Energy Trust Board of Directors

April 3, 2019

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

166th Board Meeting

Wednesday April 3, 2019
421 SW Oak Street, Suite 300, Portland, Oregon

	Agenda	Tab	Purpose
10:30 a.m.	**Board Meeting—Call to Order** (Roger Hamilton) • Approve agenda		
	General Public Comment *The president may defer specific public comment to the appropriate agenda topic.*		
	Consent Agenda (Roger Hamilton) *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.*	**1**	Action
	• February 19, 2019 Board Orientation/Training Minutes		Info
	• February 20, 2019 Annual Board Meeting Minutes		Info
10:50 a.m.	**President's Report** (Roger Hamilton)		
11:00 a.m.	**Staff Report** • Board Review (Michael Colgrove) • Legislative Update (handout in packet - no report)	**2**	Info
11:10 a.m.	**Financial Audit Results** (Jenn Price and Ashley Osten, Moss Adams)		Info
11:30 p.m.	**Working Lunch** (grab lunch and reconvene)		
11:40 a.m.	**Strategic Planning Discussion** (Mike Colgrove, Debbie Menashe)		Info
12:40 p.m.	**Energy Programs** • Contract Extension offer for Residential Program Management Contractor Services with CLEAResult Consulting (Thad Roth & Marshall Johnson) • Contract Extension offer for Residential Retail Program Delivery Contractor with CLEAResult Consulting (Thad Roth & Marshall Johnson) • Contract Extension offer for EPS New Construction Program Delivery Contractor, TRC Consulting (Thad Roth & Marshall Johnson) • Farmers Conservation Alliance – Irrigation Modernization Program Services Contract (R874) (Jed Jorgensen & Julie O'Shea, Farmers Conservation Alliance)	**3**	Action
2:00 p.m.	**2019 Budget Amendment (R875)** (Lizzie Rubado & Pati Presnail) • Amend 2019 Budget, 2020 Projection and 2019-2020 Action Plan (R875)	**4**	Action
2:15 p.m.	**NEEA Cycle 6 Strategic and Business Plan** (Jeremy Litow)		Info

3:00 p.m.	**Committee Reports**		
	• Compensation Committee (Mark Kendall)	**5**	Info
	o Adopting Investment Policy Statement (R876)		Action
	• Evaluation Committee (Eric Hayes)	**6**	Info
	• Finance Committee (Susan Brodahl)	**7**	Info
	o Adopting Finance Committee Charter (R877)		Action
	• Policy Committee (Alan Meyer)	**8**	Info
	• Conservation Advisory Council (Alan Meyer, Elee Jenn, Lindsey Hardy)	Distributed via email advance of meeting	Info
	• Renewable Energy Advisory Council (Ernesto Fonseca, Henry Lorenzen)	**9**	Info
3:30 p.m.	**Adjourn**		

The next meeting of the Energy Trust Board of Directors will be
Wednesday, May 16, 2019 at 8:30 a.m.
at Energy Trust of Oregon, 421 SW Oak, Suite 300, Portland, OR 97204

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Energy Trust of Oregon

Board Meeting Minutes—164th Meeting

February 19, 2019

Board members present: Elee Jen, Mark Kendall, Henry Lorenzen, Alan Meyer, Roland Riser, Letha Tawney (sitting in for Steve Bloom - OPUC ex officio), Anne Root, Debbie Kitchin, Susan Brodahl

Board members absent: Lindsey Hardy, Eric Hayes, Michael Colgrove, Melissa Cribbins, Ernesto Fonseca, Roger Hamilton, Steve Bloom, Janine Benner (Oregon Department of Energy special advisor)

Staff attending: Thad Roth, Oliver Kesting, Cheryle Easton, Wendy Bredemeyer, Amanda Potter, Steve Lacey, Debbie Menashe, Betsy Kauffman, Pati Presnail, Spencer Moersfelder, Hannah Cruz, Jay Ward, Sue Fletcher, Amber Cole, Naima Muntal, Kate Hanson

Others attending: Sudeshna Pal - CUB representative. Gene Rodrigues – ICF, VP (guest speaker)

Board Orientation & Training

Alan Meyer called the meeting to order at 8:09 a.m.

Cheryle Easton introduced herself and let group know she would be taking Mike Colgrove's place during his absence.

Organizational Structure

Energy Trust of Oregon's four sector leads presented an overview of the residential sector, commercial sector, industrial sector and renewable energy sector, including overview of programs, challenges, sources of savings and initiatives in 2019.

The board discussed implications of lighting transitions, the PMC model, cost-effectiveness, participation rates for various offerings and programs.

Organizational Processes

Pati Presnail, director of finance - Business Planning, Budget, and Action Plan Development. Pati discussed the annual planning cycle which included goals, insights, action plans, budget timeline, board approval and adoption of the budget.

Spencer Moersfelder, planning manager - Planning and Evaluation, Integrated Resource Planning and Long-Term Forecasting. Spencer discussed resource assessment purpose, overview, background and methodology. Resource assessment is a model that provides an estimate of energy efficiency potential achievable over a 20-year period. This analysis approach is to estimate savings potential starting at the measure level and scaling to a service territory. Spencer discussed potential types, 20-year IRP forecast flow chart and cost-effectiveness. The board discussed the definition of analysis approach, methodology, and avoided costs.

Steve Lacey, director of operations - Determination of Revenue. Steve presented the utility funding process and spoke about utility funders. Electric: Portland General Electric and Pacific Power. Gas: NW Natural, Cascade Natural Gas and Avista Utilities. He gave the board an overview of the timeline of utility engagement, budget and funding model and levels.

Amber Cole, director of communications, Hannah Cruz, sr. communications manager, Julianne Thacher, sr. project manager - communications, Naima Muntal, operations analyst, Kate Hanson project manager – reporting – Communications and Customer Service Overview. Amber discussed what communications and customer service (CCS) handles and who in her group completes various tasks. Amber discussed the quarterly and annual reports go to the OPUC, board members, utilities and the public. Amber discussed that all of the detailed information in each report is a compilation of several components of Energy Trust's groups and finance. Examples of both reports where handed out to the board.

The board discussed that they haven't seen some of these reports before. The board asked Amber if there is more than one database from which this information is compiled. The board also mentioned the great reporting that comes from CCS. The board discussed what other languages Energy Trust uses to communicate this information as a proactive way to reach a multicultural audience.

Hannah Cruz, sr. communications manager, Jay Ward, sr. community relations manager - Legislative Session and Media Engagement. Both discussed that Energy Trust is an independent non-profit and was established as a result of state regulation. Energy Trust programs continue to interest many stakeholders, including, local, state and federal policymakers. Hannah, Jay and John Volkman monitor bills. They are currently tracking 50 bills that have potential impacts on Energy Trust. They also reiterated to the board that any member of the board or Energy Trust staff can't lobby for any sort of legislation.

The board asked how they should handle requests. Hannah provided communication guidelines and staff contact information.

Hannah Cruz, sr. communications manager, Sue Fletcher, communications and customer service sr. manager - Media Engagement and Management. Hannah and Sue discussed media and public information objectives, CCS media and public relations roles, standard media inquiries, and how to respond to inquiries. Hannah and Sue handed out best practice guides for media inquiries and press releases to the board.

Debbie Menashe, director of legal and human resources - Policy Process. Debbie discussed Energy Trust governance policies, along with polices on program matters, fuel-switching, cost-effectiveness and above-market costs. She also discussed board policies on organization operations, contract execution, confidential information and diversity equity and inclusion. Debbie mentioned that policies are reviewed on a three-year cycle.

The board discussed the policy process and how new board members can better understand. Also discussed that the policies may be reviewed outside the 3-year cycle with any request to the policy committee.

Adjourn for Lunch

Gene Rodrigues with ICF presentation

Roland Risser introduced Gene Rodrigues, vice president, ICF. Gene presented "Achieving Energy Savings & Maintaining Energy Trust's Mission in an Evolving Environment for Energy Efficiency".

Gene reviewed the following topics with the board:

- Observations about Strategic Planning
- Milestones in the History of Energy Efficiency (EE) Planning
- Beacons for the Future of EE Planning
- Customer-Focused Considerations
- Platform-Based Considerations
- Wrap it UP

In summary, Gene shared that Energy Trust is in a unique position, and that mid- and long-term planning should focus on achieving today's goals while also managing uncertainty, risk, preserving optionality, and preparing to respond to a range of potential energy futures.

Adjourn for Executive Session

The meeting adjourned at 2:35 p.m.

The next regular meeting of the Energy Trust Board of Directors will be held Tuesday, February 20, 2018, at 8:00 a.m. at Energy Trust of Oregon, Inc., 421 SW Oak Street, Suite 300, Portland, Oregon.

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

PINK PAPER

EnergyTrust of Oregon

Board Meeting Minutes—165th Meeting

February 20, 2019

Board members present: Susan Brodahl, Ernesto Fonseca, Eric Hayes, Elee Jen, Mark Kendall, Debbie Kitchin, Henry Lorenzen, Alan Meyer, Roland Risser, Anne Root, Janine Benner (Oregon Department of Energy special advisor)

Board members absent: Roger Hamilton, Lindsey Hardy, Melissa Cribbins, Steve Bloom (OPUC ex officio)

Staff attending: Kathleen Belkhayat, Wendy Bredemeyer, Amber Cole, Tara Crookshank, Hannah Cruz, Phil Degens, Cheryle Easton, Fred Gordon, Jessica Kramer, Betsy Kauffman, Oliver Kesting, Steve Lacey, Debbie Menashe, Spencer Moersfelder, Jay Olsen, Pati Presnail, Amanda Potter, Thad Roth, Lizzie Rubado, Zach Sippel, Greg Stokes, Zabyn Towner, Jay Ward, Kate Wellington, John Volkman

Others attending: Aaron Frechette (Cascade Energy), Chad Gilless (Stillwater Energy), Rick Hodges (NW Natural), Joe Marcotte (Lockheed Martin), Elaine Prause (OPUC), Whitney Rideout (Evergreen Consulting)

Business Meeting

Alan Meyer called the meeting to order at 9:30 a.m. Reminder that consent agenda items can be changed to regular agenda items at any time.

General Public Comments

There were no public comments.

Officer Selection

Debbie Kitchin suggested minor changes to the onboarding process for new board members.

RESOLUTION 870
ELECTING OFFICERS OF
ENERGY TRUST OF OREGON, INC.

WHEREAS:

1. **Officers of the Energy Trust of Oregon, Inc. (other than the Executive Director and Chief Financial Officer) 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:**
   - **Roger Hamilton, President**
   - **Alan Meyer, 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 2019:

- **Roger Hamilton, President**
- **Alan Meyer, Vice President**
- **Mark Kendall, Secretary**
- **Susan Brodahl, Treasurer**

Moved by: Roland Risser		Seconded by: Anne Root
Vote:	In favor: 10	Abstained: 0
	Opposed: 0	

RESOLUTION 871
ELECTING ERIC HAYES, ERNESTO FONSECA, DEBBIE KITCHIN, HENRY LORENZEN, ALAN MEYER TO NEW TERMS ON THE ENERGY TRUST BOARD OF DIRECTORS

WHEREAS:

1. **The terms of incumbent board members Eric Hayes, Ernesto Fonseca, Debbie Kitchin, Henry Lorenzen, Alan Meyer expire in 2018.**
2. **The board 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 Eric Hayes, Ernesto Fonseca, Debbie Kitchin, Henry Lorenzen, and Alan Meyer, incumbent board members, to new terms of office that end in 2021.

Motion by: Anne Root		Seconded by: Debbie Kitchin
Vote:	In favor: 10	Abstained: 0
	Opposed: 0	

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

Consent agenda includes:

- December 14, 2018 Meeting Minutes
- January 28, 2019 Strategic Planning Workshop Minutes
- Approve Authority to Commit Incentive Funds Policy R#867
- Approve Waiving Program Incentive Caps R#868
- Approve Waste to Energy Policy R#869

Motion by: Debbie Kitchin		Seconded by: Roland Risser
Vote:	In favor: 10	Abstained: 0
	Opposed: 0	

President's Report

Alan Meyer described two recent State of Oregon reports regarding low-income Oregonians and energy burden: the *Low-Income Utility Program Working Group Report* and the *Ten-Year Plan: Reducing the Energy Burden in Oregon Affordable Housing*. State entities tapped into Energy Trust's data and expertise in producing these reports.

Authored by the Low-Income Utility Program Working Group convened under direction from Governor Brown and facilitated by the Oregon Public Utility Commission, the *Low-Income Utility Program Working Group Report* covered existing programs that reduce energy burden and included a list of all programs available for low-income customers. Energy Trust supported the report with contributions of information and analysis and participation in seven meetings. Recommendations include giving utilities authority to create low-income programs, giving the OPUC authority to set rates by energy burden, ensuring low- and moderate-income customers are resourced to participate in clean energy, convening a permanent energy burden and poverty task force, and enhancing and implementing programs that reach low- and moderate-income Oregonians.

The *Ten-Year Plan: Reducing the Energy Burden in Oregon Affordable Housing* report was developed by Oregon Department of Energy, Oregon Housing and Community Services, and the OPUC under direction from Governor Brown through an executive order in 2017. The report defined an affordable energy burden as paying 6 percent or less of household income for energy costs. An energy affordability gap occurs when a household pays more than 6 percent. Energy Trust staff participated in development of the report by attending meetings, providing data for the energy use assessment of affordable housing stock and reviewing the draft report. The report recommends understanding the market, supporting the market, and funding programs. Energy Trust's Savings Within Reach and Manufactured Home Replacement programs were referenced in the report.

The board expressed interest in receiving more information through presentations from the report authors.

Investment Earnings

Susan Brodahl presented on Energy Trust's investment returns, which were $1 million in 2018, up from $400,000 in 2017. Investment returns can be spent for the benefit of ratepayers.

Staff Report

Cheryle Easton on behalf of Michael Colgrove, Status of Board Review

Cheryle provided an update on the upcoming board review. Henry Lorenzen is representing the board during a board review consultant selection process. The goal of the review is to perform an analysis of the organizational structure and function of the Board of Directors, including its decision-making processes, relationship with management, and interaction among the board members, to determine if it is optimally advancing the mission of the Energy Trust and fulfilling the fiduciary duties of the board members.

Sue Fletcher, Diversity Advisory Council Update

Sue Fletcher, senior manager of communications and customer service, described work underway to develop a Diversity Advisory Council. Energy Trust is working with a foundational Diversity Advisory Council, which consists of seven volunteer advisors who are helping form and create a charter for a future Diversity Advisory Council. The purpose of the Diversity Advisory Council will be to guide the board and staff in diversity, equity and inclusion efforts and progress. The foundational council has met several times and anticipates two more meetings to complete a draft charter, which will be presented to the board at a future board meeting. Ernesto Fonseca and Susan Brodahl have been involved with the foundational Diversity Advisory Council.

The board discussed the geographic diversity of the future Diversity Advisory Council and how foundational members are engaging with Energy Trust. The foundational council will note in the charter that council members should represent Eastern Oregon, Central Oregon and Southern Oregon.

Hannah Cruz and Jay Ward, Legislative Update

Hannah Cruz, senior communications manager, described the state legislative session, which convened on January 22 and is expected to end around June 30, 2019. Energy Trust is a non-lobbying organization per its grant agreement with the OPUC. This extends to staff, contractors and board members representing Energy Trust. While Energy Trust does not advocate for policy, staff provide information, respond to information requests and track on legislation that could be relevant to Energy Trust. Of the 2,000 bills introduced so far in this session, Energy Trust is tracking 50 and is monitoring a few of those bills closely.

Jay Ward, senior community relations manager, provided an update on relevant legislation. There are multiple bills and legislative concepts that could directly impact Energy Trust. HB 2020 is a “cap and invest” bill, also called the Oregon Climate Action Program. It would cap greenhouse gas emissions and reduce caps over time, with allowances available for auction. If this bill passes, it could have impacts on the cost-effectiveness of Energy Trust measures. Jay described several other bills that could potentially impact Energy Trust, including HB 2494 that would extend the sunset of SB 1149 from 2026 to 2036.

The board asked questions about several of the bills, including the cap and invest bill, HB 2602 related to vehicle electrification, and HB 2329 related to siting of energy facilities.

Preliminary annual results

Steve Lacey presented Energy Trust’s preliminary annual results. In 2018, Energy Trust saved 54.0 average megawatts of electricity, which was 95 percent of its electric savings goal, and 7.5 million therms of natural gas, which was 114 percent of its natural gas savings goal. The organization generated 2.39 aMW of renewable electricity and achieved 126 percent of its renewable generation goal. Gas savings were driven by a large regenerative thermal oxidizer project, and strong savings from Production Efficiency and new residential and commercial construction. Electric savings were impacted by the delay of a very large project into 2019. Renewable generation was driven by demand for residential solar systems that completed early in 2018 to meet installation deadlines to receive the state’s Residential Energy Tax Credit before it expired. Final results and comprehensive information, including audited financials, will be available in the Annual Report to the OPUC and board on April 15, 2019.

The board asked if Energy Trust is actively pursuing opportunities with other regenerative thermal oxidizers around the state, and Amanda Potter, industrial and agriculture sector lead, responded yes.

Energy Programs

Staff presented on four Program Management Contractor (PMC) and Program Delivery Contractor (PDC) contract extensions, including a final extension for Lockheed Martin for Existing Multifamily, a first extension for ICF for Existing Buildings, and extensions for two standard Production Efficiency PDCs, Cascade Energy and Evergreen.

Kate Wellington, Existing Multifamily program manager, presented about a one-year extension of Lockheed Martin’s PMC contract to manage the Existing Multifamily program through 2020. The contract was awarded in 2015 and extended in 2018. This is the second and final extension, which means that the contract will be rebid in 2020 for 2021. Lockheed has been the Existing Multifamily PMC since 2011. The Existing Multifamily program serves properties with two or more dwelling units across a range of market segments and offers free direct installation of lighting and water-saving devices, standard and custom incentives, buy-downs with distributors and common-area lighting upgrades.

Kate summarized performance criteria for the Lockheed Martin contract, including satisfactory execution of statement of work deliverables, cross-program coordination, project pipeline, innovation and teamwork.

Kate explained the Existing Multifamily savings shortfall in NW Natural territory in 2018, which was largely due to several large projects delaying from 2018 to 2019, as well as lower than expected uptake in direct-install offerings.

The board asked about Existing Multifamily savings and participation trends, including more projects with smaller properties and reductions in electric savings goals over time. Kate explained that the program now serves more units but can claim less savings for these smaller projects that require more expensive outreach. Staff are working on developing new measures and evaluating the program to optimize it for future years.

The board asked why measure-level savings have gone down, and Kate explained that lighting baselines are shifting significantly as market transformation occurs. For showerheads, an evaluation indicated that fewer savings are realized than expected.

Kate shared examples of Lockheed Martin's success coordinating with the Residential program, developing new offerings and incentives, expanding program offerings, enhancing marketing and outreach strategies and streamlining program participation.

The board asked about diversity, equity and inclusion goals in PMC contracts, and Kate explained that diversity, equity and inclusion goals are already included in Lockheed Martin's scope of work and goals for 2019.

The board had no objections to extending the contract with Lockheed Martin as Energy Trust's Existing Multifamily PMC.

Jay Olson, Existing Buildings program manager, presented about a one-year extension of ICF's PMC contract to manage the Existing Buildings program through 2020. The Existing Buildings program serves existing commercial customers with custom projects, standard upgrades, lighting upgrades and energy performance management offerings.

Jay described the performance criteria for the ICF contract, which included achieving annual electric and gas savings goals, developing a savings pipeline for future gas and electric savings, achieving deliverables, cross-program teamwork and innovation.

The program achieved savings goals in Cascade Natural Gas and Avista in 2018 but fell short in other utilities. Jay described challenges, including large, complex projects that can delay and make a significant impact on savings goals. The program is also seeing more small projects with fewer savings.

Jay described ICF's achievement of performance criteria, including building a pipeline of future projects, expanding outreach, increasing the number of custom studies, maintaining compliance with internal audits, supporting the measure development process, collaborating with other programs, enhancing efforts to reach underserved, small and rural commercial customers, moving offerings midstream, and assembling a team to lead outreach to small customers.

The board asked about falling short of the Pacific Power goal in 2018, and Jay explained how limited contractor availability is slowing down project completions.

The board had no objections to extending ICF's contract as Existing Buildings PMC.

Jessica Kramer, Production Efficiency program manager, presented a one-year extension of Cascade Energy's PDC contract to deliver the Production Efficiency program's standard offerings through 2020.

Jessica described performance criteria for the Cascade Energy contract, including meeting savings goals, delivery budget management, project pipeline and Trade Ally Network development, data management and project reporting, excellent service to customers and trade allies, marketing coordination, quality control and exhibiting teamwork.

In 2018, Cascade Energy exceeded savings goals in all utility territories except for Avista. The program overestimated savings opportunities in Avista territory because some large customers were transport or commercial. The program expects to meet Avista goal in 2019.

The board asked how performance criteria are different for industrial PDCs and commercial PMCs, and Jessica explained that the Production Efficiency program has a more granular breakout of criteria. The board also asked about surveys to understand customers and customer satisfaction.

The board had no objections to extending Cascade Energy's contract as Production Efficiency standard track PDC.

Jessica presented a one-year extension of Evergreen's PDC contract to deliver the Production Efficiency program's lighting offerings through 2020.

Jessica described performance criteria for Evergreen, including achieving annual savings goals, delivery budget management, project pipeline development, trade ally network development, data management and project reporting, service to customers and trade allies, marketing coordination, quality control and teamwork. Evergreen met all performance metrics.

Evergreen gave Energy Trust early notice that they expected to overachieve goals in 2017 and 2018, and Energy Trust instructed them to achieve increased savings.

The board asked if Energy Trust has a clause to claw back incentives for cannabis customers that invest in energy efficiency upgrades and then go out of business. Jessica explained efforts ensure longevity of investments. Energy Trust is conducting analysis of past cannabis participants to see which businesses are still operating. This analysis will inform how much savings the program will claim from cannabis projects.

The board had no objections to extending Evergreen's contract as Production Efficiency lighting PDC.

Ernesto Fonseca left the meeting at 11:37 a.m.

Update on Organizational Development Implementation Plan

Greg Stokes, organizational development manager, summarized recommendations made last year from Energy Trust's organization review and budget review teams. Both teams focused on recommendations that would help an already high performing organization work efficiently and continue to become more flexible, adaptable and nimble.

In late 2018, Energy Trust contracted with two consulting firms to develop implementation plans for the organization review and budget review recommendations. Implementation plans for both sets of recommendations provide guidance on prioritization, change management planning, success metrics, work packets, implementation timelines and resource estimates.

The implementation plans for organizational development focus on the next 18 months, and include plans for organizational culture, conflict management, decision-making, prioritization and innovation. Each plan includes a project brief called a work packet.

Greg described the budget review recommendation, which includes transitioning from a one-year planning and budget cycle to a three-year planning cycle with one-year budgets. In the planning year, there would be intensive engagement with stakeholder workgroups. The three-year plan will guide annual budgets for the next few years. The recommendation has been shared with the OPUC, and staff will continue to engage with the OPUC going forward.

Greg described the timeline for implementing a new budget process. The organization will switch to the new budget process in 2021. Work to develop new process and workgroups will occur in 2020.

Greg summarized improvements identified in the organization review that are in process or completed, and which have been prioritized to move forward in 2019.The primary focus will be on a budget tools project and improving staff decision-making. Initial work will also commence on recommendations for innovation, organizational culture, change management, and the new budget process and workgroups.

The board noted that the new budget process is a three-year process and strategic planning is a five-year process, and the two processes are not aligned.

The board took a break for lunch at 12:00 p.m.

Renewable Northwest

The board reconvened at 12:59 p.m.

Nicole Hughes, the new executive director of Renewable Northwest, provided an overview of Renewable Northwest. Renewable Northwest was established 25 years ago and covers Oregon, Washington, Montana and Idaho. Funding is from foundation grants and dues from for-profit and nonprofit members.

Renewable Northwest advocates for the expansion of environmentally responsible renewable energy resources in the Northwest through collaboration with government, industry, utilities, customers and advocacy groups. Renewable Northwest focuses on policy, regulatory process, transmission and clean energy markets.

The board asked about Renewable Northwest's relationship with utilities.

In 2019, Renewable Northwest's policy priorities for the legislative session are siting bills, the clean energy jobs bill, bills that might erode the Renewable Portfolio Standard and the bill to extend the sunset of SB 1149. Renewable Northwest is involved in rulemaking for bills prohibiting siting solar on high-value farm land. It is also involved in Energy Facility Siting Council rulemaking that looks at whether a cluster of solar sites should be integrated and whether the cumulative impacts of multiple projects are considered.

The board asked about the definition of high-value farm land and Renewable Northwest's relationship with counties regarding siting bills.

Renewable Northwest's 2019 regulatory priorities are Pacific Power's Integrated Resource Plan, OPUC investigation of PURPA contracts, rulemaking for community solar, PGE modelling of transmission system to increase flexibility, and distribution system planning.

The board asked if Renewable Northwest was involved in community solar program design.

Renewable Northwest's 2019 transmission priorities include tracking Bonneville Power Administration's tariff and settlement agreements, OPUC transmission workshops, Montana Renewable Development Action Plan and interconnection queue reform. Montana Renewable Development Action Plan is relevant because Montana's significant wind resource could help the region meet its climate goals.

Clean energy market priorities include cap and trade, regionalization and work to address energy trade barriers, and tracking siting issues that may impact development opportunities.

The board asked about Renewable Northwest's advisory board, which consists primarily of nonprofit members plus three for-profit members.

The board appreciated learning about Renewable Northwest.

Committee Reports

Strategic Planning Committee (Mark Kendall)

The Strategic Plan Committee met to develop the organization's future unique role of value statement, which is intended to describe the characteristics Energy Trust should have to thrive in future markets.

Debbie Menashe, director of legal and human resources, provided an update on work since the board strategic planning workshop on January 28. Staff synthesized what was heard in the board discussion to develop a draft future unique role of value statement, which will serve as a guide for developing the strategic plan. Staff also met with the five utilities to talk about the unique role of value statement and specific areas of opportunity. This meeting is time to hear feedback from board members and OPUC staff about the unique role of value statement.

Elaine Prause, OPUC utility program deputy director, participates in Energy Trust's policy and strategic planning committees. Elaine shared the OPUC's perspective on the future unique role of value statement, including suggestions for phrasing and feedback on the process for development. She stressed the importance of Energy Trust maintaining a focus on its core mission and proposed a meeting with OPUC and Energy Trust staff for more discussion on her feedback.

Janine Benner left the meeting at 1:58 p.m. Janine phoned into the meeting at 2:02 p.m.

The board discussed appropriate levels and timing of stakeholder engagement during strategic planning. The board talked about balancing responsiveness to new opportunities with maintaining focus on its core mission and noted that the board needs to align on its approach to balancing the two. The board supported a collaboration meeting with OPUC staff and noted an additional board strategic planning conversation might be helpful prior to the May board strategic planning retreat. The board suggested future discussions focus on the draft strategic plan more broadly, not just the unique role of value statement. The board also requested more time for unstructured and unfacilitated discussion.

Policy Committee (Alan Meyer)

Policy committee recommends amending the bylaws to make them more consistent with current practice and article of incorporation.

RESOLUTION 872
AMEND THE BYLAWS OF ENERGY TRUST OF OREGON, INC.

WHEREAS:

1. **In 2018, Energy Trust's Management Team was restructured, and the position of Chief Financial Officer was replaced by a Director of Finance. In addition, the position of General Counsel" was restructured to a "Director of Legal and Human Resources." Because the Chief Financial Officer and General Counsel positions were referenced specifically in the Energy Trust Bylaws, staff undertook a review of the bylaws for possible revisions.**
2. **In addition, Energy Trust staff undertook an overall review of the bylaws for possible revisions. Energy Trust staff, in consultation with its auditors, the Policy Committee, and Oregon Public Utility Commission staff, suggest revisions to the bylaws which are consistent with Energy Trust operations and continue to demonstrate Energy Trust's commitment to a high level of financial stewardship.**
3. **Energy Trust's Policy Committee reviewed staff's proposed bylaw revisions over a series of committee meetings and, at its meeting on January 31, 2019, recommended revisions to the bylaws as follows: i) revise the purpose statement to be consistent with the Energy Trust Articles of Incorporation, ii) eliminate references to a chief financial officer, iii) add a bylaw requirement for an audit committee, iv) add detail on the role of the Treasurer, v) delete bylaw provisions regarding certification of financial statements and internal controls reports, and vi) replace a bylaw reference to "General Counsel" with**

reference to "chief legal counsel."

It is therefore RESOLVED that the Energy Trust Bylaws be revised as shown below.

Motion by: Roland Risser Seconded by: Debbie Kitchin
Vote: In favor: 10 Abstained: 0
Opposed: 0

BYLAWS
OF
ENERGY TRUST OF OREGON, INC.

SECTION 1
NAME

The name of the Corporation is Energy Trust of Oregon, Inc., an Oregon nonprofit corporation.

SECTION 2
PURPOSE AND POWERS

2.1 Purpose. The Corporation is organized and shall be operated to support the development of cost-effective local energy conservation, market transformation energy conservation, renewable energy resources for certain utility customers and such other purposes as are not contrary to the law.

2.2 Powers. Subject to the foregoing purposes and the requirements of Internal Revenue Code section 501(c)(3), the Corporation shall have and may exercise all the rights and powers of a nonprofit corporation under the Oregon Nonprofit Corporation Act (the "Act").

SECTION 3
DIRECTORS

3.1 Powers. The board of directors shall manage the business and affairs of the Corporation and exercise or direct the exercise of all corporate powers.

3.2 Number. The number of voting directors may vary between a minimum of five (5) and a maximum of thirteen (13), the exact number to be fixed from time to time by resolution of the board of directors. Additionally, the Oregon Public Utility Commission shall be entitled to appoint one "ex officio" member of the board of directors, which member shall have no vote but shall otherwise be afforded all the courtesies and rights of a member of the board of directors.

3.3 Election and Term of Office. Directors may be elected at any meeting of the board of directors by a majority vote of the directors then in office. Directors shall serve rotating three (3) year terms, so that no more than one-third (1/3) of the directors then in office have terms expiring in any year. Upon the expiration of their three (3) year term (except in the case of initial directors, whose terms may be shorter than three (3) years), directors' terms shall effectively end at the later of: (a) the next annual meeting of the board of directors following expiration of their term, or (b) when their successors have been elected and take office. Directors may serve for successive terms.

3.4 Resignation. Any director may resign at any time by delivering written notice of resignation to the President or Secretary. Such resignation shall be effective on receipt unless it is specified therein to be effective at a later time, and acceptance of the resignation shall not be necessary. Upon the resignation of any designated director, the body who appoints or elects that director shall be immediately notified in writing by the Secretary of such resignation and a request shall be made for said director's immediate replacement.

3.5 Removal. Directors may be removed at any time, with or without cause, by the affirmative vote of seventy percent (70%) of the directors then in office, at any annual or regular meeting of the board of directors specifically called for that purpose. The notice of such meeting shall state that the purpose or one of the purposes of the meeting is the removal of the director or directors involved. At any meeting of the directors called for the purpose of removing any director(s), said meeting notice shall specify the reasons for removal and any director who is the subject of any such removal proceeding shall be afforded adequate opportunity to respond, in writing and/or by oral presentation, to any charges or allegations made in connection therewith.

3.6 Vacancies. Any vacancy occurring in the board of directors for any reason, including a vacancy resulting from the removal of a director or an increase in the number of directors, shall be filled by the approval of a majority of the directors then in office.

3.7 Compensation. Directors shall not receive compensation for their services. A director may receive reimbursement for actual and reasonable expenses incurred in performing his or her duties upon the approval of the board of directors.

3.8 Public Meetings. All duly called meetings of the board of directors shall be open to the public, except executive sessions and committees.

3.9 Annual Meetings. The annual meeting of the board of directors shall be held at a date, time, and place determined by the board of directors.

3.10 Regular Meetings. The board of directors may from time to time establish or call monthly or other regular meetings of the board, the specific date, time, and place to be determined by the board of directors.

3.11 Special Meetings. Special meetings of the board of directors may be called by the President or by any two directors.

3.12 Notice of Meetings. Written notice of the annual meeting of the board of directors shall be given at least 30 days before the meeting; written notice of any regular meeting shall be given at least ten days before the meeting; and, written notice of a special meeting shall be given at least 48 hours before the meeting. The notice shall in each case specify the date, time, and place of the meeting, and notice shall be sufficient if actually received at the required time or if mailed not less than five days before the required time. Mailed notices shall be directed to the director's address shown on the corporate records or to the director's actual address ascertained by the person giving notice, by United States mail, postage prepaid. Except as otherwise required by law, the Articles of Incorporation, or these bylaws, neither the business to be transacted at nor the purpose of any meeting of the board of directors need be specified in the notice. Interested parties who are registered with the Corporation shall also be provided with notice of board of director meetings, on the same schedule as above.

3.13 Waiver of Notice. Whenever any notice is required to be given to any director, a waiver thereof in writing, signed by the director entitled to such notice, whether before or after the event specified in the waiver, shall be deemed equivalent to the giving of such notice. Furthermore, the attendance of a director at a meeting shall constitute a waiver of notice of such meeting, except where a director attends a meeting for the express purpose of objecting to the transaction of any business because the meeting is not lawfully called or convened.

3.14 Action Without a Meeting. Any action that is required or permitted to be taken by the directors at a meeting may be taken without a meeting if a consent in writing setting forth the action is approved by all of the directors entitled to vote on the matter. The action shall be effective on the date when the last signature is placed on the consent.

3.15 Meeting by Telephone Conference. The board of directors may hold a meeting by conference telephone or similar equipment by means of which all persons participating in the meeting can speak and hear each other. Participation in such meeting shall constitute presence in person at the meeting.

3.16 Quorum; Majority Vote. Unless otherwise provided in these bylaws or in the Articles of Incorporation, a majority of the number of directors in office at the time of a meeting of the board of directors shall constitute a quorum for the transaction of business at any meeting of the board of directors. The act of a majority of the directors present at a meeting at which a quorum is present shall be the act of the board of directors, unless a different number is required by law, the Articles of Incorporation, or these bylaws. A minority of the directors, in the absence of a quorum, may adjourn and reconvene from time to time but may not transact any business.

3.17 Presumption of Assent. A director who is present at any meeting of the board of directors shall be presumed to have assented to all actions taken at that meeting unless the director's dissent shall be entered in the minutes of the meeting, or unless the director shall file, with the person acting as the secretary of the meeting, his or her written dissent to the action before adjournment of the meeting. Such right to dissent shall not apply to a director who voted in favor of the action.

3.18 Special Board Advisor. There shall be a position named Oregon Department of Energy (ODOE), Special Board Advisor. The ODOE Special Board Advisor shall be entitled to provide a separate report at any regularly scheduled Energy Trust board meeting, to receive all directors' packet material (less confidential material), and to sit with the board during its regular public meeting sessions and strategic planning sessions, and comment on agenda items as the special advisor deems appropriate. The ODOE Special Board Advisor shall have no vote. The ODOE Special Board Advisor shall be appointed by the Director of the Oregon Department of Energy.

3.19 Executive Sessions: Executive sessions of the board of directors may be held at the request of the President or at the request of four board members, for the consideration but not decision of the following matters:

3.19.1 internal personnel matters

3.19.2 participation in litigation, mediation or negotiations to settle a dispute; or discussions with counsel regarding potential litigation affecting a corporate choice of action

3.19.3 trade secrets, proprietary or other confidential commercial or financial information; or

3.19.4 information regarding negotiations whose disclosure would likely frustrate corporate purposes.

3.20 Notification: Whenever a matter is proposed for consideration in an executive session of the board, the meeting notice shall state the grounds for the executive session.

3.21 Movement of executive session matters to open meeting: During an executive session, any director may request that the matter under discussion be moved into an open meeting. Upon receiving such request, the chair will poll the directors present in the executive session. If a majority agree to move the matter into an open meeting, the chair will conclude the discussion and schedule the matter for consideration at the next open meeting of the board.

SECTION 4
OFFICERS

4.1 Designation. The officers of the Corporation shall be a President, one or more Vice Presidents, a Secretary, a Treasurer, and an Executive Director. Such other officers as may be deemed necessary may be elected by the board of directors and shall have such powers and duties as may be prescribed by the board. The same individual may hold two or more offices.

4.2 Election and Term of Office. Officers of the Corporation other than the Executive Director shall be elected annually by the board of directors at the annual meeting of the board of directors. Each officer so elected shall hold office until a successor is duly elected or until the officer's resignation, death or removal.

4.3 Resignation. An officer may resign at any time by delivering written notice of resignation to the President or Secretary. Such resignation shall be effective upon receipt unless it is specified to be effective at a later time. The board of directors may reject any postdated rejection by notice in writing to the resigning officer.

4.4 Removal. The board of directors may remove any officer (other than the Executive Director, whose tenure, salary and other terms of employment shall be governed by their employment agreement), with or without cause, by vote of the directors then in office, at any meeting of the board of directors. Removal shall be without prejudice to the contract rights, if any, of the person removed. Election of an officer shall not of itself create contract rights.

4.5 Vacancies. A vacancy in any office because of death, resignation, removal, or otherwise may be filled by the board of directors for the unexpired portion of the term.

4.6 President. The President shall preside at all meetings of the board of directors. The President shall have such other powers and duties as may be prescribed by the board of directors. The President shall also be a nonvoting ex officio member of any committee established pursuant to Section 5.

4.7 Vice President. The Vice President(s) shall perform such duties as the board of directors shall prescribe. In the absence or disability of the President, the President's duties and powers shall be performed and exercised by the Vice Presidents.

4.8 Secretary. The Secretary shall prepare and keep (or cause to be prepared and kept) the minutes of all meetings of the board of directors and any committees of the board of directors and shall have custody of the minute books and other records pertaining to corporate business. The Secretary shall give or cause to be given such notice of the meetings of the board of directors as is required by the bylaws. The Secretary shall be responsible for authenticating resolutions and other records of the corporation. The Secretary shall perform such other duties as may be prescribed by the board of directors.

4.9 Treasurer. The Treasurer shall supervise and monitor the finances of the Corporation, keep and cause to be prepared correct and complete books and records of account of the Corporation, and perform such other tasks as requested by the board of directors.

4.10 Executive Director. The Executive Director shall: (a) serve at the pleasure of the board; (b) execute contracts, agreements and other instruments consistent with the policies and directions of the board of directors; and (c) subject to board policies and resolutions, act as the Corporation's principal executive officer with general supervision, direction and control of the business and affairs of the Corporation.

SECTION 5
COMMITTEES

5.1 Creation. The board of directors shall, by resolution adopted by a majority of the directors then in office, designate and appoint an Audit Committee. The board of directors may, by resolution adopted by a majority of the directors then in office, designate and appoint an Executive Committee and such other committees as may be deemed appropriate

5.2 Authority. Each committee appointed by the board of directors shall have and may exercise such powers and authority as may be conferred by the board of directors, but no committee shall in any event have the power or authority to (a) amend, alter, or repeal these bylaws or the Articles of Incorporation, (b) elect, appoint, or remove any director or officer, or (c) approve the Corporation's dissolution or merger, or any sale, lease, pledge, or transfer of all or substantially all of the Corporation's assets other than in the usual and regular course of the Corporation's business. The designation and appointment of any committees and the delegation thereto of authority shall not operate to relieve the board of directors or any individual director of any responsibility imposed by law. The board of directors shall have the power at any time to fill vacancies in, to change the size or membership of, and to discharge the Executive Committee and any other committee.

5.3 Audit Committee. Each calendar year, annual financial statements shall be prepared in accordance with generally accepted accounting principles, uniformly applied, audited by an outside independent certified public accountant, and presented to the Audit Committee for review. The Audit Committee may also exercise such other powers and authority as may be conferred by the board of directors consistent with these bylaws.

5.4 Executive Committee. An Executive Committee, if formed, shall consist of the President and at least two other directors, and the President shall act as chairman of the committee. Between meetings of the board of directors, the Executive Committee may, subject to such limitations as may be imposed by resolution of the board of directors or applicable law, have and exercise all the power and authority of the board of directors in the management of the Corporation.

5.5 Other Committees. All other committees shall consist of at least two directors. The President shall be a nonvoting ex officio member of all other committees.

5.6 Advisory Councils on Conservation and Renewable Resources. The board of directors shall create separate advisory councils for (a) conservation, and (b) for renewable resources, to provide advice and resources to support the Corporation. The role of such advisory councils shall be to assist the board of directors and the President in the development of a strategic plan and to assist the Corporation's staff with implementing key elements of the strategic plan, according to guidelines to be established by the board of directors.

5.7 Meetings. Members of committees shall meet at the call of the chair of the committee at such place as the chair shall designate after reasonable notice has been given to each committee member. Each committee shall keep minutes of its proceedings and within a reasonable time thereafter make a written report to the board of directors of its actions. Any action that may be taken by a committee at a meeting may be taken without a meeting if a consent in writing setting forth the specific action taken and signed by all members of the committee entitled to vote on the matter. The action shall be effective on the date when the last signature is placed on the consent.

5.8 Quorum. A majority of the members of a committee shall constitute a quorum for the transaction of business at any committee meeting, and any transaction of a committee shall require a majority vote of the quorum present at the meeting.

SECTION 6
INDEMNIFICATION OF DIRECTORS AND OFFICERS

6.1 Generally. The Corporation shall to the fullest extent permitted by law indemnify any person who is or was a director or officer of the Corporation against any and all liability incurred by such person in connection with any claim, action, suit, or proceeding or any threatened claim, action, suit, or proceeding, whether civil, criminal, administrative, or investigative, by reason of the fact that such person is or was a director or officer of the Corporation, if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interest of the Corporation, and with respect to any criminal proceeding such person had no reasonable cause to believe the conduct was unlawful. Liability includes reasonable attorneys fees and expenses, judgments, fines, costs, and amounts actually paid in settlement. The termination of any action, suit, or proceeding by judgment, order, settlement, conviction, or upon a plea of nolo contendere or its equivalent, shall not of itself create a presumption that such person did not act in good faith and in a manner which such person reasonably believed to be in or not opposed to the best interests of the Corporation, and, with respect to any criminal proceeding, had reasonable cause to believe that such conduct was unlawful. The foregoing right of indemnification shall be in addition to and not exclusive of any and all other rights to which any such director or officer may be entitled under any statute, bylaw, agreement, or otherwise.

6.2 Actions by or in the Right of the Corporation. In connection with any proceeding brought by or in the right of the Corporation, the Corporation may not indemnify any person who is or was a director or officer of the Corporation if such person has been adjudged by a court of law to be liable to the Corporation, unless the court in which the action or suit was brought shall determine upon application that, despite the adjudication of liability, in view of all of the circumstances of the case such person is fairly and reasonably entitled to indemnity.

6.3 Self-Interested Transactions. The Corporation may not indemnify any person who is or was a director or officer of the Corporation in connection with any proceeding charging improper personal benefit to such person in which such person has been adjudged liable on the basis that personal benefit was improperly received by such person, unless the court in which the action or suit was brought determines upon application that, despite the adjudication of liability, in view of all circumstances of the case such person is fairly and reasonably entitled to indemnity.

6.4 Determination of the Propriety of Indemnification. The determination that indemnification is proper shall be made by the majority vote of a quorum consisting of the directors who were not parties to the proceeding or, if such a quorum cannot be obtained, by the majority vote of a committee, duly designated by the board of directors, consisting of at least two directors who were not parties to the proceeding. If there are not two directors who were not parties to the proceeding, the full board of directors shall select special legal counsel to determine whether indemnification is proper.

6.5 Evaluation of Expenses. An evaluation as to the reasonableness of expenses shall be made by the majority vote of a quorum consisting of directors who were not parties to the proceeding or, if such a quorum cannot be obtained, by the majority vote of a committee, duly designated by the board of directors, consisting of at least two directors who were not parties to the proceeding. If there are not two directors who were not parties to the proceeding, the full board of directors, including directors who were parties to the proceeding, shall evaluate the reasonableness of expenses.

6.6 Advance of Expenses. Expenses incurred with respect to any claim, action, suit, or other proceeding of the character described in this article may be advanced by the corporation prior to the final disposition of such proceeding if (a) the director or officer provides written affirmation to the Corporation of such person's good faith belief that such person satisfies the criteria for indemnification, and (b) the director or officer gives the Corporation a written undertaking to repay the advanced amount if it is ultimately determined that the director or officer is not entitled to indemnification under this article.

The undertaking shall be a general obligation of the director or officer, but need not be secured and may be accepted by the board of directors without reference to the director or officer's financial ability to make repayment.

6.7 Insurance. The board of directors shall have the power to purchase insurance on behalf of any individual who is or was an officer or director of the Corporation against liability asserted against or incurred by such individual arising out of such individual's status as a director or officer of the Corporation, whether or not the Corporation would have the power to indemnify such individual against liability under the provisions of this article.

SECTION 7
CONTRACTS, LOANS, CHECKS AND DEPOSITS

7.1 Contracts. The board of directors may authorize any officer or officers, employees, agent or agents, to enter into any contract or execute and deliver any instrument in the name of and on behalf of the Corporation, and such authority may be general or confined to specific instances.

7.2 Loans. No loans shall be contracted on behalf of the Corporation and no evidence of indebtedness shall be issued in its name unless authorized by a resolution of the board of directors. Such authority may be general or confined to specified instances.

7.3 Checks, Drafts, etc. All checks, drafts or other orders for the payment of money, notes, or other evidences of indebtedness issued in the name of the Corporation shall be signed by such officer or officers, agent or agents of the Corporation and in such manner as shall from time to time be determined by resolution of the board of directors.

7.4 Deposits. All funds of the Corporation not otherwise employed, shall be deposited from time to time to the credit of the Corporation in such banks, trust companies, or other depositories as the board of directors may select.

7.5 Facsimile Signatures. Contracts and agreements of the Corporation, and endorsements, renewals, and amendments of the same, may be authenticated by facsimile of the signature of a duly authorized officer of the Corporation in lieu of a signature of such officer. In the event of such authentication by facsimile signature, such contract or agreement shall be valid only if countersigned by an agent of the Corporation authorized to execute such type of contract or agreement. The validity of any such contract or agreement shall not be affected in the event that the delivery of such document occurs after the officer whose signature appears by facsimile is no longer serving as an officer of the Corporation by reason of death or any other cause.

SECTION 8
CODE OF ETHICS

8.1 Generally. Officers, directors and staff of the Corporation shall at all times be mindful of their responsibilities to the Corporation to conduct its business fairly and honestly, and avoid personal financial activities that might compromise or reasonably create the appearance of compromising the Corporation.

8.2 Conflicts Disclosure. Annually, all officers, directors and non-administrative staff shall disclose in writing to the Corporation's chief legal counsel, on such forms and in such formats as shall be established by the directors, any relationships that may be deemed a "direct or indirect conflict of interest," as defined in section 65.361 of the Act, as may be amended and interpreted from time to time.

8.3 Review of Unusual Transactions. The board or a committee designated by the board shall review policies and procedures with respect to transactions between the Corporation and its officers, directors, or affiliates of officers or directors, or transactions that are not a normal part of the Corporation's business.

8.4 Executive Director. The Executive Director shall ensure full, fair, accurate, timely and understandable disclosure in the Corporation's required periodic reports and compliance with applicable governmental rules and regulations.

8.5 Reporting Concerns. Any person who is concerned that a violation of this code of ethics has occurred may report such concern to a person or firm to be determined by the board.

SECTION 9
AMENDMENT

The board of directors may amend or repeal these bylaws or adopt new bylaws by the affirmative vote of more than seventy percent of the directors then in office, at any meeting of the board of directors called for that purpose. The meeting notice shall state that a purpose of the meeting is to consider an amendment to the bylaws and shall contain a copy or summary of the proposed amendment.
The foregoing bylaws were duly adopted by the board of directors on the 31st day of March, 2001, revised on the 30th day of April, 2003, the 4th day of February, 2004, the 8th day of September, 2004, the 3rdth day of November, 2004, the 6th day of April, 2005, the 14th day of December, 2005, the 9th day of April, 2008, and the 20th day of February, 2019.

____
Mark Kendall, Secretary

Evaluation Committee
Phil Degens, evaluation manager, summarized the December 2018 evaluation committee meeting, which included discussion of an industrial Strategic Energy Management evaluation. The evaluation found that 90 percent of SEM actions remained in place. Staff will look at persistence of these savings over time. The meeting also included a presentation on a commercial Pay for Performance evaluation; a diversity, equity and inclusion data and baselining report; and evaluation of Fast Feedback customer surveys. Staff will evaluate Fast Feedback now that the organization no longer needs to collect information about free ridership.

Finance Committee (Susan Brodahl)
Finance committee met in January when year-end results were not yet available. The committee now has draft year-end results, which were positive. Incentive spending was below budget because savings were very cost-effective, and therefore Energy Trust did not spend down reserves. Savings were strong and were achieved at a lower cost than expected. The committee also talked about the state's community solar program and Energy Trust investment results.

Conservation Advisory Council (Elee Jen)
Conservation Advisory Council and Renewable Energy Advisory Council members received a presentation from the Northwest Power and Conservation Council about impact of climate change on weather in the Pacific Northwest.

Hannah Cruz added that the Northwest Power and Conservation Council presentation was informative as Energy Trust starts to look at the value of efficiency during different times. It's important to understand how temperature shifts will impact the value of savings. Staff also presented about diversity, equity and inclusion goals regarding customers and trade allies, and there was a presentation about Energy Trust's unique strengths to inform strategic planning.

Adjourn

The meeting adjourned at 2:32 p.m.

The next regular meeting of the Energy Trust Board of Directors will be held Wednesday, April 3, 2019 at 10:30 a.m. at Energy Trust of Oregon, Inc., 421 SW Oak Street, Suite 300, Portland, Oregon.

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

Tab 2

Board Update
2019 State Legislation Bill Tracking

April 3, 2019

Overview

This board update provides the status of bills in the 2019 Oregon legislative session that are of special interest to Energy Trust and are being tracked by staff.

Under the grant agreement with the OPUC, Energy Trust does not take positions on legislation. We routinely brief legislators on Energy Trust programs and accomplishments, monitor bills that could impact Energy Trust, and respond to legislative requests for information in coordination with the OPUC.

List of all bills that we are following (as of March 13, 2019)

Bill Name	Bill Title	Bill Summary	Current Committee	Last Three Actions (as of 3/13/2019)
HB 2020 INTRO	Relating to greenhouse gas emissions; declaring an emergency.	Establishes Carbon Policy Office within Oregon Department of Administrative Services and directs Director of Carbon Policy Office to adopt Oregon Climate Action Program by rule.	Carbon Reduction (J)	03/02/19 - Public Hearing held. 03/01/19 - Public Hearing held. 02/25/19 - Public Hearing held.
HB 2063 INTRO	Relating to environmental mitigation trust agreement moneys.	Extends authorized uses of moneys received by state pursuant to Volkswagen Environmental Mitigation Trust Agreement and deposited in Clean Diesel Engine Fund.	Energy and Environment (H)	01/18/19 - Referred to Energy and Environment with subsequent referral to Ways and Means. 01/14/19 - First reading. Referred to Speaker's desk.
HB 2093 INTRO	Relating to procurements for facilities that deliver electricity to the public for electric motor vehicles; prescribing an effective date.	Permits Oregon Department of Administrative Services to contract with other entity, and to participate in, sponsor, conduct or administer cooperative procurements, for purpose of acquiring, installing, maintaining or operating devices or facilities to deliver electricity to public for electric motor vehicles.	Rules (H)	01/28/19 - Public Hearing held. 01/15/19 - Referred to Rules. 01/14/19 - First reading. Referred to Speaker's desk.
HB 2095 INTRO	Relating to maintenance of buildings owned by state agencies; declaring an emergency.	Establishes Building Maintenance Account in State Treasury, separate and distinct from General Fund.	Ways and Means (J)	01/15/19 - Referred to Ways and Means. 01/14/19 - First reading. Referred to Speaker's desk.

HB 2208 INTRO	Relating to seismic improvements to buildings; prescribing an effective date.	Establishes Oregon Business Development Department program to issue grants for improving seismic safety, stability and resiliency of qualifying unreinforced masonry and unreinforced concrete buildings.	Veterans and Emergency Preparedness (H)	03/14/19 - Public Hearing scheduled. 01/18/19 - Referred to Veterans and Emergency Preparedness with subsequent referral to Ways and Means. 01/14/19 - First reading. Referred to Speaker's desk.
HB 2242 A	Relating to public utilities.	Authorizes Public Utility Commission to consider differential energy burden and other inequities of affordability in rates.	Ways and Means (J)	03/04/19 - Referred to Ways and Means by prior reference. 03/04/19 - Recommendation: Do pass with amendments, be printed A-Engrossed, and be referred to Ways and Means by prior reference. 02/26/19 - Work Session held.
HB 2205 A	Relating to the environment.	Requires Department of Environmental Quality and Oregon Health Authority to regularly assess final changes to federal environment laws to determine whether changes are significantly less protective of public health, environment or natural resources than standards and requirements contained in those federal environmental laws, as in effect on January 19, 2017.		03/13/19 - Second reading. 03/12/19 - Subsequent referral to Ways and Means rescinded by order of the Speaker. 03/12/19 - Recommendation: Do pass with amendments, be printed A-Engrossed, and subsequent referral to Ways and Means be rescinded.
HB 2256 INTRO	Relating to housing affordability; declaring an emergency.	Creates Oregon Housing Crisis Task Force.	Human Services and Housing (H)	01/15/19 - Referred to Human Services and Housing with subsequent referral to Ways and Means. 01/14/19 - First reading. Referred to Speaker's desk.
HB 2309 INTRO	Relating to electric-powered school buses.	Directs Department of Transportation to develop and implement program to lend moneys to school districts for incremental costs of purchasing electric-powered school buses.	Transportation (J)	01/15/19 - Referred to Transportation. 01/14/19 - First reading. Referred to Speaker's desk.

[HB 2322 INTRO]	Relating to the adoption of energy policies into statewide land use planning goals.	Requires Land Conservation and Development Commission to amend statewide land use planning goals related to energy to incorporate development of renewable energy facilities and reduction of greenhouse gas emissions and to match state energy policies.	Energy and Environment (H)	01/18/19 - Referred to Energy and Environment. 01/14/19 - First reading. Referred to Speaker's desk.
[HB 2329 INTRO]	Relating to energy facilities.	Modifies definition of "energy facility" for purposes of regulation of energy facilities by Energy Facility Siting Council.	Energy and Environment (H)	03/28/19 - Work Session scheduled. 03/05/19 - Public Hearing held. 02/28/19 - Public Hearing held.
[HB 2336 A]	Relating to affordable housing pilot program.	Removing population requirement for affordable housing pilot program if no qualifying nomination is received for city with population under 25,000.	Housing (S)	03/06/19 - Referred to Housing. 02/28/19 - First reading. Referred to President's desk. 02/27/19 - Third reading. Carried by Zika. Passed. Ayes, 55; Excused, 5--Doherty, Hayden, Hernandez, McLain, Nearman.
[HB 2423 INTRO]	Relating to small homes; prescribing an effective date.	Adopts Small Home Specialty Code to regulate construction of homes not more than 400 square feet in size.	Business and Labor (H)	03/06/19 - Public Hearing held. 01/15/19 - Referred to Business and Labor. 01/14/19 - First reading. Referred to Speaker's desk.
[HB 2494 INTRO]	Relating to public purpose charge.	Extends operation of public purpose charges until January 1, 2036.	Energy and Environment (H)	01/18/19 - Referred to Energy and Environment. 01/14/19 - First reading. Referred to Speaker's desk.
[HB 2496 INTRO]	Relating to energy conservation in public buildings; prescribing an effective date.	Includes battery storage in definition of "green energy technology." Defines "total contract price." Permits contracting agency, as alternative to including green energy technology in construction, reconstruction or major renovation of public building, to make expenditure to improve energy use efficiency in public building.	Energy and Environment (H)	03/26/19 - Public Hearing scheduled. 01/18/19 - Referred to Energy and Environment. 01/14/19 - First reading. Referred to Speaker's desk.
[HB 2497 INTRO]	Relating to green energy technology requirements for public buildings; prescribing an effective date.	Adds battery storage to definition of "green energy technology" for public buildings that are emergency shelters or facilities for public safety.	Energy and Environment (H)	01/15/19 - Referred to Energy and Environment. 01/14/19 - First

				reading. Referred to Speaker's desk.
HB 2501 INTRO	Relating to a task force on green energy corridors; prescribing an effective date.	Establishes Task Force on Green Energy Corridors.	Energy and Environment (H)	01/15/19 - Referred to Energy and Environment with subsequent referral to Ways and Means. 01/14/19 - First reading. Referred to Speaker's desk.
HB 2535 INTRO	Relating to disaster resiliency; prescribing an effective date.	Creates Task Force on Disaster Response and Recovery.	Veterans and Emergency Preparedness (H)	02/21/19 - Public Hearing held. 01/15/19 - Referred to Veterans and Emergency Preparedness with subsequent referral to Ways and Means. 01/14/19 - First reading. Referred to Speaker's desk.
HB 2536 INTRO	Relating to development of staging areas for emergency response.	Establishes Oregon Public Places Are Safe Places Investment Fund.	Veterans and Emergency Preparedness (H)	02/21/19 - Public Hearing held. 01/15/19 - Referred to Veterans and Emergency Preparedness with subsequent referral to Ways and Means. 01/14/19 - First reading. Referred to Speaker's desk.
HB 2581 INTRO	Relating to Columbia River Basin water; declaring an emergency.	Makes findings regarding Columbia River Basin.	Agriculture and Land Use (H)	01/18/19 - Referred to Agriculture and Land Use. 01/14/19 - First reading. Referred to Speaker's desk.
HB 2602 INTRO	Relating to vehicle electrification.	Modifies definitions of light-duty zero-emission vehicle and plug-in hybrid electric vehicle to include vehicles with at least three wheels.	Transportation (J)	01/15/19 - Referred to Transportation. 01/14/19 - First reading. Referred to Speaker's desk.
HB 2611 INTRO	Relating to the use of hydroelectric energy to comply with a renewable portfolio standard.	Specifies that electricity generated by hydroelectric facility or other equipment that generates electricity through use of hydroelectric energy may be used to comply with renewable portfolio standard.	Energy and Environment (H)	01/18/19 - Referred to Energy and Environment. 01/14/19 - First reading. Referred to Speaker's desk.

HB 2618 INTRO	Relating to solar incentives; prescribing an effective date.	Requires State Department of Energy to adopt by rule program for providing rebates for purchase, construction or installation of residential and commercial solar electric systems and paired solar and storage systems.	Energy and Environment (H)	03/26/19 - Work Session scheduled. 02/28/19 - Public Hearing held. 01/15/19 - Referred to Energy and Environment with subsequent referral to Ways and Means.
HB 2735 INTRO	Relating to emergency resilience; declaring an emergency.	Establishes Open Spaces Task Force on Emergency Preparedness.	Veterans and Emergency Preparedness (H)	02/21/19 - Public Hearing held. 01/25/19 - Referred to Veterans and Emergency Preparedness with subsequent referral to Ways and Means. 01/22/19 - First reading. Referred to Speaker's desk.
HB 2791 INTRO	Relating to energy facility siting; declaring an emergency.	Modifies cost recovery formula for site certificate holders.	Energy and Environment (H)	01/28/19 - Referred to Energy and Environment with subsequent referral to Ways and Means. 01/24/19 - First reading. Referred to Speaker's desk.
HB 2792 INTRO	Relating to energy facility siting.	Requires applicant for energy facility site certificate to obtain land use approval from local government.	Energy and Environment (H)	01/28/19 - Referred to Energy and Environment with subsequent referral to Ways and Means. 01/24/19 - First reading. Referred to Speaker's desk.
HB 2808 INTRO	Relating to clean technology sector development.	Requires Oregon Business Development Department to establish competitive clean technology sector development grant program.	Economic Development (H)	02/04/19 - Referred to Economic Development with subsequent referral to Ways and Means. 01/28/19 - First reading. Referred to Speaker's desk.
HB 2852 INTRO	Relating to community choice aggregation.	Authorizes local governments to form authorities for purpose of implementing community choice aggregation programs.	Energy and Environment (H)	02/04/19 - Referred to Energy and Environment with subsequent referral to Ways and Means. 02/04/19 - First reading. Referred to Speaker's desk.
HB 2855 INTRO	Relating to the Public Utility Commission.	Modifies general powers of Public Utility Commission.	Energy and Environment (H)	03/28/19 - Public Hearing scheduled. 02/04/19 - Referred to Energy and Environment. 01/31/19 - First

				reading. Referred to Speaker's desk.
HB 2857 INTRO	Relating to sustainable energy.	Requires eight percent of electricity sold in this state by each electric company that makes sales to 25,000 or more retail electricity consumers to be generated by small-scale renewable energy facilities or certain biomass facilities.	Energy and Environment (H)	03/26/19 - Public Hearing scheduled. 02/04/19 - Referred to Energy and Environment. 01/31/19 - First reading. Referred to Speaker's desk.
HB 2893 INTRO	Relating to an advisory committee on manufactured housing; prescribing an effective date.	Establishes advisory committee on manufactured housing within Housing and Community Development Department.	Human Services and Housing (H)	03/11/19 - Work Session held. 03/04/19 - Public Hearing held. 02/13/19 - Referred to Human Services and Housing with subsequent referral to Ways and Means.
HB 2894 INTRO	Relating to manufactured dwellings; prescribing an effective date.	Establishes program within Housing and Community Services Department to provide supplementary loans to individuals for new energy efficient manufactured dwellings.	Human Services and Housing (H)	03/11/19 - Work Session held. 03/04/19 - Public Hearing held. 02/13/19 - Referred to Human Services and Housing with subsequent referral to Ways and Means.
HB 2895 INTRO	Relating to manufactured dwellings; prescribing an effective date.	Establishes program within Housing and Community Services Department to provide grants for decommissioning and disposing of manufactured dwellings.	Human Services and Housing (H)	03/11/19 - Work Session held. 03/04/19 - Public Hearing held. 02/13/19 - Referred to Human Services and Housing with subsequent referral to Ways and Means.
HB 2896 INTRO	Relating to manufactured dwellings; prescribing an effective date.	Requires Housing and Community Services Department to provide loan to nonprofit corporation to develop program that supports manufactured dwelling park preservation and affordability for tenants.	Human Services and Housing (H)	03/11/19 - Work Session held. 03/04/19 - Public Hearing held. 02/13/19 - Referred to Human Services and Housing with subsequent referral to Ways and Means.
HB 3025 INTRO	Relating to carbon sequestration; declaring an emergency.	Requires State Forestry Department to establish Western Oregon Regional Carbon Sink as geographical area and take certain actions regarding area on or before January 1, 2031.	Natural Resources (H)	02/25/19 - Referred to Natural Resources. 02/21/19 - First reading. Referred to Speaker's desk.

HB 3027 INTRO	Relating to carbon sequestration.	Authorizes State Treasurer to issue general obligation bonds under Article XI-E of Oregon Constitution in amount that produces $500 million in net proceeds for Strategic Carbon Sequestration and Forestry Sustainability Program.	Revenue (H)	02/27/19 - Referred to Revenue with subsequent referral to Ways and Means. 02/21/19 - First reading. Referred to Speaker's desk.
HB 3045 INTRO	Relating to electric vehicle charging.	Requires local governments to allow residential or commercial development applications to provide one parking space with electric vehicle charging as substitute for two required nonelectrified spaces.	Energy and Environment (H)	03/21/19 - Public Hearing scheduled. 03/04/19 - Referred to Energy and Environment. 02/25/19 - First reading. Referred to Speaker's desk.
HB 3094 INTRO	Relating to Housing and Community Services Department programs; prescribing an effective date.	Establishes Home Weatherization, Retrofit and Affordability Program for Housing and Community Services Department to provide incentive payments to construction contractors undertaking energy improvement projects on residential structures.	Human Services and Housing (H)	03/18/19 - Work Session scheduled. 03/01/19 - Referred to Human Services and Housing with subsequent referral to Ways and Means. 02/26/19 - First reading. Referred to Speaker's desk.
HB 3111 INTRO	Relating to vehicle rebates; declaring an emergency.	Modifies provisions for reimbursement to administrator of electric vehicle rebates issued to recipients that sell vehicle or terminate lease before 24 months after purchase or beginning of lease.	Transportation (J)	03/04/19 - Referred to Transportation. 02/27/19 - First reading. Referred to Speaker's desk.
HB 3141 INTRO	Relating to transportation electrification.	Modifies and adds laws related to electric vehicle charging stations.	Energy and Environment (H)	03/28/19 - Public Hearing scheduled. 03/06/19 - Referred to Energy and Environment. 02/27/19 - First reading. Referred to Speaker's desk.
HB 3157 INTRO	Relating to residential alternative energy; prescribing an effective date.	Requires Director of Department of Consumer and Business Services to amend Low-Rise Residential Dwelling Code to require alternative energy collection or generation by December 15, 2020.	Energy and Environment (H)	03/06/19 - Referred to Energy and Environment. 02/28/19 - First reading. Referred to Speaker's desk.
HB 3211 INTRO	Relating to a cannabis business certification program; declaring an emergency.	Directs State Department of Agriculture to advance design of cannabis business certification program.	Economic Development (H)	03/13/19 - Public Hearing scheduled. 03/05/19 - Referred to Economic Development with subsequent referral to Ways and Means. 02/28/19 - First reading. Referred to Speaker's desk.

HB 3264 INTRO	Relating to manufactured dwelling parks.	Requires additional disclosures from manufactured dwelling park landlords to Housing and Community Services Department.	Human Services and Housing (H)	03/11/19 - Referred to Human Services and Housing. 03/04/19 - First reading. Referred to Speaker's desk.
HB 3274 INTRO	Relating to renewable energy.	Requires eight percent of electricity sold in this state by each electric company that makes sales to 25,000 or more retail electricity consumers to be generated by small-scale renewable energy facilities or certain biomass facilities.	Energy and Environment (H)	03/26/19 - Public Hearing scheduled. 03/11/19 - Referred to Energy and Environment. 03/04/19 - First reading. Referred to Speaker's desk.
HB 3313 INTRO	Relating to manufactured dwelling parks; prescribing an effective date.	Authorizes Housing and Community Services Department to provide grants to nonprofit to develop infrastructure for new manufactured dwelling park in Springfield, Oregon.	Human Services and Housing (H)	03/11/19 - Referred to Human Services and Housing with subsequent referral to Ways and Means. 03/04/19 - First reading. Referred to Speaker's desk.
HB 3322 INTRO	Relating to a tax credit for apprenticeships; prescribing an effective date.	Creates income tax credit for taxpayers that provide apprenticeship opportunities.	Revenue (H)	03/11/19 - Referred to Revenue. 03/04/19 - First reading. Referred to Speaker's desk.
HB 3324 INTRO	Relating to electric vehicle charging services.	Exempts funds collected through third party vendors for payment for electric vehicle charging services from certain laws relating to deposit of public funds.	Revenue (H)	03/11/19 - Referred to Revenue. 03/04/19 - First reading. Referred to Speaker's desk.
HB 3325 INTRO	Relating to net metering.	Requires public utility to meet certain requirements for processing applications from nonresidential customer-generators to interconnect to electric distribution system net metering facility that has generating capacity of more than 25 kilowatts but less than two megawatts.	Energy and Environment (H)	03/11/19 - Referred to Energy and Environment. 03/04/19 - First reading. Referred to Speaker's desk.
HB 5044 INTRO	Relating to the financial administration of the Oregon Climate Authority; declaring an emergency.	Appropriates moneys from General Fund to Oregon Climate Authority for biennial expenses.	Ways and Means (J)	01/23/19 - Assigned to Subcommittee On Natural Resources. 01/15/19 - Referred to Ways and Means. 01/14/19 - First reading. Referred to Speaker's desk.
HCR 9 INTRO	Supporting development of closed-loop pump storage projects.	Supports development of closed-loop pump storage projects.	Energy and Environment (H)	01/29/19 - Public Hearing held. 01/18/19 - Referred to Energy and Environment. 01/14/19 - First reading. Referred to Speaker's desk.

SB 38 INTRO	Relating to treatment of renewable energy certificates issued for the generation of thermal energy.	Modifies provisions for treatment of renewable energy certificates issued for generation of thermal energy.	Energy and Environment (H)	03/07/19 - Public Hearing held. 02/13/19 - Referred to Energy and Environment. 02/06/19 - First reading. Referred to Speaker's desk.
SB 82 INTRO	Relating to supportive services for registered apprenticeship programs.	Directs Bureau of Labor and Industries to establish program to provide supportive services for pre-apprenticeship and apprenticeship programs in this state.	Workforce (S)	01/15/19 - Referred to Workforce. 01/14/19 - Introduction and first reading. Referred to President's desk.
SB 89 INTRO	Relating to greenhouse gas emissions; declaring an emergency.	Requires Environmental Quality Commission to adopt by rule program for assessing net impacts of state policies and programs for reducing greenhouse gas emissions.	Environment and Natural Resources (S)	01/15/19 - Referred to Environment and Natural Resources. 01/14/19 - Introduction and first reading. Referred to President's desk.
SB 91 INTRO	Relating to public purpose expenditure standards.	Requires at least 50 percent of public purpose charge funds paid to nongovernmental entity to be invested in providing incentives to retail electricity customers for accelerating transportation electrification.	Environment and Natural Resources (S)	01/15/19 - Referred to Environment and Natural Resources. 01/14/19 - Introduction and first reading. Referred to President's desk.
SB 98 INTRO	Relating to renewable natural gas; prescribing an effective date.	Requires Public Utility Commission to adopt by rule renewable natural gas program for natural gas utilities to recover prudently incurred qualified investments in meeting certain targets for including renewable natural gas in gas purchases for distribution to retail natural gas customers.	Environment and Natural Resources (S)	03/14/19 - Work Session scheduled. 02/07/19 - Public Hearing held. 01/28/19 - Recommendation: Without recommendation as to passage and be returned to President's desk for referral. Referred to Environment and Natural Resources by order of the President.
SB 220 INTRO	Relating to greenhouse gas emissions.	Requires Department of Environmental Quality to conduct study related to greenhouse gas emissions.	Environment and Natural Resources (S)	01/15/19 - Referred to Environment and Natural Resources. 01/14/19 - Introduction and first reading. Referred to President's desk.
SB 267 INTRO	Relating to small scale local energy projects; declaring an emergency.	Transfers duties, functions and powers of State Department of Energy related to issuance of loans for small scale local energy projects to Oregon Business Development Department.	Environment and Natural Resources (S)	01/15/19 - Referred to Environment and Natural Resources. 01/14/19 - Introduction and first reading. Referred to President's desk.

SB 348 INTRO	Relating to conducting a cost-benefit analysis of low carbon fuel standards; prescribing an effective date.	Requires Division of Audits to hire or contract with independent, third-party entity to conduct cost-benefit analysis of low carbon fuel standards and associated rules.	Environment and Natural Resources (S)	01/15/19 - Referred to Environment and Natural Resources. 01/14/19 - Introduction and first reading. Referred to President's desk.
SB 451 INTRO	Relating to eligibility for renewable energy certificates.	Establishes eligibility for renewable energy certificates for facilities that generate electricity from direct combustion of municipal solid waste and became operational before January 1, 1995, if such facilities register with Western Renewable Energy Generation Information System at any time.	Environment and Natural Resources (S)	03/12/19 - Public Hearing held. 01/28/19 - Recommendation: Without recommendation as to passage and be returned to President's desk for referral. Referred to Environment and Natural Resources by order of the President. 01/25/19 - Work Session held.
SB 503 INTRO	Relating to the use of hydroelectric energy to comply with a renewable portfolio standard.	Specifies that electricity generated by hydroelectric facility or other equipment that generates electricity through use of hydroelectric energy may be used to comply with renewable portfolio standard.	Environment and Natural Resources (S)	01/16/19 - Referred to Environment and Natural Resources. 01/14/19 - Introduction and first reading. Referred to President's desk.
SB 504 INTRO	Relating to allowable green energy technology in public improvement contracts; prescribing an effective date.	Expands definition of "green energy technology" for purposes of public improvement contracts.	Environment and Natural Resources (S)	01/16/19 - Referred to Environment and Natural Resources. 01/14/19 - Introduction and first reading. Referred to President's desk.
SB 508 INTRO	Relating to the use of hydroelectric energy to comply with a renewable portfolio standard.	Specifies that electricity generated by hydroelectric facility or other equipment that generates electricity through use of hydroelectric energy may be used to comply with renewable portfolio standard.	Environment and Natural Resources (S)	03/07/19 - Public Hearing held. 01/16/19 - Referred to Environment and Natural Resources. 01/14/19 - Introduction and first reading. Referred to President's desk.
SB 598 INTRO	Relating to the Oregon Global Warming Commission.	Changes name of Oregon Global Warming Commission to Oregon Climate Change Commission.	Environment and Natural Resources (S)	01/17/19 - Referred to Environment and Natural Resources. 01/14/19 - Introduction and first reading. Referred to President's desk.

SB 636 INTRO	Relating to renewable natural gas; prescribing an effective date.	Requires Public Utility Commission to adopt by rule renewable natural gas program for natural gas utilities to recover prudently incurred qualified investments in meeting certain targets for including renewable natural gas in gas purchases for distribution to retail natural gas customers.	Environment and Natural Resources (S)	01/25/19 - Referred to Environment and Natural Resources. 01/22/19 - Introduction and first reading. Referred to President's desk.
SB 712 INTRO	Relating to the energy supplier assessment.	Reduces, to 0.15 percent, percentage of energy resource supplier's gross operating revenue that annual energy resource supplier assessment may not exceed.	Environment and Natural Resources (S)	01/30/19 - Referred to Environment and Natural Resources. 01/29/19 - Introduction and first reading. Referred to President's desk.
SB 713 INTRO	Relating to State Department of Energy.	Requires State Department of Energy to conduct study on department's contributions to leading State of Oregon to safe, clean and sustainable energy future.	Environment and Natural Resources (S)	01/30/19 - Referred to Environment and Natural Resources. 01/29/19 - Introduction and first reading. Referred to President's desk.
SB 714 INTRO	Relating to the Energy Facility Siting Council.	Requires State Department of Energy to conduct study related to Energy Facility Siting Council and report findings to interim committees of Legislative Assembly by September 15, 2021.	Environment and Natural Resources (S)	01/30/19 - Referred to Environment and Natural Resources. 01/29/19 - Introduction and first reading. Referred to President's desk.
SB 715 INTRO	Relating to the Energy Facility Siting Council.	Requires State Department of Energy to conduct study related to Energy Facility Siting Council and report findings to interim committees of Legislative Assembly by September 15, 2021.	Environment and Natural Resources (S)	01/30/19 - Referred to Environment and Natural Resources. 01/29/19 - Introduction and first reading. Referred to President's desk.
SB 902 INTRO	Relating to taxation; prescribing an effective date.	Declares policy of state to encourage sustainable growth by funding reduction of certain taxes with imposition of tax on amount of carbon dioxide equivalent emissions from combustion of certain carbon-based fuels.	Environment and Natural Resources (S)	03/01/19 - Referred to Environment and Natural Resources, then Finance and Revenue. 02/28/19 - Introduction and first reading. Referred to President's desk.
SB 928 INTRO	Relating to the Oregon Climate Authority; declaring an emergency.	Establishes Oregon Climate Authority.	Environment and Natural Resources (S)	03/19/19 - Public Hearing Scheduled. 03/06/19 - Referred to Environment and Natural Resources. 03/04/19 - Introduction and first reading. Referred to President's desk.

SB 929 INTRO	Relating to a tax credit for funding historic property project expense rebates; prescribing an effective date.	Creates tax credit for certified historic property project contributions.	Environment and Natural Resources (S)	03/06/19 - Referred to Environment and Natural Resources, then Tax Expenditures, then Ways and Means. 03/04/19 - Introduction and first reading. Referred to President's desk.
SCR 1 A	Declaring legislative support for closed-loop pump storage energy projects.	Declares legislative support for closed-loop pump storage energy projects.		03/12/19 - Second reading. 03/11/19 - Recommendation: Do adopt with amendments. (Printed A-Eng.) 03/07/19 - Work Session held.

Tab 3

Briefing Paper
CLEAResult Contract Extension Offer for Residential PMC Services

April 3, 2019

TABLE 1: 2018 Residential Sector Performance (Includes combined PMC, PDC Retail, and PDC EPS savings metrics)

Savings	Goal	Achieved	
	kWh	kWh	
PGE	37,379,453	39,857,717	107%
PAC	25,467,605	30,341,749	119%
	Therms	Therms	
NWN	2,479,440	2,490,414	100%
CNG	201,743	215,276	107%
AVI	222,510	253,387	114%
NWN-WA	199,880	210,373	105%

TABLE 2: 2018 PMC Performance (CLEAResult)

Savings	Goal	Achieved	
	kWh	kWh	
PGE	12,917,242	12,673,887	98%
PAC	10,487,242	13,043,869	124%
	Therms	Therms	
NWN	1,849,656	1,972,650	107%
CNG	144,583	146,579	101%
AVI	196,894	226,227	115%
NWN-WA	199,880	210,373	105%

Summary

Absent board objection, Energy Trust staff proposes to offer to extend the contract for the Residential (Oregon and Washington) program management contractor (PMC) with CLEAResult Consulting Inc. (CLEAResult) for the first of three potential one-year extension periods. The initial term of this contract is for two years, from January 1, 2018 to December 31, 2019; the first one-year extension would extend the contract through December 31, 2020. Staff have worked with CLEAResult to develop and implement a contractual scope of work to achieve Energy Trust's program objectives under this Residential program management contract. Monitoring CLEAResult's performance and results under this contract, Energy Trust has determined that, overall, CLEAResult's performance during the initial term of the PMC contract satisfies the extension criteria set forth in the contract.

Background

- Energy Trust's residential sector provides electric and gas energy-efficiency solutions for residential customers of single-family homes, manufactured homes and newly constructed homes. The program is delivered through program management contractor CLEAResult and through two program delivery contractors supporting retail promotions and EPS new construction offerings.
- In 2017, three residential programs were in place and delivered by three PMCs—Existing Homes, New Homes and Products. As a result of analysis conducted throughout 2016, and in anticipation of reductions to future savings opportunities across key measure categories, staff developed a revised model for delivering programs in 2018 and beyond. As a result, an RFP was issued in March 2017 for a single PMC and possibly one or more PDCs.
    - PMC services were defined as those which include management and delivery of Energy Trust program offerings through management of program operations, program development, program implementation, forecasting, marketing, outreach and customer service.
    - PDCs provide targeted, specific market-focused residential offerings, including increasing market adoption of retail products and newly constructed homes. PDCs would have smaller contracts focused solely on program implementation, not program management. PDCs should have demonstrated specialized experience and expertise driving certain technology or market-channel-specific offerings.
- In July 2017 (resolution 811), the board authorized a contract with CLEAResult for program management and delivery services with a first-year anticipated budget for 2018 of approximately $8,207,044 in delivery costs and actual and subsequent budget consistent with board-approved annual budgets and action plans.
    - The board approved 2019 EPS PDC delivery budget for Oregon in 2019 is $7,988,000 and draft 2020 delivery budget is $7,923,000. The Washington delivery budget for 2019 is $124,260 and the draft 2020 delivery budget is $119,519.
- The authorizing resolution provided for a contract with an initial term of two years and a provision allowing Energy Trust to offer contract extensions for up to three additional years if, in Energy Trust's sole discretion, Energy Trust determines that the PMC meets certain established performance criteria. The board resolution also directed staff to report to the board on the PMC's progress toward meeting contract extension criteria and recommend whether to extend the contract.
- Staff have reviewed CLEAResult's performance against the contract extension criteria and is recommending extending the contract for an initial one-year extension period. If the board does not object to the recommended extension, staff will offer to CLEAResult to extend the PMC contract term through December 31, 2020, consistent with the 2020 board-approved budget and action plans.

Extension Criteria Discussion

Energy Trust's contract with CLEAResult for delivery of Residential PMC services includes five extension criteria: Collaboration, Project Pipeline, Innovation, Teamwork, and Satisfactory Execution of Services. Staff have assessed PMC performance against the criteria and determined that the PMC has satisfactorily performed in this contract period. The remainder of this briefing paper describes PMC performance against these criteria and is based on 2018 energy savings achievement:

1. **Collaboration**
    a. Effectively supported program management needs in the first year of the new residential program model.
    b. Executed collaboration agreements and worked well with PDCs to deliver a unified residential program.
    c. Developed portfolio-wide budget/savings management tools.
    d. Worked with staff to support cities and municipalities, community based organizations, and community action agencies to leverage Energy Trust resources.

2. **Project Pipeline**
    a. Developed modeling tools to support five-year savings and expenditure analysis to support forecasting of future program needs and opportunities.
    b. Implemented strategies to expand customer participation leading to an increase of seven percent in Savings Within Reach; expansion of prior pilot effort to increase adoption of heat pumps in manufactured homes resulting in 120 units installed through a promotion using enhanced incentives; delivered support and promotion of manufactured homes replacements resulting in the siting of 14 units and demonstrated participation pathway for additional parks across the service territory; and increased installation of measures in single family rental homes by eight percent.
    c. Worked with distributors and market actors to increase recognized sales of heat pump water heaters by nearly 30% and for gas tank water heaters by over 50 percent.

3. **Innovation**
    a. Successfully developed 19 measures across the residential portfolio, demonstrating compliance with Energy Trust measure development standards.
    b. Managed pilots to test new technologies through contributions to pilot business briefs and execution of pilot delivery activities.
    c. Implemented a new offer that allowed customers to receive smart thermostat incentives through a coupon that can be used at participating retailers and reduces the price of a thermostat at the time of purchase.

4. **Teamwork**
    a. Effective working relationships and strong customer referrals to other Energy Trust programs, including Multifamily, Solar, and Existing Buildings.
    b. Strong work with Energy Trust staff to develop new initiatives and effectively manage customer concerns.

c. Successful representation and development of residential program needs across vendors and collaborating organizations.

5. Satisfactory Execution of Services

a. Program savings:
   i. Supported achievement of residential program portfolio-wide savings goals as demonstrated in Table 1. This reflects the combined efforts of PMC and PDC resources to achieve a balanced energy savings portfolio, savings achievement exceeding goal across all utility territories.
   ii. Achieved contract savings goals, as demonstrated in Table 2. This reflects PMC savings accomplishment for all utilities except for PGE, which varied slightly from goal, but was offset by the strong performance of PDC savings achievement.
b. Budget management
   i. Demonstrates strong understanding of budget management principles and delivered reliable expenditure forecasts.
c. Data management
   i. Aptitude for managing integration needs and how to work with Energy Trust systems.
   ii. Familiarity and competency in working with third party data systems
   iii. Supporting alignment of system data needs with future measure development needs and establishing project documentation requirements to meet financial compliance.
d. Customer & contractor services:
   i. Demonstrated understanding of Energy Trust customer service values, compliance with SLAs and use of current procedures and protocols to serve nearly 40,000 unique customers and process almost 27,000 incentive applications.
   ii. Maintained a high customer satisfaction rating while answering over 24,000 inbound calls across multiple Energy Trust phone numbers.
   iii. Effective field and trade representation including many staff members with historical knowledge and understanding of Energy Trust values and program requirements, leading to effective interactions with trade allies and participating non-trade ally contractors, including:
      1. Enrollment of 191 new trade allies in 2018.
      2. Large number of geographically prioritized field visits with trade allies.

Next Steps: Absent board objection, staff will offer to extend the Residential program management contract with CLEAResult, the Residential PMC, through December 31, 2020. If the board objects to offering an extension of this contract, then staff would immediately begin a new competitive bid process to secure Residential PMC services for calendar year 2020.

PINK PAPER

Briefing Paper
CLEAResult Contract Extension Offer for Retail PDC Services

April 3, 2019

TABLE 1: 2018 Residential Sector Performance (Includes combined PMC, PDC Retail, and PDC EPS savings metrics)

Savings	Goal	Achieved	
	kWh	kWh	
PGE	37,379,453	39,857,717	107%
PAC	25,467,605	30,341,749	119%
	Therms	Therms	
NWN	2,479,440	2,490,414	100%
CNG	201,743	215,276	107%
AVI	222,510	253,387	114%
NWN-WA	199,880	210,373	105%

TABLE 2: 2018 Retail PDC Performance

Savings	Goal	Achieved	
	kWh	kWh	
PGE	21,581,719	23,294,054	108%
PAC	14,247,572	16,004,346	112%
	Therms	Therms	
NWN	177,213	175,826	99%
CNG	6,495	8,046	124%
AVI	12,419	11,850	95%

Summary

Absent board objection, Energy Trust staff proposes an offer to extend the contract for the Residential (Oregon and Washington) retail program delivery contractor (PDC) with CLEAResult Consulting Inc. (CLEAResult) for up to one additional year. The initial term of this contract is for two years, from January 1, 2018 to December 31, 2019. Staff have worked with CLEAResult to develop and implement a contractual scope of work to achieve Energy Trust's program objectives under this retail program delivery contract. Monitoring CLEAResult's performance and results under this contract, Energy Trust has determined that, overall, CLEAResult's performance during the initial term of the PDC contract satisfies the extension criteria set forth in the contract.

Background

- Energy Trust's residential sector provides electric and gas energy-efficiency solutions for residential customers of single-family homes, manufactured homes and newly constructed homes. The program is delivered through Program Management Contractor CLEAResult and two Program Delivery Contractors supporting retail promotions and EPS new construction offerings.

- In 2017, three residential programs were in place and delivered by three PMCs—Existing Homes, New Homes and Products. As a result of analysis conducted throughout 2016 and in anticipation of reductions to future savings opportunities across key measure categories, staff developed a revised model for delivering programs in 2018 and beyond. As a result, an RFP was issued in March 2017 for a single PMC, and possibly one or more PDCs.
    - PMC services were defined as those which include management and delivery of Energy Trust program offerings through management of program operations, program development, program implementation, forecasting, marketing, outreach and customer service.
    - PDCs provide targeted, specific market-focused residential offerings, including increasing market adoption of retail products and newly constructed homes. PDCs would have smaller contracts focused solely on program implementation, not program management. PDCs should have demonstrated specialized experience and expertise with driving certain technology or market-channel-specific offerings.
- In July 2017 (resolution 812), the board authorized a contract with Ecova, Inc. for program delivery contractor (PDC) services in support of the retail midstream promotion portion of the Residential program, with a budget for 2018 of approximately $1,594,837 in delivery costs and actual and subsequent budget consistent with board-approved annual budgets and action plans. In January 2018, a portion of Ecova, Inc was acquired by CLEAResult Consulting Inc. As part of this ownership change, CLEAResult attained the contractual obligations associated with this PDC contract.
    - The board approved 2019 Retail PDC delivery budget for Oregon in 2019 is $1,343,000 and draft 2020 delivery budget is $719,140.
- The authorizing resolution provided for a contract with an initial term of two years and a provision allowing Energy Trust to offer contract extensions for up to three additional years if, in Energy Trust's sole discretion, Energy Trust determines that the PMC meets certain established performance criteria. The board resolution also directed staff to report to the board on the PMC's progress toward meeting contract extension criteria and recommend whether to extend the contract.
- Staff have reviewed CLEAResult's performance against the contract extension criteria and recommend extending the contract for up to one additional year. If the board does not object to the recommended extension, staff will offer to CLEAResult to extend the PMC contract term consistent with the 2020 board-approved budget and action plans.
- As a result of declining retail savings opportunities related to transformation of lighting, staff do not anticipate seeking additional extensions of this contract beyond this one. Much of the work performed in 2020 will focus on ending market offerings and transitioning relationships with our nearly 500 retail partners.

Extension Criteria Discussion

Energy Trust's contract with CLEAResult for delivery of retail PDC services includes five extension criteria: Collaboration, Project Pipeline, Innovation, Teamwork, and Satisfactory Execution of Services. Staff have assessed PMC performance against the following extension criteria and determined that the PMC has satisfactorily performed in this contract period. The remainder of this briefing paper describes PMC performance against these criteria and is based on 2018 energy savings achievement:

1. **Collaboration**: the PDC executed collaboration agreements and worked well with PMC to deliver a unified residential program, including retail subject matter expertise to support savings forecasts, reporting, measure development or updates, field staffing, program representation, and marketing needs.

2. **Project Pipeline**
    a. Supported analysis and outreach needs to continue delivery of market-wide retail lighting incentives and support for other retail needs through the end of 2019. In 2018, the program realized more than 5 million sales of LEDs and completed more than 4,700 field visits.
    b. Expanded retail midstream measures to include heat pumps, gas tank water heaters and clothes washers.

3. **Innovation**
    a. Provided key insights and analysis on lighting market activities and details to support updates to Energy Trust's measures, as well as growth of sales among tier 3 retailers.
    b. Leveraged retailer point-of-sale data of low cost and high-volume clothes washers (top loading) to target the best-selling, inefficient products. This new tactic has *shifted* sales to similarly priced, efficient options by increasing availability and eliminating the incremental cost of the lowest-priced efficient products.

4. **Teamwork**
    a. Effective working relationships and strong customer referrals to other Energy Trust program staff and the residential PMC.
    b. Successful representation and development of residential program needs with retailers and midstream partners.

5. **Satisfactory Execution of Services**
    a. Program savings:
        i. Supported achievement of residential program portfolio-wide savings goals as demonstrated in Table 1. This reflects the combined efforts of PMC and PDC resources to achieve a balanced energy savings portfolio; savings achievement exceeding goal across all utility territories.
        ii. Achieved contract savings goals around retail measures, dominated by retail lighting sales, as demonstrated in Table 2.
    b. Budget management:

   i. Demonstrated strong understanding of budget management principles and delivered reliable expenditure forecasts, with the year-end actual incentive expenditure landing within $5,000 of the Q3 forecast.

c. Data management:
   i. Strong competency in managing data across third-party and Energy Trust systems, highlighting effective relationships and oversight of collecting and transferring reporting requirements from over 500 retailers.

Next Steps: Absent board objection, staff will offer to extend the Residential program delivery contract with CLEAResult, for retail PDC services, for no longer than one additional year. Much of the work performed in 2020 will focus on ending current market offerings and transitioning relationships with retail partners. If the board objects to offering an extension of this contract, then staff would immediately begin a new competitive bid process to secure Residential PMC services for all or part of calendar year 2020.

PINK PAPER

Briefing Paper
TRC Contract Extension Offer for Residential PDC EPS New Construction Services

March 7, 2019

TABLE 1: 2018 Residential Sector Performance (Includes combined PMC, PDC Retail, and PDC EPS savings metrics)

Savings	Goal	Achieved	
	kWh	kWh	
PGE	37,379,453	39,857,717	107%
PAC	25,467,605	30,341,749	119%
	Therms	Therms	
NWN	2,479,440	2,490,414	100%
CNG	201,743	215,276	107%
AVI	222,510	253,387	114%
NWN-WA	199,880	210,373	105%

TABLE 2: 2018 EPS Performance (TRC)

Savings	Goal	Achieved	
	kWh	kWh	
PGE	2,880,492	3,889,776	135%
PAC	732,791	1,293,534	177%
	Therms	Therms	
NWN	452,571	341,938	76%
CNG	50,665	60,651	120%
AVI	13,197	15,310	116%
NWN-WA	61,675	73,222	119%

Summary

Absent board objection, Energy Trust staff proposes to offer to extend the contract for the Residential (Oregon and Washington) EPS Whole Home New Construction program delivery contractor (PDC) with TRC Consulting (TRC) for the first of three potential one-year extension periods. The initial term of this contract is for two years, from January 1, 2018 to December 31, 2019; the first one-year extension would extend the contract through December 31, 2020. Staff has worked with TRC to develop and implement a contractual scope of work to achieve Energy Trust's program objectives under this Whole Home New Construction program delivery contract. Monitoring TRC's performance and results under this contract, Energy Trust has determined that, overall, TRC's performance during the initial term of the PMC contract satisfies the extension criteria set forth in the contract.

Background

- Energy Trust's residential sector provides electric and gas energy-efficiency solutions for residential customers of single-family homes, manufactured homes and newly constructed homes. The program is delivered through Program Management Contractor CLEAResult and through two Program Delivery Contractors—CLEAResult supporting retail promotions and (TRC) delivering EPS new construction offerings.
- In 2017, three residential programs were in place and delivered by three PMCs—Existing Homes, New Homes and Products. As a result of analysis conducted throughout 2016 and in anticipation of reductions to future savings opportunities across key measure categories, staff developed a revised model for delivering programs in 2018 and beyond. As a result, an RFP was issued in March 2017 for a single PMC and possibly one or more PDCs.
    - PMC services were defined as those which include management and delivery of Energy Trust program offerings through management of program operations, program development, program implementation, forecasting, marketing, outreach and customer service.
    - PDCs provide targeted, specific market-focused residential offerings, including increasing market adoption of retail products and newly constructed homes. PDCs would have smaller contracts focused solely on program implementation, not program management. PDCs should have demonstrated specialized experience and expertise driving certain technology or market-channel-specific offerings.
- In July 2017 (resolution 813), the board authorized a contract with TRC for program delivery contractor (PDC) services in support of the Energy Performance Score (EPS) whole home new construction of the Residential program, with a first-year anticipated budget for 2018 of approximately $1,949,862 in delivery costs and actual and subsequent budget consistent with board-approved annual budgets and action plans.
    - The board approved 2019 EPS PDC delivery budget for Oregon in 2019 is $2,075,000 and draft 2020 delivery budget is $2,071,000. The Washington delivery budget for 2019 is $121,474 and the draft 2020 delivery budget is 129,075.
- The authorizing resolution provided for a contract with an initial term of two years and a provision allowing Energy Trust to offer contract extensions for up to three additional years if, in Energy Trust's sole discretion, Energy Trust determines that the PDC meets certain established performance criteria. The board resolution also directed staff to report to the board on the PDC's progress toward meeting contract extension criteria and recommend whether to extend the contract.
- Staff has reviewed TRC's performance against the contract extension criteria and is recommending extending the contract for an initial one-year extension period. If the board does not object to the recommended extension, staff will offer to TRC Consulting to extend the PDC contract term through December 31, 2020 consistent with the 2020 board-approved budget and action plans.

Extension Criteria Discussion

Energy Trust's contract with TRC for delivery of its Whole Home New Construction program contains five extension criteria: Collaboration, Project Pipeline, Innovation, Teamwork, and Satisfactory Execution of Services. Staff has assessed PDC performance against these extension criteria and determined that the PDC has demonstrated satisfactory progress. The remainder of this briefing paper describes PDC performance against these criteria and is based on 2018 energy savings achievement:

1. **Collaboration**
   a. PDC effectively took over responsibility for EPS delivery activities within the first quarter of 2018, executed collaboration agreements and worked well with PMC to deliver a unified residential program; and provided EPS expertise to support savings forecasts, reporting, measure development or updates, field staffing and program representation, and marketing needs.
2. **Project Pipeline**
   a. Effectively supported builders and market actors' transition to a new 2017 Oregon Residential Specialty Code and corresponding program requirements, demonstrated by valuable interactions with more than 200 builders.
   b. Achieved savings shown in Table 2, exceeding all goals except for NW Natural Gas which was impacted by a slower than anticipated builder adoption of the new code.
3. **Innovation**
   a. PDC integrated analysis of various market activities and introduced concepts in support of future program evolution, including.
      i. A market test called Integrated Early Design Assistance to engage builders and verifiers early in the construction process, this test continues into 2019 implementation.
      ii. Builder heat maps – allowing program staff and verifiers to visually identify geographic areas with high construction permit activity compared to program activity.
      iii. EPS Data Publication – cleaned, defined and anonymized three years of program data for publication on Energy Trust website, use cases implemented in 2019.
      iv. Quality Assurance Triage – develop a statistical regression protocol for EPS quality assurance that resulted in improved verifier experience and reduced staff time dedicated to QA.
4. **Teamwork**
   a. PDC staff successfully integrated into working relationships with Energy Trust staff with designated points of contact in key areas including program management, outreach, marketing, solar and incentive processing.

5. **Satisfactory Execution of Services**
    a. PDC staff successfully executed services related to program savings, budget management, data management and customer and contractor services.
    b. PDC maintained broad field representation in coordination with the PMC, resulting in a highly satisfactory customer and contractor experience that is in alignment with Energy Trust customer service values.
    c. PDC supported high penetration of market share of EPS homes among total new homes built within Energy Trust territory, as well as a meaningful quantity built in support of affordable housing and solar ready standards.
    d. PDC achieved milestones related to auditing and met established SLAs and utilizing current procedures and protocols.

Next Steps: Absent board objection, staff will offer to TRC to extend its Residential program delivery contract through December 31, 2020.

PINK PAPER

Board Decision
AUTHORIZING A CONTRACT FOR IRRIGATION MODERNIZATION PROGRAM MANAGEMENT

April 3, 2019

Summary

Authorize the executive director to negotiate and sign a contract with Farmers Conservation Alliance (FCA) providing up to $500,000 in Energy Trust funds per year for up to five years for the Irrigation Modernization program, which facilitates significant energy efficiency savings and new renewable energy projects. Under the contract FCA would conduct general program management and work to secure and leverage large-scale federal investments. FCA was selected through an RFQ process based on their abilities and proven track record of success in building and managing the Irrigation Modernization program.

Energy Trust's initial investments in Irrigation Modernization, through the efforts of FCA as our contractor, have created a new, significant opportunity to modernize irrigation infrastructure. As a result of large-scale federal funding that is now available, the coordination, communication, and partner development required to ensure successful project development and implementation now exceeds the scope and scale of the program's prior efforts.

Energy Trust staff believe it is critical for Oregon irrigation districts to secure the newly available federal investments, which require non-federal matching funds, to develop projects that can help to achieve Energy Trust's desired energy generation and energy efficiency outcomes. To support these outcomes Energy Trust staff developed an expanded scope of work for the contracted management of Irrigation Modernization program activities.

Background

- In late 2014, Energy Trust released an RFQ seeking a contractor to develop and manage a new initiative aimed at reducing pumping loads and installing new in-conduit hydropower projects through the modernization of agricultural water delivery infrastructure in Oregon. The resulting Irrigation Modernization program helps irrigation districts and the farmers they serve to partner with appropriate agency and community stakeholder groups to identify the values and goals they want to achieve in the future, quantify potential modernization benefits, and develop strategies for funding and implementation.

- Oregon's 6,500 farms typically receive water through open irrigation district canals that transport more than 480 billion gallons of water annually. Many of these open systems are over 100 years old. Not only are they deteriorating, many are inherently inefficient, losing up to 50% of the conveyed water to seepage or evaporation before reaching a farm, and incurring significant operation and maintenance costs.

- Historically, farmers and ranchers have upgraded their infrastructure on a piecemeal, project-by-project basis. This approach works at a small scale, but takes a relatively long time, does not effectively scale, and delays modernization benefits.

- An example of an irrigation modernization project: open canals are piped, conserving water previously lost to seepage and evaporation; gravity pressurizes piped water, eliminates pumps, saving energy and other costs. Surplus water pressure is used to produce in-conduit hydropower, with revenue helping to offset the costs of modernization. Energy Trust can claim energy savings and renewable energy.

- Eliminating canal water losses also enables more water to be both left in rivers and delivered to farms, improving drought resilience and eliminating pollutant runoff. River water temperatures can be improved and stream reaches can be restored by the elimination of diversion dams. Pressurized water enables on-farm irrigation upgrades, encourages investment in new farm equipment and infrastructure, and can shift production to higher-value crops, creating a virtuous cycle of local economic development benefits. When fires strike, pressurized water lines can be tapped by wildland firefighters.

- FCA was selected to perform the work outlined in the 2014 RFQ and has served as the contractor managing Irrigation Modernization program activities since that time. Energy Trust supports this work through two separate contracts: one for general program management (the focus of this document and resolution), and one to manage Project Development Assistance incentives used to help districts move through modernization planning processes. Since 2015, Energy Trust has invested between $200,000 and $350,000 annually for Irrigation Modernization program management.

- FCA's performance as our contractor has exceeded expectations while defining what Irrigation Modernization means in Oregon and nationally. Accomplishments include:

    - Participation from twenty-two irrigation districts across the state, representing over 20 percent of Oregon's total irrigated acreage, with additional districts expected to enroll in 2019.

    - Nine districts have completed initial planning processes, identifying 60,000 megawatt hours of energy savings and a potential 37 megawatts of in-conduit hydropower. If fully implemented, the plans would save over 500 cubic feet per second of water to restore Oregon rivers while increasing the reliability of agricultural water deliveries and producing an estimated $904 million in economic development benefits.

    - $2.8 million in federal funding was awarded to FCA to support public processes required to permit piping projects, complementing Energy Trust's Project Development Assistance funds used to generate planning materials required for permitting.

    - FCA secured an unprecedented $75 million for project implementation in central Oregon over the past three years through the USDA Natural Resources Conservation Service's Watershed Protection and Flood Prevention program (P.L. 83-566).

  - In Q4 2018 the Tumalo Irrigation District began replacing 8,500 feet of open canal with 7-foot diameter pipe, paid for with P.L. 83-566 funds. The district intends to pipe ten times as much canal in Q4 2019.

- Additional federal funding ($25-50 million annually) is expected to be available for five years. Irrigation districts participating in the modernization program are well positioned to apply for these funds. To be eligible requires securing non-federal matching funds equivalent to at least 25 percent of the total federal funding. Building sources of non-federal matching funds is critical for Energy Trust to achieve the savings and generation potential the program has identified.

- Energy Trust believes the co-benefits of modernization - water conservation, habitat restoration, economic development, etc. - are essential to developing additional funding support at scale. These benefits are valued within existing state programs managed by agencies such as the Oregon Department of Environmental Quality, though their Clean Water State Revolving Loan Fund, and other grant funds available through the Department of Water Resources and the Oregon Watershed Enhancement Board.

Discussion

To support the coordination, communication, and partner development required to build new sources of implementation funding, while also continuing to grow the program as described below, program management capacity beyond what can be achieved at current contractual funding levels is required. Staff are proposing to expand this funding to up-to $500,000 annually, for up-to five years, to support the following goals:

- Maintaining existing Irrigation Modernization program services with the goal of accelerating energy efficiency and renewable energy project implementation.
- Expanding participation to new districts to quantify the energy and non-energy benefits that can be captured through modernization.
- Extending the program more deeply into on-farm opportunities in coordination with Energy Trust's efficiency programs.
- Expanding communications to improve stakeholders' understanding of irrigation modernization benefits and to cultivate opportunities for development and implementation funding and partnerships.
- Tapping into P.L. 83-566 and other federal funding opportunities.
- Growing additional non-federal development and implementation funding to ensure all available federal implementation funds can be put to use.
- Building additional external funding support for Irrigation Modernization program management and project planning work to expand the reach of Energy Trust's funds.

Energy Trust issued an RFQ for the above program management services on February 5, 2019. Several engineering firms expressed interest but only FCA submitted a response.

Staff was not surprised by the single response. We are not aware of other entities with FCA's qualifications, skills and experience. Indeed, while the RFQ was open a federal agency began exploring a sole-source contract with FCA for modernization work in Nevada.

A staff team reviewed the FCA response and found that it clearly demonstrates FCA's qualifications, which are also apparent in its highly successful work to date. Staff judges FCA's rates to be reasonable. FCA's response included letters of support from the director of the Oregon Water Resources Department, the manager of Tumalo Irrigation District, the executive director of Oregon Water Resources Congress (an association of irrigation districts), and the executive director of Coalition for the Deschutes (a non-profit focused on river restoration). Staff have a high level of confidence in FCA and believe FCA is the best choice for managing this program.

Energy Trust staff wish to move forward in drafting and executing a new contract with Farmers Conservation Alliance in support of the goals and in accordance with the budget and term listed above. The funding required to support this work is available in the 2019 Other Renewables program budget.

Recommendation

Authorize the executive director to negotiate and sign a contract with Farmers Conservation Alliance for up to $500,000 in Energy Trust funds per year for up to five years for management of the Irrigation Modernization Program.

RESOLUTION 874
AUTHORIZING A CONTRACT WITH FARMERS CONSERVATION ALLIANCE FOR MANAGEMENT OF THE IRRIGATION MODERNIZATION PROGRAM

WHEREAS:

1. **Modernizing agricultural water delivery infrastructure creates significant opportunities for new, in-conduit hydroelectric projects and substantial electricity savings by eliminating irrigation pumping loads;**
2. **Farmers Conservation Alliance (FCA), as Energy Trust's contractor since 2015, has built a highly successful program supporting irrigation modernization;**
3. **FCA has attracted $75 million in federal funding for modernization projects in central Oregon, requiring a 25 percent non-federal match;**
4. **Energy Trust wishes to continue to grow the Irrigation Modernization Program to accelerate energy efficiency and renewable energy projects, penetrate more deeply into on-farm opportunities, and attract non-federal and federal funding to achieve these and other, non-energy benefits.**

It is therefore RESOLVED, that the board of directors of Energy Trust of Oregon, Inc. authorizes the executive director to negotiate and sign a contract with Farmers Conservation Alliance for Irrigation Modernization program management services consistent with, but not limited to, the following terms:

1. **An initial term of two years, with three potential one-year extensions.**
2. **A budget of up to $500,000 per year, not to exceed a total of $2.5 million over five years.**
3. **To achieve the following purposes (among others):**

- **Maintain existing program services with the goal of accelerating energy efficiency and renewable energy project implementation;**
- **Extend participation to new irrigation districts or similar agricultural water providers;**
- **Expand communications to improve stakeholders' understanding of irrigation modernization benefits and cultivate opportunities for development and implementation funding and partnerships;**
- **Expand non-federal development and implementation funding and partnerships;**
- **Grow external funding for program management and project planning;**
- **Integrate on-farm energy efficiency and renewable energy opportunities in coordination with Energy Trust programs;**
- **Seek federal funding for modernization activities, which is expected to be available under the P.L. 83-566 program over the next five years**.

Moved by: Seconded by:

Vote: In favor: Abstained:

Opposed: [list name(s) and, if requested, reason for "no" vote]

Tab 4

Board Decision R875
Amend the 2019 Budget and 2019-2020 Action Plan
April 3, 2019

Summary
Oregon will launch a Community Solar Program in 2019 and has selected and contracted with Energy Solutions to be the Community Solar Program Administrator. Energy Trust will act as a subcontractor to Energy Solutions through a professional services contract, providing program delivery services. The professional services contract between Energy Solutions and Energy Trust was finalized in March 2019, and revenues received pursuant to this professional services contract will result in modest changes to Energy Trust's board approved 2019 Budget and 2019-2020 Action Plan. If approved, this board resolution would amend the 2019 Budget and 2019-2020 Action Plan.

Background and Discussion
Senate Bill 1547 (Oregon's Clean Electricity and Coal Transition Plan) was passed by the Oregon Legislature in 2016 and included a directive to the Oregon Public Utility Commission to establish a Community Solar Program for Oregon customers of Portland General Electric, Pacific Power and Idaho Power. The Community Solar Program gives residential, industrial and commercial customers the option to buy or lease part of a community solar project and be credited through their electric bills for their portion of the energy generated. Energy Trust has relevant and unique technical program expertise to help administer the state's Community Solar Program, having successfully administered Oregon's energy efficiency and renewable energy programs since 2002.

In 2018, the State of Oregon selected a proposal for Community Solar Program Administrator that included Energy Solutions as primary delivery contract and Energy Trust as a subcontractor. Contract negotiations between the state and Energy Solutions occurred in late 2018 and early 2019, after the board of directors adopted Energy Trust's 2019 Budget and 2019-2020 Action Plan. In March 2019, Energy Solutions and the State of Oregon entered into a final Community Solar Program administration contract. Following finalization of that contract, Energy Solutions and Energy Trust finalized an agreement covering the terms and conditions of Energy Trust's role as a subcontractor to Energy Solutions, the Community Solar Program Administrator.

Throughout the course of contract negotiations between the state and Energy Solutions and Energy Solutions and Energy Trust, staff provided information to Energy Trust's board of directors at meetings of the Finance and Policy Committees and at an executive session of the board of directors on February 19, 2019.

The contract between Energy Solutions and Energy Trust is expected to result in additional 2019 revenues and expenditures for Energy Trust, thereby revising the board approved 2019 Budget and 2019-2020 Action Plan as detailed in the attached Income Statement, 2018 to 2020, Amended Budget and in the memo to the board's Finance Committee dated March 18, 2019 from Michael Colgrove, attached as ***Exhibit A***.

Recommendation

Approve amendments to the 2019 Budget and 2019-2020 Action Plan as described in the memo from Michael Colgrove to the board's Finance Committee dated March 18, 2019.

Board Decision

AMEND 2019 BUDGET, 2020 PROJECTION, 2019-2020 ACTION PLAN AND 2020 PROJECTION

April 3, 2019

RESOLUTION 875
AMEND 2019 BUDGET, 2019-2020 ACTION PLAN AND 2020 PROJECTION

BE IT RESOLVED that Energy Trust of Oregon, Inc. Board of Directors amends the Energy Trust 2019 Budget, 2020 Projection and 2019-2020 Action Plan as presented to the board at its meeting on December 14, 2018 to adjust for additional revenue and expenses arising out of Energy Trust's contract with Energy Solutions to provide program delivery services as a subcontractor to Energy Solutions in its role as Oregon Community Solar Program Administrator and as shown in the Energy Trust Income Statement 2018 to 2020 below.

Energy Trust of Oregon
Income Statement
2018 to 2020, Amended Budget

	Budget 2018	Forecast 2018	Budget 2019	Projection 2020
OREGON PPC REVENUE				
Public Purpose Funds-PGE	37,484,629	37,416,478	38,961,842	38,961,842
Incremental Funds - PGE	64,656,625	67,030,916	51,874,804	51,874,804
Public Purpose Funds-PacifiCorp	28,525,981	28,537,673	28,848,138	28,848,138
Incremental Funds - PacifiCorp	31,515,755	32,419,066	32,112,130	32,112,130
Public Purpose Funds-NW Natural	18,279,834	18,558,144	20,558,144	23,558,144
NW Natural - Industrial DSM	520,024	848,774	3,769,769	3,968,028
Public Purpose Funds-Cascade	2,167,052	2,167,052	2,915,331	2,915,331
Public Purpose Funds-Avista	1,156,870	1,325,134	2,091,870	2,091,870
Total Oregon PPC Revenue	**184,306,770**	**188,303,236**	**181,132,028**	**184,330,287**
NW Natural - Washington	2,466,148	2,428,171	2,194,160	2,542,487
Community Solar Revenue			355,063	546,896
Revenue from Investments	230,000	600,000	600,000	600,000
Total Other Sources of Revenue	**2,696,148**	**3,028,171**	**3,149,223**	**3,689,383**
TOTAL REVENUE	**187,002,918**	**191,331,407**	**184,281,250**	**188,019,670**
EXPENSES				
Incentives	111,030,753	103,770,760	109,121,220	96,793,877
Program Delivery Subcontracts	58,297,400	58,552,327	61,771,050	59,553,160
Employee Salaries & Fringe Benefits	13,608,430	13,375,998	14,546,606	15,742,300
Agency Contractor Services	1,536,000	1,417,420	1,927,964	1,315,248
Planning and Evaluation Services	4,028,074	3,147,643	3,702,872	3,193,872
Advertising and Marketing Services	2,832,975	2,746,975	3,195,450	2,946,500
Other Professional Services	4,596,049	3,142,084	4,771,018	5,066,672
Travel, Meetings, Trainings & Conference	476,550	451,994	470,440	478,066
Dues, Licenses and Fees	220,091	230,632	253,683	238,183
Software and Hardware	515,379	455,280	526,989	581,291
Depreciation & Amortization	522,465	396,000	264,647	294,978
Office Rent and Equipment	1,054,433	1,054,433	1,059,933	1,060,570
Materials Postage and Telephone	138,650	135,976	137,450	138,355
Miscellaneous Expenses	4,500	4,712	4,500	4,500

TOTAL EXPENSES	**198,861,753**	**188,882,235**	**201,753,820**	**187,407,566**
TOTAL REVENUE LESS EXPENSES	**(11,858,836)**	**2,449,172**	**(17,472,570)**	**612,104**

Moved by: Seconded by:

Vote: In favor: Abstained:
Opposed:

Exhibit A

MEMO

Date: March 18, 2019

To: Board of Directors, Finance Committee

From: Michael Colgrove, Executive Director

Subject: Amended 2019 Budget and 2019-2020 Action Plan based on subcontract with Community Solar Program Administrator

This memo summarizes changes to Energy Trust of Oregon's 2019 Budget and 2019-2020 Action Plan based on Energy Trust's subcontract with Energy Solutions, the primary delivery contactor selected by the State of Oregon to administer Oregon's Community Solar Program. The program is funded by new revenue that is separate from utility customer public purpose funding directed to Energy Trust for energy efficiency and renewable energy programs. Energy Trust's 2019 budget is amended to represent these minimal changes to revenues and expenditures.

Senate Bill 1547 (Oregon's Clean Electricity and Coal Transition Plan) was passed by the Oregon Legislature in 2016 and included a directive to the Oregon Public Utility Commission to establish a Community Solar Program for Oregon customers of Portland General Electric, Pacific Power and Idaho Power. Costs associated with the startup of the Community Solar Program are recoverable in utility rates. The ongoing costs to administer the program will be collected from participants.

The Community Solar Program gives residential, industrial and commercial customers the option to buy or lease part of a community solar project and be credited through their electric bills for their portion of the energy generated. Community solar is well suited to customers who face barriers to putting solar panels on their own roofs, including renters and people who cannot afford to purchase their own panels.

The program aligns with Energy Trust's mission and strategic plan. Energy Trust has relevant and unique technical and program expertise to help administer the state's Community Solar Program, having successfully administered Oregon's energy efficiency and renewable energy programs since 2002.

In 2018, the State of Oregon selected a proposal for Community Solar Program Administrator that included Energy Solutions as primary delivery contractor and Energy Trust as a subcontractor. Contract negotiations between the state and Energy Solutions occurred in late 2018 and early 2019, after the board of directors adopted Energy Trust's 2019 Budget and 2019-2020 Action Plan.

Energy Trust's Role as Subcontractor to the Community Solar Program Administrator

Energy Trust will act as a subcontractor to the Community Solar Program Administrator through a professional services arrangement. Participating in the program as a subcontractor, rather than a primary administrator, leverages Energy Trust's expertise in program development, solar project review and verification, consumer protection and customer service, while minimizing

Energy Trust's investment in and potential risk associated with developing a new revenue collection model and developing a new software platform.

Revenue is based on negotiated rates for each staff position, plus other direct expenses.

As a subcontractor, Energy Trust will lead Community Solar Program project certification activities, including application review, installation verification, and registration and oversight of project developers. Energy Trust will also lead the customer service and consumer protection aspects of the program and advise on program design and continuous improvement.

During the startup phase, services will be provided by existing, experienced employees to ensure a fast start. Duties normally performed by these staff will be backfilled temporarily by contractors. Two new employees will be hired after the initial startup phase is complete. As they come on board, they will relieve the existing employees working on startup. A program manager will be hired after initial startup work has been completed, followed by an assistant or coordinator. New employees will be eligible to participate in Energy Trust benefits and staff retention programs, like any other employee.

The Community Solar Program budget shown below is fully loaded with a share of facilities, IT, management and communications support. These support costs are allocated to the Community Solar Program using a fair and equitable method that allocates costs across all programs in proportion to key drivers such as staff hours working on those programs. Energy Trust is taking every step possible to account for public purpose charge funds and Community Solar Program funds separately to ensure that no funder will subsidize the costs of any other funder.

In 2020, the program will operate at scale, and the two new employees will be full time. Existing staff will contribute to the program at a reduced level once the new employees take over operations. Program oversight and specialty skills will continue to be provided by existing staff and accounted for in time-keeping.
Non-employee direct expenses include a subcontract for a call center and a technical solar verifier.

Community Solar Program Budget in **c**alendar **y**ears 2019 and 2020
The following table shows the Community Solar Program revenue, expenditures and contribution to net assets (sometimes called reserves) on a full accounting basis, including staff and infrastructure costs shifted from existing programs. In 2019, the Community Solar Program will produce an increase in assets of $111,020, and in 2020 the program will produce an increase in net assets of $88,564.

	2019	2020
Revenue	$ 355,063	$ 546,896
Employee Salaries and Fringe Benefits	$ 164,892	$ 281,749
All Other Expenses	$ 79,151	$ 176,583
Total Expenditures	$ 244,043	$ 458,332
Change in Net Assets	$ 111,020	$ 88,564

Impact on Energy Trust's Final Approved 2019 Budget and 2019-2020 Action Plan

During the startup phase, costs for existing employees in these positions have been reallocated to the Community Solar Program. Three employees will provide a significant level of service, and their regular duties will be partially backfilled by contractors. The contractor costs to backfill for their regular duties will be attributed to the existing business.

During the operations phase of the program, services will be primarily provided by the two new employees, with existing staff contributing specialty skills and oversight at a greatly reduced level.

The introduction of the Community Solar Program does not impinge on Energy Trust's ability to deliver its primary energy efficiency and renewable energy programs under its grant agreement with the Oregon Public Utility Commission and achieve board-approved savings and generation goals.

Impact on Energy Trust's Staffing Costs Under the OPUC Performance Metric

The new program absorbs some staffing, management and indirect costs currently attributed to public purpose charge-funded energy efficiency and renewable energy programs overseen by the OPUC under the grant agreement. The net decrease in staffing for public purpose charge-funded energy efficiency and renewable energy programs overseen by the OPUC reduces Energy Trust's estimated staffing costs slightly from 6.97 percent to 6.95 percent in 2019, and 7.43 percent to 7.40 percent in 2020. When rounded for reporting, the change in the reported metric is not visible.

Detailed changes to the Budget in Calendar Years 2019 and 2020

The following tables illustrate that expenditures for the combined organization will increase by $100,976 in 2019 and $300,077 in 2020. The tables also illustrate how costs for staff and support are absorbed by the Community Solar Program and will reduce costs for existing programs.

2019

	Community Solar	Energy Trust excluding Community Solar	Combined Organization
Detail of changes in budgeted expenditures			
Final Approved Budget	$ -	$ 201,652,844	$ 201,652,844
Reallocated existing staff	$ 123,665	$ (123,665)	$ -
Reallocated management and support	$ 58,702	$ (58,702)	$ -
Contractors to Backfill in Org	$ -	$ 39,300	$ 39,300
New Staff for Community Solar	$ 41,227		$ 41,227
New Community Solar Program Expense	$ 20,449		$ 20,449
Summary of Changes	$ 244,043	$ (143,067)	$ 100,976
Amended Final Approved Budget	**$ 244,043**	**$ 201,509,777**	**$ 201,753,820**

2020	Community Solar	Energy Trust excluding Community Solar	Combined Organization
Detail of changes in budgeted expenditures			
Final Approved Budget	$ -	$ 187,106,589	$ 187,106,589
Reallocated existing staff	$ 67,168	$ (67,168)	$ -
Reallocated management and support	$ 103,464	$ (103,464)	$ -
Contractors to Backfill in Org	$ -	$ 13,277	$ 13,277
New Staff for Community Solar	$ 214,581		$ 214,581
New Community Solar Program Expense	$ 73,119		$ 73,119
Summary of Changes	$ 458,332	$ (157,355)	$ 300,977
Amended Final Approved Budget	$ 458,332	$ 186,949,234	$ 187,407,566

Cash Flow Considerations

Energy Trust will invoice monthly for time and materials. The agreement with the primary contractor is for payment in arrears. It could take as long as 60 days to receive the funds for each monthly invoice. Energy Trust funds usually invested to earn interest will be utilized to cover expenditures while awaiting monthly payment, until Community Solar Program funds have built up enough reserves that this is no longer necessary.

Recognizing that Energy Trust will lose the benefit of some interest income during this period, the displaced interest income will be carefully tracked and returned to the contingency fund annually, at the time unrestricted interest income is redistributed. This interest replacement is estimated to be approximately $1,100 a year because the program is small and interest rates are low. Energy Trust discloses interest attribution annually in the financial statements provided to the board of directors and submitted to the OPUC. The annual statements are posted on Energy Trust's website at www.energytrust.org/reports. Energy Trust is committed to avoiding cross-subsidization in every way we can.

Tab 5

Compensation Committee Meeting Minutes

February 14, 2019

Attending by Teleconference:
Roger Hamilton, Compensation Committee Member, ex officio

Attending at Energy Trust office:
Mark Kendall, Roland Risser, Compensation Committee Members
Michael Colgrove, Debbie Menashe, Whitney Winsor, Cheryle Easton, Energy Trust staff

Others attending:
Jeff Gates, Cable Hill Partners
Ann Konrad, Principal Financial

Meeting started at 2:00 pm

Retirement Plan Quarterly Fiduciary Investment Review

Jeff Gates of Cable Hill Partners and Ann Konrad of Principal Financial were present at the meeting to provide a quarterly fiduciary investment review to the committee. Jeff's presentation covered the fourth quarter of 2018 and included comments on the year as a whole.

Although 2018 returns generally reflect a continuing positive investment market, quarter 4 of 2018 was not a positive quarter in terms of investment performance. The market experienced volatility in ways it hadn't for a long time. Bonds and cash fared best, with value stocks outperforming growth stocks. Jeff presented specific information on the performance of the Energy Trust retirement plan funds, which experienced losses consistent with the market. Jeff noted that even one month into the first quarter of 2019, these losses are recovered as the market has recovered. Jeff also noted that Energy Trust retirement plan funds are maintained in a diversified portfolio to hedge against volatility like that experienced in the last quarter of 2018.

Jeff then reviewed the scorecard methodology used by Cable Hill Partners to evaluate Energy Trust's retirement plan funds. For the third consecutive quarter, the TIAA-CREF Social Choice Eq Instl fund scored 6. Funds scoring at six or below are placed on a watchlist for four consecutive quarters or four of five consecutive quarters. Those remaining at six or below would be suggested for removal from the available fund investment lineup. Jeff explained that if the fund is performing well its low score is related primarily to manager fees and risk, which are higher than the benchmarks applied by the scorecard.

The committee agreed to continue watching this fund, noting that it is a social equity fund of interest to Energy Trust's plan participants. Jeff noted that the Principal platform is dynamic, and Cable Hill Partners will continue to monitor the platform for alternative socially conscious investment funds and will keep the committee informed.

Ann then gave the committee a high-level summary of the distribution of plan investments and a snapshot of “retirement wellness,” a measure of participation level, disaggregated by age of participation. Generally, Energy Trust’s participant “retirement wellness” is good as compared to the comparison benchmark used by Principal Financial. The plan is the source of a relatively small number of employee loans.

While the plan currently has a good participation rate, the contribution rates are holding steady. Ann discussed ways to help employees consider saving more by deferring to the retirement plan. Ideas discussed were communications around the annual performance review merit increase awards. Debbie and Whitney agreed to work on such communications. Another approach is to amend the 401K plan document to provide for an automatic contribution increase, with the ability for employees to opt out. Automatic increases could be timed to coincide with annual merit increases. Currently, employees must affirmatively make a change to increase their contribution. To preserve the plan’s IRS safe harbor status, the plan could not be amended until January 1, 2020, but the committee suggested that staff discuss whether this is an approach to consider in 2020. Debbie and Whitney are interested in continuing discussions on this.

Investment Policy Statement Discussion

A draft Investment Policy Statement was distributed to committee members prior to the meeting for review. Jeff Gates and Cable Hill Partners recommended that Energy Trust adopt an Investment Policy Statement (an “IPS”). An IPS is considered best practice and is a high-level description of the parameters and objectives of the organization’s fiduciary investment responsibilities. The IPS is intended to assist the retirement plan’s fiduciaries by establishing nonbinding guidelines for making investment-related decisions in a prudent manner. It outlines the underlying philosophies and processes for the selection, periodic monitoring and evaluation of the investment options offered by an organization’s retirement plan.

Committee members discussed the draft and proposed some modest revisions. Debbie agreed to circulate the draft IPS by email for committee input. If, after such circulation, there is a consensus to move forward with the IPS, committee members will propose the IPS to the full board for approval at its next meeting, scheduled on April 3, 2019.

Meeting adjourned at 3:30 p.m.

Next Compensation Committee Meeting: April 24, 2019, at 2:00 p.m.

PINK PAPER

Board Decision R876
Adopting an Investment Policy Statement
April 3, 2019

Summary

Adopt the Energy Trust of Oregon, Inc. 401(k) Plan Investment Policy Statement, as proposed by Cable Hill Partners, Energy Trust's retirement plan investment advisor and approved by Energy Trust's board Compensation Committee. The Compensation Committee, which has fiduciary oversight for Energy Trust's retirement plans, including its 401(k) plan, recommends adopting an Investment Policy Statement to assist in oversight of the 401(k) plan.

Background

Cable Hill Partners first introduced a draft investment policy statement to the Energy Trust Compensation Committee in 2018. At its committee meeting on February 14, 2019, Jeff Gates of Cable Hill Partners guided the committee through the draft statement and took questions from committee members. The investment policy statement presented for review to the committee provides nonbinding guidelines for making investment related decisions in a prudent manner. This document is high level and outlines the approach of the committee in its work with Cable Hill Partners and The Principal, the team advising on and maintaining Energy Trust's 401(k) plan. A copy of the draft plan, proposed for adoption, is attached to this briefing paper and resolution.

Discussion

The proposed investment policy statement is high level and nonbinding. It does not constitute a contract and is not a statement of mandatory requirements. The statement provides general principles and guidelines for fiduciary review and consideration investment option selection, retention and replacement, among other things. The Compensation Committee reviewed the draft investment policy statement and proposed some modest revisions to delete any references to any company stock investment because Energy Trust, as a not-for-profit corporation does not have company stock. The statement attached reflects these revisions. The Compensation Committee recommends adoption of the attached draft Investment Policy Statement to guide its fiduciary oversight of the Energy Trust 401(k) plan.

Recommendation

Adopt the Energy Trust of Oregon 401(k) Plan Investment Policy Statement as shown in the attached.

Board Decision
ADOPT AN INVESTMENT POLICY STATEMENT
Adopted: April 3, 2019

RESOLUTION #876

WHEREAS:

1. **Energy Trust sponsors a defined contribution plan 401(k) Retirement Plan (the Plan) for the benefit of its employees and their designated beneficiaries.**
2. **Energy Trust, acting through its board of directors and the board's Compensation Committee, has fiduciary oversight responsibility of the Plan.**
3. **At its February 14, 2019 Compensation Committee meeting, the committee reviewed and discussed an Investment Policy Statement presented by Cable Hill Partners, a certified financial advising firm engaged by Energy Trust to provide retirement plan investment and oversight support.**
4. **The Investment Policy Statement presented is intended to assist the Energy Trust board as fiduciary, acting through its Compensation Committee, by establishing nonbinding guidelines for making investment-related decisions with respect to the Plan.**
5. **The Compensation Committee reviewed and discussed the proposed Investment Policy Statement and proposed some modest revisions to align the Investment Policy Statement with Energy Trust's not-for-profit structure.**
6. **With the revisions proposed, Energy Trust's Compensation Committee recommends that the board adopt an Investment Policy Statement in the form attached to this resolution document.**

IT IS THEREFORE RESOLVED: That Energy Trust of Oregon, Inc., Board of Directors adopts the Investment Policy Statement attached hereto as Exhibit A.

Moved by:

Seconded by:

Vote:
In favor:

Abstained:

Opposed:

Adopted on April 3, 2019, by Energy Trust of Oregon, Inc., Board of Directors.

Exhibit A

Energy Trust of Oregon 401(k) Plan
Investment Policy Statement

Adopted by Energy Trust of Oregon, Inc. Board of Directors

April 3, 2019

Part I. THE PLAN

The **ENERGY TRUST OF OREGON** ("Company") sponsors a defined contribution plan (the "Plan") for the benefit of its employees and their designated beneficiaries. The Company will appoint a Committee to fulfill the Company's fiduciary duties in regards to Plan investments. The Plan is intended to provide participating employees the ability to create long-term accumulation of savings through contributions to individual participant accounts and the earnings thereon.

The Plan is a qualified employee benefit plan intended to comply with all applicable federal laws and regulations, including section 401(a) of the Internal Revenue Code of 1986, as amended, and the Employee Retirement Income Security Act of 1974 (ERISA), as amended. In addition, the Plan is intended to comply with ERISA Section 404(c) and applicable Department of Labor regulations.

The Plan's participants and beneficiaries are expected to have different investment objectives, time horizons and risk tolerances. To meet these varying investment needs, participants and beneficiaries will be able to direct their account balances among a range of investment options to construct diversified portfolios that reasonably span the risk/return spectrum. Participants and beneficiaries alone bear the risk of gains or losses of their investment options and their asset allocation.

Part II. THE PURPOSE OF THE INVESTMENT POLICY STATEMENT

This Investment Policy Statement is intended to assist the Plan's fiduciaries by establishing nonbinding guidelines for making investment-related decisions in a prudent manner. It outlines the underlying philosophies and processes for the selection, periodic monitoring and evaluation of the investment options offered by the Plan.

Specifically, this Investment Policy Statement:

- Defines the Plan's investment objectives.
- Defines the roles of those responsible for the Plan's investments.
- Describes the criteria and procedures for selecting the investment options.
- Establishes investment procedures, measurement standards and monitoring procedures.
- Describes potential corrective actions the Committee can take should investment options (or their respective managers) fail to satisfy established objectives, if the Committee determines that such actions are prudent and advisable given the circumstances.
- Describes the types of educational materials to be provided to Plan participants and beneficiaries.
- Describes certain fiduciary obligations and related applicable laws and regulations.

The guidelines provided in this Investment Policy Statement do not constitute a contract. These guidelines are also not meant to be a statement of mandatory requirements. Rather, these guidelines are only an explanation of general principles and guidelines being currently applied for investment option selection, retention and replacement. Furthermore, these guidelines are not the sole factors considered by the Committee in the process. This Investment Policy Statement is not intended to, and shall not be deemed to expand the fiduciary duties of the Committee, or its individual members, or to create duties that do not exist under ERISA.

This Investment Policy Statement will be reviewed periodically, and, if appropriate, may be amended by the Committee at any time to reflect changes in the capital markets, Plan objectives, or other factors relevant to the Plan.

Part III. INVESTMENT OBJECTIVES

The Committee will select the Plan's investment options based on criteria deemed relevant, from time to time, by the Committee. These criteria may include, but are not limited to, the following:

- Maximization of return within reasonable and prudent levels of risk.
- Provision of returns comparable to returns for similar investment options.
- Provision of exposure to a wide range of investment opportunities in various asset classes and vehicles.
- Control administrative and management fees.
- Provision of appropriate diversification within investment vehicles.
- Investment's adherence to stated investment objectives and style.

Part IV. ROLES AND RESPONSIBILITIES

Subject to the terms of the Plan document, the Committee is responsible for selecting the trustee(s); hiring the recordkeeper; hiring the investment consultant; selecting the investment options, and selecting an investment(s) for default(s) when a participant or beneficiary fails to provide investment direction. The Committee is also responsible for:

- Establishing and maintaining the Investment Policy Statement.
- Periodically evaluating the Plan's investments' performances and considering investment option changes.
- Periodically monitoring the performance and fees charged by service providers.
- Periodically monitoring any other Plan fees.
- Periodically monitoring Plan participant interests and concerns on Plan services and investment options.
- Providing for Plan participant investment education and communication.

In executing its responsibilities, the Committee will make decisions in accordance with all applicable fiduciary standards of ERISA Section 404(a) as follows:

- Solely in the interest of Plan participants and beneficiaries, for the exclusive purpose of providing Plan benefits and defraying reasonable administrative fees;
- With the care, skill, prudence and diligence under the circumstances then prevailing that a prudent person acting in like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and of like aims; and
- In accordance with the documents and instruments governing the Plan insofar as such documents and instruments are consistent with the provisions of ERISA.

All investments selected by the Committee are intended to meet requirements of ERISA section 404(c).

Part V. MONITORING OF SERVICE PROVIDERS

Service providers should be monitored on an ongoing and regular basis. Administrative and/or recordkeeping service providers may be benchmarked against, but not limited to, industry averages and/or other provider quotes. Monitoring for these service providers should include, but not be limited to, an evaluation of the provider's:

- Investment offerings and services
- Recordkeeping technology and services
- Compliance services and support
- Technology
- Participant access and communications
- Fees

The ongoing monitoring of the Plan's service providers is to ensure that total Plan fees, services and investment opportunities are competitive and reasonable.

Investment consultant service providers (Plan and participant level) should be monitored regularly and the evaluation should include, but not be limited to, consideration of the provider's:

- Investment due diligence processes
- Fiduciary guidance and services
- RFP/Benchmarking scope and services
- Technology
- Participant-level access, communications and advice (if applicable)
- Fees

Part VI. SELECTION OF INVESTMENT OPTIONS

The selection of investment options offered under the Plan is among the Committee's most important responsibilities. Set forth below are the considerations and guidelines that the Committee should employ in fulfilling this fiduciary responsibility.

The Plan intends to provide an appropriate range of investment options that, in the aggregate, will allow Plan participants to construct portfolios consistent with their unique individual circumstances, goals, time horizons and tolerance for risk. The Plan will make available to participants at a minimum, at least three broadly diversified investment options, each of which shall offer materially different risk and return characteristics and which in the aggregate are sufficient in permitting the participants, by choosing among them, to materially affect the potential return and degree of risk on their accounts, as well as minimizing the risk of large losses within the range normally appropriate for the participant, in accordance with the requirements of ERISA Section 404(c). The Committee, shall be responsible for the Plan-level investment selection process, as set forth in this Investment Policy Statement, but cannot guarantee investment results for any selected investment option.

Major asset classes to be considered may include, but are not limited to:

Conservative Investments

Cash and liquid investments including, but not limited to, money market, stable value and guaranteed interest accounts.

Income Investments

Income oriented investments including, but not limited to, low, medium and high-quality bond investments, with short, intermediate and/or long-term duration. Management styles may be indexed and actively managed international, global and domestic styles.

Equity Investments

Investments that invest in equity securities, both domestic and foreign, including, but not limited to, small, medium and large market capitalization, with value, blend and growth investment objectives, which may be actively managed or indexed.

Asset Allocation Investments

Investments or accounts that invest in a combination of conservative, income and equity investments, "fund of funds" accounts combining several of the above investments into one or a series of investments, and "manager of managers" accounts combining several different investment styles and fund managers into one account or a series of accounts.

Other Investments

In addition to the foregoing major assets classes, the Committee may also consider other appropriate investments in other styles or asset classes offered through vehicles such as commingled trusts, insurance company separate accounts through a group annuity contract and mutual funds. Notwithstanding the foregoing, the Committee may consider, but is not required, to include in the investment menu any specific investment asset class, option or style.

After considering the desired asset classes, the Committee will evaluate and choose the appropriate investment option(s) desired to be offered by the Plan's investment menu. If an investment manager (responsible for the underlying investment vehicle, such as a mutual fund, commingled account, collective trust or separate account) is chosen as a potential investment option, the following minimum criteria should be considered:

1. The investment manager should be a bank, insurance company, investment management, mutual fund company or an investment adviser registered under the Investment Advisers Act of 1940;
2. The investment's manager should operate in good standing with regulators and clients, with no material pending or concluded legal actions against it; and
3. All relevant quantitative and qualitative information on the manager and investment should be made available by the manager and/or vendor.

In addition to the minimum criteria above, the Committee should consider the following standards for selection of all investments:

1. Investment performance should be competitive with an appropriate style-specific benchmark and the median return for an appropriate, style-specific peer group (where appropriate and available, long-term performance of an investment manager may be inferred through the performance of another investment with similar style attributes managed by such investment manager);
2. Specific risk and risk-adjusted return measures should be reviewed by the Committee and be within a reasonable range relative to appropriate, style-specific benchmark and peer group;
3. The investment should demonstrate adherence to the stated investment objective, without excess style drift over trailing performance periods;
4. Fees and fee structures should be competitive compared with similar investments reasonably available to the Plan; part of this examination includes a review of the proper use of investment-generated fees (and related revenue) to offset Plan recordkeeper fees, which should also be reviewed on a periodic basis;
5. The investment should exhibit attractive qualitative characteristics, including, but not limited to, acceptable manager tenure; and

6. The investment should be able to provide performance, holdings and other relevant information in a timely fashion with specified frequency.

Furthermore, investments will be evaluated and selected utilizing a “score card,” detailed below in Part VII (Investment Monitoring and Reporting).

Part VII. INVESTMENT MONITORING AND REPORTING

The ongoing monitoring of investments is a regular and disciplined process intended to ensure that a previously selected investment option continues to satisfy the selection process and that an investment option continues to be a prudent option offered for investment in the Plan. The process of monitoring investment performance relative to specified guidelines will be consistently applied. Frequent change of investments is neither expected nor desired.

The Committee will bear in mind any and all political, social, economic or other changes that may potentially require more frequent review and consideration of investments. The following are some, but not all, general factors that may be considered in ongoing monitoring:

- Current regulatory environment,
- Current state of capital markets,
- Performance of investment alternatives,
- Utilization of accounts by Plan demographic,
- The prudent applicability of this Investment Policy Statement as written, in light of prevailing facts and circumstances.

Monitoring will generally utilize the same investment selection criteria used in the original selection analysis, or such other criteria as deemed prudent by the Committee. Unusual, notable, or extraordinary events should be communicated by each investment and/or provider on a timely basis to the Committee. Examples of such events include portfolio manager or team departure, violation of investment guidelines, material litigation against the investment management firm, or material changes in firm ownership structure and announcements thereof.

If overall satisfaction with the investment option is acceptable, no further action is required. If areas of dissatisfaction exist, the Committee will monitor whether the investment is taking appropriate and prudent steps to remedy the deficiency. If over a reasonable period the issue remains unresolved, removal of the investment option may result.

For supported asset classes, a “score card” will be maintained and documented (see addendum) to substantiate acceptable levels of performance and appropriate style characteristics. Based upon objective criteria, derived from modern portfolio theory concepts, each investment option will receive a score reflecting its overall performance.

If an investment fails to meet the criteria standards, as determined by its score, it may be placed on a “watch list” (as defined in the attached Addendum). If the investment maintains a watch list score for four consecutive quarters, or five out of eight quarters, the investment may be considered for further action (see Part IX below) by the Committee. In the event an investment receives a score which is below that of “watch list” status, or experiences extraordinary circumstances which may render it imprudent to maintain, it may be considered for action (see Part IX below) by the Committee at the earliest administratively practicable date.

If the investment meets criteria standards, as determined by its score as “acceptable” or “good” (as defined in the attached Addendum) for four consecutive quarters, it may be removed from the watch list.

Cash, or principal preservation, alternatives should be reviewed with a primary focus on the investment’s ability to preserve capital and minimize risk. Criteria reviewed should include, but not be limited to, credit quality, diversification and stability of insurance provider, if applicable.

Asset allocation investments should be scored and monitored in the same manner as all other investments, using the previously described guidelines in Part VII. Because many of these investments contain separate underlying investment funds, it may also be appropriate to score and monitor those, as available and applicable. Unlike other investments which are monitored and scored individually, target-date investments, though potentially scored individually, should be evaluated as a group. Due to the unique importance of these investment options for participants in the Plan, investments or suites of investments (as may be applicable), or managed accounts failing to achieve criteria standards should be carefully reviewed before removal from the Plan (in the absence of a reasonable alternative).

In the event asset allocation investments have too brief a time history to be scored, the investment or suite should be evaluated both qualitatively and quantitatively on the underlying investments that may have a longer time history available, using a proxy, or a qualitative framework for all other instances.

Investments where no score is applied due to specialty focus (for example, socially responsible funds), short time history or other unique circumstances should be reviewed using a proxy, where applicable and prudent, or a qualitative framework for all other instances.

The foregoing investment monitoring criteria shall not, under any circumstances, be taken as definitive, conclusive, or controlling for removal, termination or continuation of an investment option. All determinations should be made by the Committee, in its sole discretion, taking into consideration all relevant facts and circumstances.

PART VIII: ASSET ALLOCATION AND DEFAULT STRATEGY

The Committee will evaluate and choose an investment or set of investments, or multiple investments, to serve as the default investment(s) for the Plan. The default investment(s) will be the designated investment for dollars contributed to the Plan by participants and/or the employer for which the Plan has no active employee direction on file.

Asset allocation investments and/or accounts (risk-based or target date-based) should be considered as the Plan's default investment strategy due to the inherent benefits these options provide to participants including the diversification of assets across multiple asset classes. The intent on selection of an asset allocation investment(s) as the default is to meet the requirements of a qualified default investment alternative (QDIA) under the terms of section 404(c)(5) of ERISA and the regulations promulgated thereunder.

In the event the Committee selects a target-date asset allocation solution, a critical component is the respective glidepath which should be reviewed to make sure it is appropriate and prudent as a default, and further that it continues to be appropriate and prudent, for the Plan and Plan's participants. The following criteria should be considered in the selection, and ongoing monitoring, of a target-date asset allocation solution:

- Plan objectives, including, but not limited to; the Plan being a "supplemental" plan vs. the Company's sole retirement plan which participants are relying on to retire, the existence of additional plans (i.e., defined benefit plan, deferred compensation plan, money purchase pension plan, etc.), potentially impactful additional Plan design elements (i.e., automatic features, level of matching contributions, profit sharing contributions, etc.), whether the Plan's objectives in offering the suite have changed, whether proprietary, custom or nonproprietary solutions best meet the objectives of a prudent number of eligible employees and whether the glidepath, equity landing point, and age 65 equity exposure, most closely meets the objectives of a prudent number of eligible employees;
- Plan demographic information, including, but not limited to: participant deferral rates, account balances and their general degree of investment knowledge (level of investment sophistication), whether a single or multiple glidepath approach would be most prudent for the demographics of the eligible employee population; and
- Participant behavior information, including, but not limited to; the level of participant involvement in the plan before and after retirement and how participants behave with investment and market risk within the plan.

Other considerations may include:

- Whether the Plan's objectives in offering the existing suite have changed;
- Whether there have been significant changes in the suite's investment strategy or management team;
- Whether the fees and expenses of the suite are reasonable given the investment management (including glidepath construction, rebalancing, etc.) involved;
- Additional information such as number, and construct, of asset classes used to promote diversification and growth potential within each investment; and
- The management style of the underlying investments be it passive, active or a core-satellite approach.

In the event the Committee selects a risk-based asset allocation solution, the investment chosen as a default should be reviewed to make sure it is appropriate and prudent as a default, and further that it continues to be appropriate and prudent for the Plan and Plan's participants. The risk level is a critical component that should be reviewed and considered in the selection and ongoing monitoring of the investment. The chosen investment and its associated risk level should be suitable for the Plan and Plan's participants.

Part IX. COMMITTEE ACTION

An investment may be removed when the Committee has lost confidence in the investment manager's ability to:

- Achieve performance, style, allocation and/or risk objectives.
- Maintain acceptable qualitative standards (e.g., stable organization, compliance guidelines).

If the investment manager has failed to adhere to and/or remedy one or both of the above conditions, the investment may be considered for removal from the Plan. The Committee may also remove an investment option for any reason it deems necessary and prudent.

Any decision by the Committee to remove such an investment will be made on an individual basis, and will be made based on all the known facts and circumstances, including, but not limited to:

- The objective analysis (described above)
- Administrative impact on the Plan
- Timing
- Employee communication issues
- The availability of other (potential replacement) investments
- Underwriting and Plan provider limitations
- Financial considerations (hard and soft dollar fees)
- Professional or client turnover
- A material change in the investment process
- Other relevant factors

Considerable judgment should be exercised in the Committee decision-making process. The Committee may administer the following approaches with an investment that fails to consistently meet criteria of this Investment Policy Statement:

- Remove and replace (map assets) with a reasonably similar alternative investment.
- Freeze the assets in the investment and direct new assets to an alternative, reasonably similar, investment.
- Phase out the investment over a specific time period.

- Remove the investment and do not provide a replacement investment and default assets into the Plan's QDIA.

Replacement of a removed investment follows the criteria outlined in Part VI (Selection of Investment Options).

Part X. PARTICIPANT EDUCATION AND COMMUNICATION

The Plan should communicate to employees that they can direct their own investments and investment changes. Investment communications materials, educational materials and enrollment support should be available to help Plan participants make educated and informed choices, and may include:

1. Periodic enrollment and investment education, through one or more of the following: on-site meetings, phone conference, web conference, Internet, phone (voice-response and live representatives) or written materials;
2. ERISA Section 404(c) disclosure;
3. Summary plan description made available to all participants;
4. General information regarding investment risk, inflation, potential taxation impact, investment earnings and asset classes;
5. Other investment tools (e.g., investment risk profile questionnaire) to assist participants and beneficiaries in making educated and informed investment decisions; and
6. All additional information required for disclosure by ERISA, the Internal Revenue Code of 1986, and all other Federal and state statutes and all regulations promulgated hereunder, and all regulatory guidance provided thereto.

Notwithstanding the foregoing, all investment education provided by the Plan and/or Committee, and all communications connected thereto, is not intended, nor shall it be construed, as investment advice to Plan participants.

Part XI. COORDINATION WITH THE PLAN DOCUMENT AND APPLICABLE LAWS

Notwithstanding the foregoing, if any term or condition of this Investment Policy Statement conflicts with any section of ERISA or the Internal Revenue Code, or regulations promulgated hereunder, or any term or condition in the Plan document, the terms and conditions of ERISA, the Internal Revenue Code and the Plan document shall control.

Part XII. ERISA 404(c)

The Company and the Committee intend for the Plan to comply with ERISA Section 404(c) and the regulations promulgated thereunder. Each participant/beneficiary is provided the opportunity to exercise control and to give instructions over his/her account with a frequency that is appropriate for each investment option and, finally, to choose from a broad range of investment options. Plan fiduciaries are thus relieved from liability for investment performance directly resulting from investment decisions made by Plan participants.

The intention to comply with ERISA Section 404(c), and the regulations promulgated hereunder, should be communicated to employees in writing.

Part XIII. INVESTMENT INFORMATION AND ADMINISTRATIVE SUPPORT

The Committee should require the investment manager and/or service provider (administrator, recordkeeper) to offer the following administrative information and support, competitive to that provided by other investment managers and/or service providers as it deems appropriate, which may include:

1. Daily valuation of all investments;
2. Daily access to account information via toll-free number and Internet access;

3. The ability to make investment transfers for both existing and future individual account balances on a daily basis (nonbusiness days and holidays excluded). Certain trading practices may be limited to comply with market timing, excess trading, liquidity driven and/or related policies and procedures of the service provider and/or specific investment options;
4. Participant account investment reports produced no less frequently than annually, with similar information available via the Internet at least quarterly; and
5. Quarterly investment performance updates available for participant review via the Internet.

Part XIV. REVIEW PROCEDURES

This Investment Policy Statement will be periodically reviewed and may be amended, if appropriate, at any time and without notice, by action of the Committee.

It is not expected that this Investment Policy Statement will change frequently. In particular, short-term changes in the financial markets should not require amendments to this Investment Policy Statement.

Name of Plan Fiduciary	Signature	Date

Name of Plan Fiduciary	Signature	Date

Name of Plan Fiduciary	Signature	Date

Scorecard System Methodology™

The **Scorecard System Methodology** incorporates both quantitative and qualitative factors in evaluating fund managers and their investment strategies. The **Scorecard System** is built around pass/fail criteria, on a scale of 0 to 10 (with 10 being the best) and has the ability to measure active, passive and asset allocation investing strategies. Active and asset allocation strategies are evaluated over a five-year time period, and passive strategies are evaluated over a three-year time period.

Eighty percent of the fund's score is quantitative (made up of eight unique factors), incorporating modern portfolio theory statistics, quadratic optimization analysis, and peer group rankings (among a few of the quantitative factors). The other 20 percent of the score is qualitative, taking into account things such as manager tenure, the fund's expense ratio relative to the average fund expense ratio in that asset class category, and the fund's strength of statistics (statistical significance). Other criteria that may be considered in the qualitative score includes the viability of the firm managing the assets, management or personnel issues at the firm, and/or whether there has been a change in direction of the fund's stated investment strategy. The following pages detail the specific factors for each type of investing strategies.

Combined, these factors are a way of measuring the relative performance, characteristics, behavior and overall appropriateness of a fund for inclusion into a plan as an investment option. General fund guidelines are shown in the "Scorecard Point System" table below. The Scorecard Point System is meant to be used in conjunction with our sample Investment Policy Statement, in order to help identify what strategies need to be discussed as a "watch-list" or removal candidate; what strategies continue to meet some minimum standards and continue to be appropriate; and/or identify new top-ranked strategies for inclusion into a plan.

Scorecard Point System	
Good:	**9-10 Points**
Acceptable:	**7-8 Points**
Watch:	**5-6 Points**
Poor:	**0-4 Points**

Scorecard System Methodology™
Target Date Fund Strategies

Target Date Fund strategies are investment strategies that invest in a broad array of asset classes that may include U.S. equity, international equity, emerging markets, real estate, fixed income, high yield bonds and cash (to name a few asset classes). These strategies are managed to a retirement date or life expectancy date, typically growing more conservative as that date is approached). For this type of investment strategy, the **Scorecard System** is focused on how well these managers can add value from asset allocation. Asset allocation is measured using our **Asset allocation strategies methodology** and manager selection is measured using either our **Active and/or Passive strategies methodologies**, depending on the underlying fund options utilized within the Target Date Fund strategy.

Risk-based strategies follow the same evaluation criteria and are evaluated on both their asset allocation and security selection.

Weightings	Target Date Fund Strategies	Maximum Points
Asset Allocation Score (Average) 50%	The individual funds in this Score average require five years of time history to be included. See Asset Allocation strategies methodology for a detailed breakdown of the Scoring criteria. Funds without the required time history are not included in the Score average. The Funds included in this average are from the Conservative, Moderate Conservative, Moderate, Moderate Aggressive and Aggressive categories, where Funds (also referred to as “vintages”) are individually Scored according to their standard deviation or risk bucket.	5
Selection Score (Average) 50%	**Active strategies:** The individual active funds in this Score average require five years of time history to be Scored. See Active strategies methodology for a detailed breakdown of the Scoring criteria. Funds without the required time history are not included in the Score average. **Passive strategies:** The individual passive funds in this Score average require three years of time history to be Scored. See Passive strategies methodology for a detailed breakdown of the Scoring criteria. Funds without the required time history are not included in the Score average.	5
	Total	10

Scorecard System Methodology™

Asset Allocation Strategies

Asset allocation strategies are investment strategies that invest in a broad array of asset classes that may include U.S. equity, international equity, emerging markets, real estate, fixed income, high yield bonds and cash (to name a few asset classes). These strategies are typically structured in either a risk-based format (the strategies are managed to a level of risk, e.g., conservative or aggressive) or, in an age-based format (these strategies are managed to a retirement date or life expectancy date, typically growing more conservative as that date is approached). For this type of investment strategy, the **Scorecard System** is focused on how well these managers can add value from both asset allocation and manager selection.

Multisector Bond (MSB) asset class follows the same evaluation criteria with some slightly different tolerance levels where noted. These managers are also evaluated on both their asset allocation and security selection.

Weightings	Asset Allocation Strategies	Maximum Points
Style Factors 30%	**Risk Level:** The fund's standard deviation is measured against the category it is being analyzed in. The fund passes if it falls within the range for that category.	1
	Style Diversity: Fund passes if it reflects appropriate style diversity (returns-based) among the four major asset classes (Cash, Fixed Income, U.S. & International Equity) for the given category. *MSB* funds pass if reflect some level of diversity among fixed income asset classes (Cash, U.S. Fixed Income, Non-U.S. Fixed Income and High Yield/Emerging Markets).	1
	R-Squared: Measures the percentage of a fund's returns that are explained by the benchmark. Fund passes with an R-squared greater than 90 percent. This statistic measures whether the benchmark used in the analysis is appropriate.	1
Risk/Return Factors 30%	**Risk/Return:** Fund passes if its risk is less than the benchmark or its return is greater than the benchmark. Favorable risk/return characteristics are desired.	1
	Up/Down Capture Analysis: Measures the behavior of a fund in up and down markets. Fund passes with an up capture greater than its down capture. This analysis measures the relative value by the manager in up and down markets.	1
	Information Ratio: Measures a fund's relative risk and return. Fund passes if ratio is greater than 0. This statistic measures the value added above the benchmark, adjusted for risk.	1
Peer Group Rankings 20%	**Returns Peer Group Ranking:** Fund passes if its median rank is above the 50^{th} percentile.	1
	Sharpe Ratio Peer Group Ranking: Fund passes if its median rank is above the 50^{th} percentile. This ranking ranks risk-adjusted excess return.	1
Qualitative Factors 20%	Two points may be awarded based on qualitative characteristics of the fund. Primary considerations are given to manager tenure, fund expenses and strength of statistics, however, other significant factors may be considered. It is important to take into account nonquantitative factors, which may impact future performance.	2
	Total	10

Scorecard System Methodology™

Active Strategies

Active strategies are investment strategies where the fund manager is trying to add value and outperform the market averages (for that style of investing). Typically, these investment strategies have higher associated fees due to the active involvement in the portfolio management process by the fund manager(s). For this type of investment strategy, the **Scorecard System** is trying to identify those managers who can add value on a consistent basis within their own style of investing.

Weightings	Active Strategies	Maximum Points
Style Factors 30%	**Style Analysis:** Returns-based analysis to determine the style characteristics of a fund over a period of time. Fund passes if it reflects the appropriate style characteristics. Style analysis helps ensure proper diversification in the Plan.	1
	Style Drift: Returns-based analysis to determine the behavior of the fund/manager over multiple (rolling) time periods. Fund passes if the fund exhibits a consistent style pattern. Style consistency is desired so that funds can be effectively monitored within their designated asset class.	1
	R-Squared: Measures the percentage of a fund's returns that are explained by the benchmark. Fund passes with an R-squared greater than 80 percent. This statistic measures whether the benchmark used in the analysis is appropriate.	1
Risk/Return Factors 30%	**Risk/Return:** Fund passes if its risk is less than the benchmark or its return is greater than the benchmark. Favorable risk/return characteristics are desired.	1
	Up/Down Capture Analysis: Measures the behavior of a fund in up and down markets. Fund passes with an up capture greater than its down capture. This analysis measures the relative value by the manager in up and down markets.	1
	Information Ratio: Measures a fund's relative risk and return. Fund passes if ratio is greater than 0. This statistic measures the value added above the benchmark, adjusted for risk.	1
Peer Group Rankings 20%	**Returns Peer Group Ranking:** Fund passes if its median rank is above the 50^{th} percentile.	1
	Information Ratio Peer Group Ranking: Fund passes if its median rank is above the 50^{th} percentile. This ranking ranks risk-adjusted excess return.	1
Qualitative Factors 20%	Two points may be awarded based on qualitative characteristics of the fund. Primary considerations are given to manager tenure, fund expenses and strength of statistics, however, other significant factors may be considered. It is important to take into account nonquantitative factors, which may impact future performance.	2
	Total	**10**

Scorecard System Methodology™

Passive Strategies

Passive strategies are investment strategies where the fund manager is trying to track or replicate some area of the market. These types of strategies may be broad-based in nature (e.g., the fund manager is trying to track/replicate the entire U.S. equity market like the S&P 500) or may be more specific to a particular area of the market (e.g., the fund manager may be trying to track/replicate the technology sector). These investment strategies typically have lower fees than active investment strategies due to their passive nature of investing and are commonly referred to as index funds. For this type of investment strategy, the **Scorecard System** is focused on how well these managers track and/or replicate a particular area of the market with an emphasis on how they compare against their peers.

Weightings	Passive Strategies	Maximum Points
Style & Tracking Factors 40%	**Style Analysis:** Returns-based analysis to determine the style characteristics of a fund over a period of time. Fund passes if it reflects the appropriate style characteristics. Style analysis helps ensure proper diversification in the Plan.	1
	Style Drift: Returns-based analysis to determine the behavior of the fund/manager over multiple (rolling) time periods. Fund passes if the fund exhibits a consistent style pattern. Style consistency is desired so that funds can be effectively monitored within their designated asset class.	1
	R-Squared: Measures the percentage of a fund's returns that are explained by the benchmark. Fund passes with an R-squared greater than 95 percent. This statistic measures whether the benchmark used in the analysis is appropriate.	1
	Tracking Error: Measures the percentage of a fund's excess return volatility relative to the benchmark. Fund passes with a tracking error less than 4. This statistic measures how well the fund tracks the benchmark.	1
Peer Group Rankings 40%	**Tracking Error Peer Group Ranking:** Fund passes if its median rank is above the 75th percentile.	1
	Expense Ratio Peer Group Ranking: Fund passes if its median rank is above the 75th percentile.	1
	Returns Peer Group Ranking: Fund passes if its median rank is above the 75th percentile.	1
	Sharpe Ratio Peer Group Ranking: Fund passes if its median rank is above the 75th percentile.	1
Qualitative Factors 20%	Two points may be awarded based on qualitative characteristics of the fund. Primary considerations are given to fund expenses and strength of statistics, however, other significant factors may be considered. It is important to take into account nonquantitative factors, which may impact future performance.	2
	Total	**10**

Manager Research Methodology
Beyond the Scorecard

The **Scorecard System™** uses an institutional approach which is comprehensive, independent, and utilizes a process and methodology that strives to create successful outcomes for plan sponsors and participants. The **Scorecard** helps direct the additional research the Investment team conducts with fund managers throughout the year. Three of the primary factors that go into the fund manager research are people, process and philosophy.

PEOPLE	PROCESS	PHILOSOPHY
Key Factors: • Fund manager and team experience • Deep institutional expertise • Organizational structure • Ability to drive the process and performance	Key Factors: • Clearly defined • Consistent application • Sound and established • Clearly communicated • Successfully executed process	Key Factors: • Research and ideas must be coherent and persuasive • Strong rationale • Logical and compelling • Focus on identifying skillful managers

Scorecard System Disclosures

Investment objectives and strategies vary among fund and may not be similar for funds included in the same asset class.

All definitions are typical category representations. The specific share classes or accounts identified above may not be available or chosen by the Plan. Share class and account availability is unique to the client's specific circumstances. There may be multiple share classes or accounts available to the client from which to choose. All recommendations are subject to vendor/provider approval before implementation into the Plan. The performance data quoted may not reflect the deduction of additional fees, if applicable. If reflected, additional fees would reduce the performance quoted.

Performance data is subject to change without prior notice.

Performance of indexes reflects the unmanaged result for the market segment the selected stocks represent. Indexes are unmanaged and not available for direct investment.

The information used in the analysis has been taken from sources deemed to be reliable, including, third-party providers such as *Markov Processes International, Morningstar,* firms who manage the investments, and/or the retirement plan providers who offer the funds.

Every reasonable effort has been made to ensure completeness and accuracy; however, the final accuracy of the numbers and information is the responsibility of the investment manager(s) of each fund and/or the retirement plan providers offering these funds. Discrepancies between the figures reported in this analysis, and those reported by the actual investment managers and/or retirement plan providers, may be caused by a variety of factors, including: Inaccurate reporting by the manager/provider; Changes in reporting by the manager/provider from the time this report was prepared to a subsequent retro-active audit and corrected reporting; Differences in fees and share-classes impacting net investment return; and, Scriveners error by your advisor in preparing this report.

The enclosed Investment Due Diligence report, including the **Scorecard System**, is intended for plan sponsor and/or institutional use only. The materials are not intended for participant use.

The purpose of this report is to assist fiduciaries in selecting and monitoring investment options. A fund’s score is meant to be used by the Plan sponsor and/or fiduciaries as a tool for selecting the most appropriate fund.

Fund scores will change as the performance of the funds change and as certain factors measured in the qualitative category change (e.g., manager tenure). Fund scores are not expected to change dramatically from each measured period, however, there is no guarantee this will be the case. Scores will change depending on the changes in the underlying pre-specified Scorecard™ factors.

Neither past performance nor statistics calculated using past performance are guarantees of a fund’s future performance. Likewise, a fund’s score using the **Scorecard System™** does not guarantee the future performance or style consistency of a fund.

This report was prepared with the belief that this information is relevant to the Plan sponsor as the Plan sponsor makes investment selections.

Fund selection is at the discretion of the investment fiduciaries, which are either the Plan sponsor or the Committee appointed to perform that function.

Cash Equivalents (e.g., money market fund) and some specialty funds are not scored by the **Scorecard System**.

The enclosed Investment Due Diligence report and Scorecard™ is not an offer to sell mutual funds. An offer to sell may be made only after the client has received and read the appropriate prospectus.

For the most current month-end performance, please contact your advisor.

The Strategy Review notes section is for informational purposes only. The views expressed here are those of your advisor and do not constitute an offer to sell an investment. An offer to sell may be made only after the client has received and read the appropriate prospectus.

Carefully consider the investment objectives, risk factors and charges and expenses of the investment company before investing. This and other information can be found in the fund’s prospectus, which may be obtained by contacting your Investment Advisor/Consultant or Vendor/Provider. Read the prospectus carefully before investing.

For a copy of the most recent prospectus, please contact your Investment Advisor/Consultant or Vendor/Provider.

ACR#201700 08/16

Tab 6

Evaluation Committee Meeting

February 14, 2019, 12:00 pm

Attending at Energy Trust offices

Adam Bartini, Kathleen Belkhayat, Eric Braddock, Susan Brodahl, Shelly Carlton, Sarah Castor, Eli Caudill, Quinn Cherf, Michael Colgrove, Warren Cook, Phil Degens, Sue Fletcher, Fred Gordon, Jackie Goss, Andy Griguhn, Kati Harper, Eric Hayes, Andrew Hudson, Susan Jowaiszas, Abigail Kemp, Oliver Kesting, Erika Kociolek, Jessica Kramer, Steve Lacey, Scott Leonard, Jennifer Light, Joe Marcotte, Alan Meyer (interim Committee Chair), Nick Michel, Dulane Moran, Alex Novie, Jay Olson, Amanda Potter, Jonathan Roschke, Thad Roth, Dan Rubado, Peter Schaffer, Kenji Spielman, Kate Wellington, Jamie Woods

Attending by phone

Roger Hamilton, Anna Kim

Multifamily Tier 2 Advanced Power Strip Pilot Evaluation

Presented by Erika Kociolek

Background: In 2015, the Multifamily program completed a pilot of Tier 1 advanced power strips (APS), which found savings of 76 kWh per year for the devices. In 2016 and 2017, the program did a pilot for Tier 2 APS, which involved devices from two manufacturers. Tier 1 APS are load sensing and measure current through one outlet to control other outlets. Tier 2 APS are similar to Tier 1, but also include a motion or infrared sensor to control the operation of devices plugged into it. For the pilot, the units were meant to be installed on home entertainment systems.

Findings: The pilot was designed to compare Tier 2 units with a control unit (a basic power strip). The pilot had targets of 90 control unit participants, and 45 participants with each of the two Tier 2 units. Eighty-one participants with control units and 85 participants with Tier 2 units were enrolled in the pilot. However, only 52 participants with control units were included in the analysis, and 27 participants with Tier 2 units were included. While 166 tenants participated in the pilot, only 79 could be included in the evaluation because of incorrect installation of devices or because the metering units were not reset between installations in dwelling units. The estimated annual savings from a Tier 2 unit were 16 kWh. Due to the small sample size, the savings estimate is not statistically significant. Devices were difficult for users to install correctly – many did not have their TV plugged into the APS or had it plugged into the incorrect outlet on the APS. We don't know exactly why the APS wasn't used as expected. Eric Hayes asked how the installation instructions were provided. Joe Marcotte said that there was no demonstration or verbal instruction, but there was a leave-behind page of instructions with a link to a website. Kate Wellington said the instruction method was chosen to mimic how we wanted to do a large-scale program, with customers self-installing devices. Jennifer Light said that the Regional Technical Forum (RTF) looked at other studies of Tier 2 APS and they had similar rates of incorrect installs. Other studies have also seen many people uninstalling the APS, which reduces savings. Erika Kociolek said we excluded the people who didn't install the APS correctly to get the best-case estimate of savings if they were correctly installed all of the time.

The program is not pursuing Tier 2 APS as a measure going forward, but will continue to offer Tier 1 APS. Fred Gordon asked if Tier 1 APS are subject to the same installation problems; Erika Kociolek said they are, but to a lesser extent. Jamie Woods asked if the we expected the installation issues. Erika Kociolek said Energy Trust expected installation issues on a scale similar to what we saw with Tier 1. Jennifer Light said that across studies the RTF has reviewed, they are finding that savings for Tier 2 are not that different from Tier 1. Fred Gordon said this was a pilot measure and we didn't have a very confident estimate of savings going in. Michael Colgrove asked if there were any laboratory studies. Erika Kociolek said there was a meta-analysis done by Johnson Consulting and a study from Wisconsin done by Cadmus. These showed savings in the neighborhood of 200 kWh. Jennifer Light said savings from simulations tend to be higher than real-world results and the RTF discounts results from simulation studies.

Existing Buildings Process Evaluation

Presented by Dan Rubado

Background: The Existing Buildings program has operated since 2003, and ICF has been the program management contractor (PMC) since 2013. The program serves commercial buildings in Oregon and Southwest Washington. It does not serve multifamily buildings or production facilities. Program activity is most concentrated in the Portland Metro area and Willamette Valley. There are five main program tracks. The table below shows 2017 projects and savings by track.

2017 Existing Buildings Projects and Savings by Track

Program Track	Projects	2017 kWh Savings	2017 Therm Savings
Lighting	1,853	64,015,860	0
Standard	1,246	17,400,685	918,981
Custom	281	20,022,646	683,308
Direct Install	341	4,554,448	0
Strategic Energy Management	53	5,587,041	205,716
Total	**3,774**	**111,580,680**	**1,808,005**

Lighting has historically been the biggest part of the program in terms of electric savings. Project savings are calculated through Energy Trust's Lighting Tool. The standard track has prescriptive and calculated savings measures like heating, ventilation and air conditioning (HVAC), water heating, and food service equipment for both electric and gas. The custom track is more complex and uses allied technical assistance contractors (ATACs) to conduct studies on facilities to identify opportunities and estimate savings specific to that facility. Incentives are based on therms or kWh saved, rather than per piece of equipment installed. The custom track generally serves larger sites with bigger opportunities because studies are a larger up-front cost. The direct install track is implemented by SmartWatt under subcontract to ICF and uses geographic targeting of small businesses to offer discounted lighting measures. The direct install track includes a low-cost financing option. Its goal is to increase efficient lighting in smaller businesses that might not otherwise participate. They also provide some leave-behind power strips. The strategic energy management (SEM) track is implemented through four different coaching firms; customers participate in a series of workshops, and conduct assessments to identify opportunities for operations and maintenance (O&M) savings and capital measures at their sites. Coaches help customers track energy use and savings over time and set targets for energy use reduction.

The goal of the evaluation was to conduct a comprehensive review of the program. The report is lengthy, but there is a lot of great information. Through the evaluation, we wanted to assess the current program effectiveness, understand how the program can adapt to changes and identify new program opportunities and recommendations for improvement.

Evergreen Economics was hired to conduct the evaluation. One part of the evaluation was a market characterization and program penetration analysis based on Energy Trust participation and site data. Evergreen summarized the number of sites and energy usage by market sector, region, and other characteristics. There was also an SEM follow-through analysis that compared capital project participation by SEM participants to non-participants. Finally, Evergreen conducted interviews with program staff and a variety of market actors. Interviewed program staff included PMC staff and subcontractors. Market actors included ATACs, trade allies and non-trade ally contractors, participating customers in each track and nonparticipants.

Findings: The market characterization yielded a lot of rich information. There were roughly 125,000 commercial sites identified. About 18 percent of eligible sites have participated in the Existing Buildings program since 2003. The bulk of participant sites were in the restaurant, retail, office and warehouse sectors. There are also a large number of office, retail, restaurant and healthcare sites left to be served, and they represent a lot of energy usage. The program has the highest participation rates in the laundry, school, warehouse and grocery sectors. The largest number of participants and highest rates of participation are in the Portland Metro and Northwest Oregon regions. Sites in the Metro area also use more energy, so they have more opportunity for savings. Even if a site has participated, there may still be remaining opportunities to save energy.

Participating sites represent about half of total electric and gas usage. The participation rate is higher among sites with high energy usage. Among smaller sites, we have lower participation rates, but participants represent about half of the energy use.

Program penetration by market sector and fuel

Market Sector	Weighted Participation Rate	% of Electricity Used by Participants	Savings as % of Electricity Usage	% of Gas Used by Participants	Savings as % of Gas Usage
Government	40%	71%	22%	74%	18%
Grocery	50%	86%	23%	70%	16%
Healthcare	7%	47%	17%	28%	29%
Higher Ed.	17%	83%	24%	55%	46%
Hospitality	39%	69%	17%	63%	10%
Laundry	79%	43%	17%	79%	27%
Office	8%	38%	21%	24%	23%
Recreation	21%	52%	24%	48%	20%
Religious	20%	52%	16%	36%	12%
Repair	26%	58%	29%	38%	10%
Restaurant	40%	47%	7%	48%	11%
Retail	18%	44%	24%	27%	10%
Schools K-12	66%	78%	13%	75%	15%
Unknown	13%	37%	22%	25%	20%
Warehouse	57%	76%	32%	73%	11%
Total	**18%**	**52%**	**20%**	**43%**	**17%**

From the table above on program penetration by market sector and fuel (with noteworthy high and low values highlighted in orange), we can see there are remaining gas opportunities in grocery and warehouses. For higher education, we have served the bigger energy users. Jamie Woods asked about the size of institutions. Dan Rubado said that the custom track tends to focus on bigger energy users, but all tracks except direct install are open to all customer sizes.

The SEM follow-through analysis looked at years 2012 through mid-2018. As the number of SEM participants has grown, so has the percentage of capital projects done at SEM sites, from less than 1 percent in 2012 to almost 9 percent in 2018. Evergreen modeled the likelihood of doing a capital project in a given year based on SEM participation status. The regression analysis controlled for a variety of factors: building size, year, region and utility. It also looked at the size of capital projects.

As shown in the table below, SEM enrollment in a given year made a customer 17 percent more likely to complete a capital project that year; if they were enrolled in the current and previous year, they were 26 percent more likely to complete a capital project. SEM is having a real impact on driving capital projects, which we expected, but now we know the magnitude. Fred Gordon said the analysis shows correlation, but not necessarily causation; he asked if other evaluations demonstrate causation. Dan Rubado said this was covered in the participant interviews and those interview results do indicate causation. Jamie Woods asked if the analysis factored in determinants of participation. Dan Rubado said Evergreen included covariates where we had information. Jamie Woods asked if the analysis accounted for self-selection. Results also show that SEM is associated with larger capital projects, not just more projects. As a result, incentives are correspondingly larger. Oliver Kesting asked if the estimates of incentives hold project size equal and Dan Rubado said the models did control for project size.

Marginal Effects of SEM Participation

Model	Currently Enrolled in SEM	Enrolled in SEM in Current and Last Year
Completed Any Capital Project	16.6%	25.8%
Completed a Capital Project that Saved kWh	14.8%	21.6%
Completed a Capital Project that Saved Therms	12.3%	18.3%
Total Ex Ante kWh Savings from Capital Projects	49,092	78,796
Total Incentives Paid for kWh Savings from Capital Projects	$5,694	$7,465
Total Ex Ante Therm Savings from Capital Projects	439	867
Total Incentives Paid for Therm Savings from Capital Projects	$1,075	$1,464

Evergreen conducted interviews with program staff. Interviewees reported that good communication protocols were in place. They noted that the measure development process has changed, shifting work to the PMC. The change has taken some adjustment, but it results in higher quality work. Primary marketing is through direct email campaigns and has been successful in increasing web traffic. The program sees opportunities to reach small, rural and non-English speaking businesses. Trade ally management is generally working well, despite some confusion among allies about program enrollments. The program has made an effort to increase the diversity of trade allies.

Staff reported that the standard track has not seen many recent changes and is working well. One continuing challenge is in the quality of applications and the amount of missing information. Most applications are still submitted on paper through postal mail.

A significant change in the lighting track has been that linear fluorescents are no longer offered. The market is moving to light-emitting diodes (LEDs) and baselines are changing quickly, leading to cost-effectiveness challenges. Staff report that direct install track participants are satisfied and there is good coordination with other tracks when customers have a need outside direct install lighting. The direct install track is not allowed to serve small manufacturing sites, which has been a barrier. Finding new regions to serve at low cost is also a challenge. Fred Gordon asked if the difficulty with cost was related to drive time to, and customer density in, rural areas, and Dan Rubado confirmed that it was.

The custom track is complex and involves lots of paperwork. Some contractors have challenges with the process. In the custom track, there has been a shift by the program away from whole building studies to more targeted studies and projects. Many smaller sites often don’t have cost-effective measures, which is frustrating for everyone. Staff report that the quality of studies is generally high, and the process works well.

Management of the SEM track transitioned from Energy Trust to ICF in 2017. There are four coaching firms, which brings both value and difficulty. Firms can be reluctant to share ideas with competitors and a lot of coordination is required with four firms. The energy tracking tool remains complex and time consuming despite updates. It can be hard to attribute savings to SEM when sites complete capital measures. Promoting SEM has been more difficult than other tracks. Program staff feel that SEM competes with custom and retro-commissioning offers for customers. The use of success stories has been effective in recruiting participants. Staff still see opportunity for new participants.

Thirteen ATACs of various activity levels were interviewed. They noted that schools, healthcare and large offices are sectors with large savings potential. Some firms were not familiar with the new short study. Many ATACs believe the custom track has opportunities to better serve small businesses. There is some confusion about how studies are assigned to ATACs. ATACs felt that the study review process sometimes takes too long and leads to the loss of opportunities. A few didn’t understand the study evaluation process or thought it was inconsistent. ATACs want more feedback on the quality of their studies and how they compare with peers. Alan Meyer asked if we rate ATACs; we do not. There is a lack of understanding about cost-effectiveness criteria. Costs were higher for more complex studies, and ATACs said the incentive was not enough. They reported some delays in payments for studies. They felt communication is good, but they also expressed some dissatisfaction with processes.

Thirty-one trade ally contractors were interviewed, of which the majority were lighting contractors. Many of them were long time trade allies. There were very few non-trade ally contractors, so the results for those contractors alone were not very useful. A third of trade allies receive more than 25 percent of their revenue from Energy Trust projects. Many noted that reduced incentive levels, especially for lighting, make it harder to sell projects. They mentioned challenges in serving smaller sites and leased spaces. Very few trade allies take advantage of program marketing funds. Interviewees also noted that completing projects with lighting and non-lighting measures is difficult because it requires working in two different program tracks.

Several said that the new DocuSign process for submitting applications has been difficult. They do believe the participation process is generally easy for customers. Only 65 percent are satisfied with incentive turnaround time, while 95 percent are satisfied with their involvement in the program.

Ninety-eight participants from the lighting, standard, and direct install tracks completed a survey about their participation experience. Respondents were concentrated in the Portland Metro and Northwest Oregon regions, and 60 percent owned their building. Over half of respondents occupied small spaces of less than 5,000 square feet. Fred Gordon asked if the survey sampling was random with respect to building size and Dan confirmed it was. Three quarters of respondents said their project was important or critical to their business. About a third (37 percent) received an energy assessment from the program and most rated it as useful. Respondents also rated program processes highly; almost 100 percent said the paperwork was reasonable, which is much higher than we usually see. Thirty percent said they have made other improvements since participating. They feel they are as focused, or more focused, on energy efficiency compared to their industry peers. Respondents didn’t have a clear sense of what other efficiency opportunities are available to them.

Evergreen Economics surveyed 60 custom track participants, who were also concentrated in the Portland Metro and Northwest Oregon regions, but tended to occupy larger buildings than participants in other program tracks. Two thirds said their project was important or critical to their business. They cited program outreach and word of mouth as the most common sources of awareness of the program, and many had participated prior to the project about which we surveyed them. As with other tracks, they rated program processes highly. Almost two-thirds (64 percent) reported they still have large energy saving opportunities remaining, and they were more aware of what kinds of opportunities than participants in other tracks.

Seventeen SEM participants were surveyed. They reported that SEM is serving them well with the current structure. Respondents noted that SEM requires a large commitment for participants and they are constrained in staff time, but participation is worthwhile. Most participants were able to increase and maintain energy management activities over time. Almost two thirds (65 percent) repeated SEM learnings with nonparticipating sites. They also reported that SEM motivated them to participate in other Existing Buildings program tracks, corroborating the findings in the SEM follow-through analysis. Participants said they wanted more peer organizations in their cohort; previously, we heard that they were worried about sharing information with competitors.

Nonparticipants were hard to reach for interviews. The evaluation achieved 28 interviews with decision makers in nine market sectors. Nonprofit and public organizations were more willing to be interviewed than for-profit companies, which might mirror where program outreach is more likely to be effective. Without any prompting about what Energy Trust does, most respondents (82 percent) reported that they had heard of Energy Trust and a majority of those respondents had at least a general idea of what we provide. Shelly Carlton asked if the awareness question was aided or unaided. Dan Rubado said we started with unaided questions and then moved to aided; fewer people were aware of exactly what we did than they were of our name. Respondents were most familiar with Energy Trust lighting offerings. Most reported doing upgrades at their sites, and half said they had taken advantage of an incentive program in Oregon. It is not clear if they were talking about other participating sites, and the evaluation noted that customers don’t always know how to answer this type of question. Most said their opportunities for further energy savings were small; those who reported having done an upgrade before were more likely to identify additional opportunities. Evergreen Economics noted that outreach to site contacts was less useful than outreach to organizational contacts.

Recommendations: The evaluation contained many recommendations, following the findings. Evergreen recommended that the EB program:

- Provide faster turnaround on incentive checks
- Provide a single point of contact for multi-measure projects that cross program tracks
- Expand training resources for contractors (e.g. Lighting Tool, DocuSign)
- Reduce the number of SEM coaches
- Connect SEM participants to similar organizations across cohorts
- Expand outreach and opportunities for smaller customers and outside Portland Metro
- Make ATACs more familiar with program processes (e.g. study assignment, review/approval process, timelines, and payment)
- Promote use of the lower cost Short Study
- Target healthcare, office, and retail sectors for future opportunities

Overall, the program is operating well. Trade allies and customers are generally happy. There are some small tweaks that could lead to improvements. The market characterization could be used to identify opportunities for targeting businesses. SEM provides benefits other than direct savings. The program should look at the ATAC model and whether it can help expand participation. The lighting and direct install tracks are facing cost-effectiveness challenges that may require a redesign of offerings. There were no big technologies identified to fill the gap from reductions in lighting savings. There were also no obvious program blind spots, although there are areas where we could do more. Energy Trust should pursue underserved markets using current offerings and continue diversity, equity and inclusion efforts to enroll diverse trade allies and reach small, rural and diverse customers.

Alan Meyer asked if other elements of diversity came through in the study. Dan Rubado said the need to better serve non-English-speaking businesses came up, but there were not a lot of other examples. Jamie Woods noted that newer, efficient lighting can improve test scores in K-12 schools and higher education facilities, and asked if Energy Trust has connected with the Department of Education about non-energy benefits (NEBs). Dan Rubado said that we have not connected with the Department of Education, but we are interested. Phil Degens said it is challenging to quantify the NEBs in dollar amounts and the time frame over which benefits accrue. Jamie Woods suggested at least using NEBs in program marketing for lighting. Dan Rubado said a lot of times schools go through the New Buildings program because of major renovations. Dulane Moran asked about the penetration analysis by market sector and whether it was looking at all participants since the beginning of the program; perhaps there are sites Energy Trust could go back to. Dan Rubado agreed that some measures may be reaching the end of their lives, and it could be possible to go back to those sites and do more. Warren Cook said the evaluation results were a testimony to SEM and the long-term payoffs of that offering. Jay Olson said that we have missed some opportunities in rural areas and outside of the Portland Metro area because of lack of trade allies. He also asked if the penetration analysis considered measure availability. Dan said the analysis did not consider measure availability and some results may be caused by a lack of measure offerings.

Production Efficiency 2013-2014 Impact Evaluation

Presented by Erika Kociolek

Background: The Production Efficiency program claimed savings of about 110 million kWh and 1.2 million therms in 2013 and 171 million kWh and 1.2 million therms in 2014. SBW Consulting was chosen to evaluate the 2013 and 2014 program years. The goals of the evaluation were to estimate electric and gas savings and realization rates (RRs). The realization rate is the ratio of evaluated savings to program-estimated savings. The evaluation also contained recommendations to improve the program.

There were many tasks in the evaluation. SBW drew a sample of projects, reviewed project files, developed measurement and verification (M&V) plans and reviewed them with program staff. They interfaced with program staff and program delivery contractors (PDCs) to ensure that customer communication and recruitment for interviews and site visits went smoothly. SBW conducted data collection and savings analysis and summarized findings. Finally, they extrapolated the project-level results to the program level and delivered a detailed report.

Findings: The overall 2013 and 2014 electric realization rates were 96 percent and 91 percent - very high, and in line with previous years. As shown in the table below, on the gas side, the rates were 97 percent and 100 percent; also very good. At the track level, there was some variation in realization rates. Custom capital and custom O&M tracks had some lower realization rates, while the streamlined and SEM tracks had realization rates close to 100 percent.

Production Efficiency realization rates by track and year

Track	Electric			Gas		
	# projects evaluated	% of program savings	RR	# projects evaluated	% of program savings	RR
2013						
Custom Capital	9	43%	95%	6	41%	94%
Custom O&M	6	7%	71%	-	-	-
SEM	9	22%	104%	5	8%	99%
Streamlined	14	28%	98%	7	51%	100%
2014						
Custom Capital	10	35%	80%	9*	62%*	101%*
Custom O&M	5	7%	65%	-	-	-
SEM	8	32%	100%	2	3%	91%
Streamlined	13	26%	103%	8	36%	100%

*Two custom O&M projects are included in the gas custom capital category.

In the streamlined track, results by year and fuel were consistently very close to 100 percent. There were a small number of projects that differed from expectations. SBW made some adjustments to savings for operating hours, number of units installed, and a few other factors.

Alan Meyer asked why we are reviewing 2013 and 2014 program years now. Erika Kociolek said there have been resource constraints for Evaluation staff that prevented completing the evaluation until now. Evaluation has been making efforts to catch up and the 2016-2017 impact evaluation is currently underway. The 2013-2014 impact evaluation started several years ago, and analysis and reporting have taken time. Alan asked if the results are relevant to the current program year. Phil Degens said that while the program does change over time, these results are important for truing up 2013 and 2014 savings. Warren Cook asked if the evaluation results tell us something about the persistence of measures. Erika Kociolek said we attempted to evaluate the measures one to two years after they were installed.

The evaluation of the SEM track leveraged the learnings from the SEM evaluation presented at the last Evaluation Committee meeting, as well as the findings from the CORE pilot evaluation. Evaluation of SEM projects involved reviewing documents and models, interviewing participants, and assessing the impact of changes on savings. As with the streamlined track, there were a very small number of projects that had any differences between evaluated and program-estimated savings and realization rates were close to 100 percent.

The custom capital track had the largest savings of any of the tracks and several very large projects. Realization rates by year and fuel were 94 percent or higher, except for electric savings in 2014, which had a realization rate of 80 percent. Evaluation adjustments were made to a small number of projects that had large savings and isolated changes. For example, the project with the highest electric savings in 2013 was only partially implemented and the equipment was permanently shut down 26 months after implementation. We are working with the evaluator to determine if the facility closure should affect the realization rate or if it is part of the average measure life. Phil Degens said that measure lives are based partly on facility lives – we used to set custom measure lives at 10 years, but several years ago we did a study that indicated 15 would be reasonable because most plants were still operating after 10 years. That is an average lifetime for plants and measures; some last longer and others do not last that long. Investments are made by customers, and by Energy Trust, assuming the plant will not shut down, but it happens occasionally. Other low project realization rates were caused by lower loads or capacity than assumed, or more use of equipment than was assumed. There were a wide range of small changes in the track for typical reasons: changes to operating hours, production levels, and efficiency levels, and data entry errors. Fred Gordon asked if there was a pattern that explains the lower custom capital realization rates. Erika Kociolek did not see any pattern. Eric Braddock said he noticed that loads tended to be lower than expected. Rather than using a projection of load in the future, the program might be better off using the current load to estimate savings. Jamie Woods asked how the evaluation projects savings into the future. Erika Kociolek said the evaluation takes a snapshot of current savings and does not project increases or decreases in savings over time. Phil Degens said that when we see something different than expected in the evaluation, we ask the customer if they expect things to change in the near future, and we do factor that into the evaluation results. Jamie Woods said that in that case extending measure life shouldn't change results much and he was comfortable with it.

The custom O&M track had a small number of projects and large error bands around estimates at the track level; the evaluation was designed for a certain level of precision over all projects, not at the track level. Two projects were installed at a site that switched electric providers, which is very unusual. We decided not to evaluate the projects and to treat them as we would a customer that refused to participate in an evaluation: SBW applied the average custom O&M realization rate for the project year to those two projects. There was also a project in this track at the previously discussed site that had shut down. Since custom O&M measures have shorter lives (three years) we might need to account for shutdown in the realization rate, rather than the measure life. Evaluation staff are still discussing this with the program and the evaluator. Fred Gordon said the plant closure study that justified a 15-year measure life for custom capital does not apply to custom O&M measures.

Recommendations: SBW suggested several program process changes aimed at increasing the reliability of savings: Doing more pre- and post-installation metering, waiting to close out projects until all measures are fully installed, and considering more realistic assumptions for capacity and loads. We hope to get more information about how many cases in the evaluation this applied to in 2013 and 2014 before making decisions about what to adopt. SBW recommended improving documentation, especially for complex analyses; improving the quality control of models; and requiring final models be provided to Energy Trust. Some models are proprietary and there is unwillingness to share with Energy Trust. Again, we would like to know how many cases to which this applied in 2013 and 2014. Future evaluations should be conducted closer to installation dates of measures. SBW also recommended that we clarify protocols for ex-post savings estimates for plant closures and measure removals; we should describe our preferences and standardize them. Alan Meyer agreed that standardizing is good, and he wants to make sure that what we learn from evaluations is implemented. Erika Kociolek said project-level findings have been shared with program staff during the course of the evaluation. Fred Gordon said Evaluation staff have been doing a lot of data work, which is also important and foundational to much of our work, and we have to make trade-offs with our resources. That is a major reason we have decided to skip impact evaluations of the 2015 program year. Program realization rates have been very consistent over time, which makes us comfortable with skipping 2015. Eric Hayes asked if we include time spent on evaluations in our expectations of program workload. Fred Gordon said that we do, and we still have to make sure everything gets done when critical work comes up.

Erika Kociolek said that program staff were key to completing the impact evaluation and contributed very important input. The program is performing well based on realization rates, with no major issues. In terms of next steps, we are doing an industrial O&M persistence study to look at the measure life and see if it should three years or something else. That study should be complete in Q3 2019. Also, the 2018 Production Efficiency process evaluation is wrapping up in Q2 2019 and has mirrored a lot of activities from the Existing Buildings process evaluation. As noted, we are skipping the 2015 impact evaluation, except that the largest gas project in 2015 will be evaluated as part of the 2016-2017 impact evaluation, which is already underway. Anna Kim asked if this is the only instance where we are skipping impact evaluations for a program year. Dan Rubado said that the 2013 year of the New Buildings program was also skipped, although the largest projects representing most of the savings in that year received individual project impact evaluations. Susan Brodahl asked how the 2015 gas project realization rate would be applied. Erika Kociolek said it would only be applied to itself. Sarah Castor said that the rest of the 2015 program projects would likely get an average of the 2014 and 2016 realization rates. Alan Meyer asked how the 2013 and 2014 program savings will be trued up. Phil Degens said that these realization rates and the free ridership rates from Fast Feedback will go into the next annual true-up, applied to just these program years. Budgets will use an average of the most recent three years of realization rates. True-up may not change reported savings much because we assumed a realization rate based on previous program years when the savings were originally claimed, and those realization rates were probably close to these ones.

New Homes Ductless Heat Pump Pilot Evaluation

Presented by Dan Rubado

<u>Background</u>: The goal of this study was to research homes conditioned exclusively with ductless heat pumps (DHPs). These homes had become increasingly common in the New Homes program; the study began in 2017. Contractors and builders saw DHP-only homes as a lower-cost way to get an efficient heating system. They experimented with how to comfortably heat a home with a DHP. The program wanted to understand how this impacted savings. The systems were installed in two-story homes that all used the same general floor plan. There was one DHP on the first floor with no ducts. The second floor had another DHP in the utility room with a duct

system to serve bedrooms and fans to circulate DHP-conditioned air. The study investigated two different configurations: V1 and V2. V1 homes used a low power bath fan for air distribution, while V2 homes had two in-line duct fans that ran continuously. V1 homeowners had complaints about comfort, so V2 was a modification to address those complaints. There was uncertainty about installation practices, costs, energy usage, and comfort.

Dan Rubado showed some photos of a home with a typical installation. Many homes had a gas fireplace on the first floor for heating and perhaps aesthetics. The second floor had an intake duct above the DHP unit with a fan that would pull the DHP air into the duct. There was an air return above the door to the utility room.

<u>Research objectives</u>: Through this study, we wanted to learn if these systems could produce acceptable levels of comfort. We also wanted to understand how well program energy models estimate energy usage and savings. Another primary objective was to examine the airflow and temperatures provided by these systems under various fan operation cases. There were secondary objectives to look at the equipment and installation costs and compare them with other systems. The program wanted to understand if the fans could be controlled and at what cost. Finally, the study needed to look at DHP-system run times and how much energy the fans used.

CLEAResult, the residential PMC, conducted a temperature monitoring study in V2 homes. Energy Trust hired Evergreen Economics to review that study and evaluate DHP-only homes. Evergreen conducted staff interviews, installer interviews and site visits. The also conducted a survey of participant and nonparticipant homeowners, a review of the temperature data, and a billing analysis for V1 and V2 homes.

<u>Findings</u>: Nineteen V2 homes were recruited for the temperature study. Monitors were installed in several rooms in each home and four of the homes also had fan controls added. Temperature monitors showed significant differences from room to room – greater than 2 degrees – especially when cooling. There were problems with airflow and comfort. The installed fan controls didn't help much – they didn't make things better or worse. Eric Hayes asked if the monitoring was done on the first or second floor, and Dan Rubado confirmed that the monitors were on the second floor of the homes.

It was difficult to recruit homes for the temperature study, which ultimately used door-to-door outreach to recruit. Some V2 homes were previously V1 with retrofitted fans. There was some data loss during the study due to logger failure or occupants moving. Occupants had mixed satisfaction with homes, with some complaints about noise and some about temperature variation. Fan control installation was easy, and customers understood how to operate the controls. The study had a small sample size, smaller than desired. Ideally, results would have been available sooner, so we could change the program approach to these types of homes. Dulane Moran asked if recruiting was done through builders or directly with owners. Dan Rubado said recruiting was through cold calls to owners, which made it difficult. These were the original HVAC systems in the homes, except for the added fan controls.

Evergreen interviewed the system installers. Their motivation for installing DHPs in the homes was to get more energy efficient HVAC systems at lower cost. They believed the V2 configuration would improve on V1 by better conditioning the second floor. They had received limited complaints that were usually about fan noise. V2 system costs for a typical 2,000 square foot home were $2,000 to $2,700 for equipment and $1,000 to $1,500 for labor; the cost varied by the size and layout of the home. Dan Rubado thought this was the cost just for the second-floor system but needed to verify. There were two outdoor DHP units. Jamie Woods asked if we had checked that there weren't duct failures. Eli Caudill said sometimes the temperature study detected low air flow. Fred Gordon said studies have indicated that duct system issues are common in new homes.

It is not common practice to run fans continuously, and the electrician who installed the fan controls was surprised to see systems designed this way. The electrician also felt control programming was difficult and not intuitive and thought homeowners might not be able to use them correctly. Installing fan controls costs about $200 in materials and $225 for three hours of labor. Steve Lacey asked what type of controls were installed. Eli Caudill said they used a Samsung Smart Things hub, temperature sensors, and a smart switch on the wall. The fan could be controlled through a smart phone app and the program picked homeowners who would know how to use a smart phone app. Shelly Carlton asked how these systems compared to other system types. The DHP cost is similar to what we have seen in other studies, which is less expensive than a ducted heat pump. Scott Leonard said this DHP solution was less expensive than other options. Jennifer Light said ducted heat pumps in New Homes should be close to this cost, but Dan Rubado said that you also have to include the cost of installing ducts. There is an upcoming V3 system, which should be a further improvement. It's designed by the manufacturer to be ducted with integrated air distribution fans. It costs roughly $500 more for the equipment and is effectively a small ducted heat pump.

Evergreen completed 24 surveys with homeowners: Four with V2 owners, 15 with V1 owners and five with non-DHP homeowners. They had more success in recruiting V1 homeowners because there were more to recruit from.

DHP homeowners were more motivated by efficiency and green features than non-DHP homeowners. DHPs were controlled with a variety of methods, including programmable thermostats, handheld controllers and non-programmable thermostats. V2 homes had higher winter setpoints and lower summer setpoints, indicating possible performance issues. Because the number of respondents was small, this could be spurious or indicative of a real difference; we don't know for sure. DHP homeowners were more ambivalent about their comfort level. Only a few DHP homeowners used supplemental heat, and that was mainly from a gas fireplace.

Homeowner satisfaction with DHPs was low because of sound levels and temperature, especially for V2 homes. None of the V2 owners would recommend a DHP system to a friend or family member, though a few V1 homeowners would. This was surprising because V2 was intended to be better than V1.

The analysis of energy performance models involved comparing estimated and actual energy consumption. Results showed that V1 models slightly overstated electric usage, and V2 models slightly understated electric usage, but not at a statistically significant level. On average, DHP models were good and performed better than non-DHP models in estimating energy usage.

Evergreen also compared the energy usage of V1 and V2 homes. They chose a subset of V1 homes that were similar to V2 homes. Heating degree day coefficients suggest V2 systems had reduced DHP run time over V1 systems, but V2 homes did use 1,560 kWh more than V1 homes, likely because of increased fan usage. Engineering calculations were used to estimate the annual impact of continuous fan use and three intermittent fan use scenarios. The calculations estimated 1,700 kWh per year for continuous fan operation. A moderate scenario where the fan runs only half the year cut fan usage to 770 kWh, while 25 percent fan usage resulted in 430 kWh per year in fan energy consumption. Proper fan controls could easily reduce V2 usage by over 1,000 kWh per year.

Conclusions: Engineering estimates are a reliable prediction of fan energy usage. V1 and V2 systems struggled to provide consistent comfort, and the impact of fan controls could not be conclusively assessed. Homes with fan controls did not appear to show a difference in comfort, temperature or air flow, though they might save energy. V2 systems cost between $3,100 and $4,200 for a typical 2,000 square foot home. V3 should be about $500 more than that. Fan controls cost about $425. V2 systems cost less and likely save energy compared to central ducted heat pump systems.

Recommendations: Evergreen recommended that the program not include V1 or V2 homes, due to occupant comfort issues. They also suggested that Energy Trust consider a new pilot of V3 systems, as they may have better energy performance and comfort. Finally, Evergreen suggested that the program work with energy monitoring contractors to ensure proper testing of V3 systems.

The program will not exclude V1 or V2 systems but won’t recommend them either. These systems probably won’t be cost-effective based on new modeling protocols. The program is not pursuing a V3 pilot but will monitor those homes; they will be allowed in the program. We suggest third-party quality assurance or quality control of V3 homes to ensure proper installation, ducting and temperature distribution. Warren Cook asked how the program will treat V2 homes. Scott Leonard said Energy Trust wouldn’t pay a direct incentive, but it is allowed by code, so we can’t exclude those homes from the program. Jennifer Light asked where this type of system falls in the building code. Scott Leonard said the homes in the pilot were built under the 2014 code, so the DHP systems were viewed against an air source heat pump baseline and presented a significant improvement. The 2017 Oregon code makes this less appealing because of the zonal option. Dan Rubado said we may not see a lot of these V1 and V2 DHP system configurations in the future. Alan Meyer said that these seem like bad systems. Scott Leonard said that the market is moving quickly to make systems work, and manufacturers see their role in making better systems. V3 is an integrated system designed to be ducted by the manufacturer.

Fred Gordon said DHPs represent a lot of opportunity in energy efficiency supply curves and the Evaluation Committee will continue to see studies about them for that reason.

Wrap-up

Phil Degens had planned to present an overview of 2019 Evaluation activities, but given the limited time remaining in the meeting, he decided to skip the presentation. He asked board members to let him know by email what sort of information about evaluation plans they would like to see presented at a future meeting. Alan Meyer asked him to email the list of planned 2019 evaluation projects to the Evaluation Committee members.

Meeting adjourned at 3:00 PM.

Sarah Castor will send out a poll to schedule the next meeting for a date in April 2019.

PINK PAPER

New Buildings Program

Final Report

August 9, 2018

Prepared by

research into action inc

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Final Report

New Buildings Program

August 9, 2018

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Table of Contents

Executive Summary

Introduction

In December 2017, Energy Trust of Oregon (Energy Trust) selected Research Into Action to conduct market research to support their New Buildings program. This report presents the approach, results, and the implications of those results for the program.

Evaluation Objectives

This research considered the new construction market's full landscape of stakeholders, project scopes, and program phases (i.e., design, planning, installation, or completion). To capture this arc of activity, the research team focused on collecting the following information:

- The key characteristics, awareness, perceptions, barriers, motivators, and engagement of respondents, and
- Key aspects of the broader new construction market, including external market forces that come into play, presenting new barriers and opportunities, such as energy and building codes, emerging technologies, and economics.

We completed interviews with 90 respondents of which 63 provided details about the Energy Trust's high priority group – those with experience using Early Design Assistance, Market Solutions, Modeling Assistance, or Path to Net Zero. Most respondents were commercial building owners and developers who do work across Oregon in varying building types. About half are experienced both with the new construction market and with the program through participation in multiple projects.

Data collection occurred from late April 2018 through early June 2018. Interviews lasted, on average, about 35 minutes and ranged from 20 – 60 minutes.

Program Effects

Many market actors are highly engaged with the program.

The program successfully attracts and engages a large portion of the market through outreach. Many respondents are repeat customers and program offerings adapt to meet the needs of many different customers.

Early involvement of Energy Trust representatives enhances participation.

Participants often involve program representatives in their projects, which both makes participation smoother and helps design teams consider energy efficiency early in the process.

Program training is a valuable resource for some.

About one-third of all respondents (31%) attended Energy Trust-sponsored trainings. Almost all who did valued their training. Respondents attended classroom-based training, lunch-and-learns sponsored by Energy Trust, and site-visits with Energy Trust representatives.

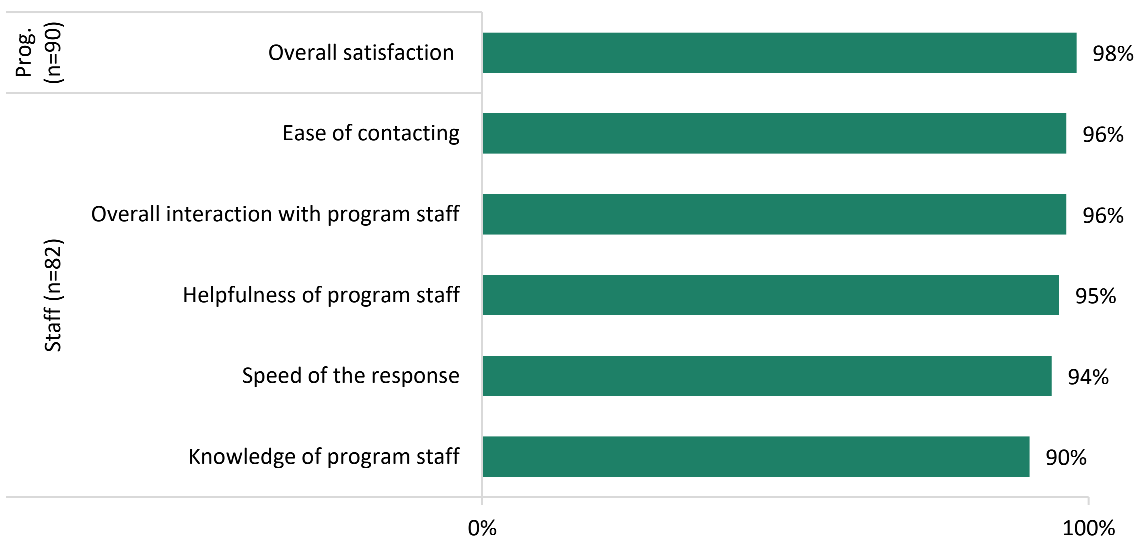
The program influences renewable energy decisions.

Many New Buildings respondents consider renewable energy (51%) and the program plays an important role in supporting and influencing public and private respondents to consider renewable measures. The program influences renewable energy decisions by helping verify and clarify plans for renewables and helping offset the cost of the overall bill for analysis and installation.

Participant satisfaction is very high.

Respondents reported high levels of satisfaction with the program overall and with their interactions with staff (Figure ES-1).

Figure ES-1: Satisfaction with Overall Program and Staff



Market Insights

Financial motivations, particularly savings on operations and maintenance costs, motivate program participants.

Almost all respondents noted some financial motivation. Improved building performance and quality, and a commitment to social and environmental responsibility, also are important motivations for many respondents (44% each).

Participants cited four key barriers to investing in energy efficiency.

Cost, while the single most frequent barrier, is not the only barrier to constructing efficient buildings. While upfront cost was the most frequent barrier, respondents described other key factors that prevent owners from constructing efficient buildings, including concerns about new or untested equipment, the extra time need to build an efficient building, and lack of knowledge among building owners about efficiency benefits.

The energy code does not play a major role in most project decisions.

Changes in energy code directly affected some respondents (39%), largely related to increases in the amount of time it takes to do a new project. The remaining 61% said code considerations do not? noticeably change their work because they are often unaware of code changes or because they already build above energy code (7). Forty-eight respondents noted that other members of the design team – typically architects – keep abreast of code changes but it is not a major consideration in design.

Insights About Program Offerings

Early Design Assistance helps participants consider new green technologies.

A third of respondents noted that Early Design Assistance allowed them to consider new energy efficient and "green" technologies or measures they would not have considered without the assistance. Measures included changes to the building shell and installation of electric vehicle charging stations.

Participants lauded many aspects of Early Design Assistance.

They specified that the offering provided them:

- An opportunity to collaborate and build relationships across the design team.
- Face-to-face time with program staff.
- Exposure to new ideas.
- Verification that they are on the right path for their project.
- Receiving incentive money to support the cost of the assistance meeting.
- Time to better understand the program requirements.

The easy-to-follow path of Market Solutions makes it invisible to some and appealing to others.

Less than half of the 22 interviewed respondents that knew they participated in an Energy Trust project, could recall they participated in the Market Solutions offering, even when prompted with reminders about the tiers and workbooks. Those who recalled the path said they were highly satisfied and said it was important that it offered an easy-to-follow way to construct a more efficient building.

Participants appreciated Modeling Assistance because it helps verify and adjust designs.

The 11 respondents offering details about the modeling assistance said it is important for verifying and adjusting design, but that they did not use it to make wholesale changes. Some also appreciated the new ideas that modeling brought to their projects.

Path to Net Zero participants tend to be mission driven.

Of the 17 respondents, almost all (15) elected to take the Path to Net Zero (PTNZ) offering due to the mission of their organization or, in the case of a developer, the mission of their client. The majority of these mission-driven organizations were public entities (13) such as school districts (6) or entities (7) like health centers, fire departments, and courthouses.

PTNZ's non-monetary support is an important influence on design.

Of the 15 respondents able to report about how the PTNZ offering influenced their project, almost all (14) noted how the non-monetary influences of PTNZ influenced their project compared to about a third mentioning the monetary incentives.

Staying within a project budget presents a key challenge to net zero projects.

Of those who described encountering challenges to constructing net zero buildings (13), most (12) expressed that it was difficult to meet the budget demands.

PTNZ respondents cited high satisfaction and many benefits to participation.

Respondents said the program:

- Provided them a path to follow to achieve high efficiency
- Helped support the mission of their organization
- Helped convince others about benefits of efficiency
- Will provide them with long-term financial savings
- Built awareness about efficiency for future projects.

Conclusions and Recommendations

Conclusion 1: The New Buildings program offers a suite of offerings that appeals to a broad cross-section of the market. From building owners and developers interested in a single measure, to those interested in net zero construction, all have clearly laid out paths and support, including appropriate incentive levels tailored to each path. This has allowed Energy Trust to reach roughly half of all new commercial projects in its territory and develop a cadre of owners and professionals that are highly satisfied with the program.

Conclusion 2: Offering multiple program offerings allowed respondents to find a path that works for them. For example, Market Solutions offers less knowledgeable and experienced participants an easy and convenient way, with the certainty of specific incentive amounts, to increase the energy efficiency in their projects. Path to Net Zero offers highly motivated participants a path to achieve their - objectives. This makes the program convenient and familiar, but also may encourage repeat customers to stay in the path they know, even if they might be able to pursue greater efficiency. Energy Trust representatives almost act as de facto members of design teams, especially on more complicated projects, and these representatives may be able to take steps that effectively influence progress toward higher efficiency for future projects.

> **Recommendation 1:** Investigate ways to work with past participants to try even higher efficiency for future projects. This encouragement could occur during the system-based project as outreach managers could begin laying the groundwork with these respondents about more efficiency work they could do in their next building. Similarly, a highly satisfied Market Solutions respondent might be encouraged to try using the top tier offering or even pursue a net zero approach on their next building.

Conclusion 3: Respondents see verification of energy efficiency design and measures as a critical benefit of the program. Respondents from all program offerings identified, to varying degrees, the value they received from having their ideas verified by the program. It was important to many respondents that a third party, Energy Trust, was verifying the designs and measures they wanted to install to meet their efficiency objectives.

> **Recommendation 2:** Along with messages about incentives and technical support, ensure that marketing materials include messaging about the value the program can offer to help verify designs and ideas.

Conclusion 4: The construction professional community is critical to program awareness and use. Those who participate in the program's training opportunities highly value their training experiences, and greater participation in trainings could be another conduit for positive word of mouth about the program.

> **Recommendation 3:** Continue to seek opportunities to engage potential participants – both those working for professional services firms and building owners -- via trainings, including lunch-and-learn sessions, formal classroom training, and updates about program updates.

Conclusion 5: Roughly half the new commercial buildings in Energy Trust territory are not going through the New Buildings program. This research with participants cannot shed light on who and what types of buildings are not participating. However, this is an important consideration for future program expansion.

> **Recommendation 4:** Further exploration of the program's database, plus market research with nonparticipants and "market experts" could provide further insights for expanding the program's reach into new construction and major renovation market.

Conclusion 6: This research exposed topics to explore in the next round of market research.

Recommendation 5: For the next round of market research consider:

- Interviewing modelers to get a more complete understanding of the successes and challenges associated with the program's modeling assistance.
- Ask respondents about any projects they have done that did not go through the program, even when they were aware of the program or had used it in the past, to better understand if participants selectively use the program, or if the program is consistently applied to all their projects. Furthermore, this line of questioning could confirm that once participants find an offering that meets their need, they tend to stay in that offering for future projects.
- In future market penetration analysis work, examine if smaller projects are being missed by the program and if so, consider ways to attract smaller projects.

PINK PAPER

MEMO

Date: December 31, 2018
To: Board of Directors
From: Jessica Iplikci , New Construction Senior Program Manager
Susan Jowaiszas, Marketing Lead Energy Programs
Phil Degens, Evaluation Manager
Subject: Staff Response to the 2018 New Construction Market Research

Energy Trust wanted to take a closer look at participants in the New Buildings program that had utilized specific program services within the past year, 2017. Past research studies largely focused on completed projects and customers that had been engaged with the program over multiple years. Focusing the research on more recent participation in a wider range of program services, such as early design assistance, can provide more timely feedback to program managers on the current offerings and customer experience.

The market research indicated that the program has a maintained a large share of the new construction market. The program also continues to attract new participants in a very active and competitive commercial real estate market. The market strategy where code follows practice is proving to be successful as most respondents had few if any code-related issues.

The program's early engagement strategy has led many customers to consider more energy efficiency and renewable energy options in their projects. Path to Net Zero participants responses indicated that participants in that track were becoming more comfortable with this design approach and doing additional Path to Net Zero projects.

New Buildings has been encouraging repeat participation resulting in customers taking a comprehensive approach to efficiency and renewable energy generation in their projects. Program managers are considering how to maintain savings momentum by both enrolling more projects and achieving deeper savings where customers have the desire.

Training and education have grown over the past several years as a tool for the program to engage with architects, designers and engineers, and support their capacity to design high-performance buildings in Oregon. This investment is proving to be an effective strategy to build understanding of the value of energy efficiency and renewable energy with building owners and developers.

Tab 7

Board Decision R877
Amending the Charter of the Energy Trust Finance Committee to Conform to Bylaw Amendments
April 3, 2019

Summary
Approve two housekeeping amendments to the Energy Trust Finance Committee charter: recognizing that Energy Trust now has a Director of Finance rather than a "Chief Financial Officer;" reflecting bylaw amendments approved by the board in February 2019; and authorizing the committee to advise the board regarding closures of financial accounts, not just establishment of such accounts.

Background
At its February 2019 meeting, the Energy Trust board adopted amendments to its bylaws recognizing that the position formerly called Chief Financial Officer has been restructured, as the new position is called Director of Finance.

The current charter authorizes the Finance Committee to "advise the board regarding all matters affecting the establishment of accounts with banks or brokers."

Discussion
The first proposed change to the charter reflects the February 2019 bylaw change, acknowledging that Energy Trust now has a Director of Finance rather than a Chief Financial Officer.

The second proposed change would authorize the committee to advise the board regarding the closure of accounts with banks or brokers, not just the establishment of such accounts.

Recommendation
Approve amendments to the Finance Committee charter as shown in the attached.

Board Decision
FINANCE COMMITTEE CHARTER

Adopted: April 3, 2019

RESOLUTION #877 REPLACES R#293
RESOLUTION APPROVING FINANCE COMMITTEE CHARTER

WHEREAS:

1. **At its February 2019 meeting, the board adopted amendments to the Energy Trust bylaws recognizing that the position formerly called Chief Financial Officer has been restructured in a new position called Director of Finance. A conforming amendment to the Finance Committee charter is therefore needed.**
2. **In addition, the current charter authorizes the Finance Committee to "advise the Board regarding all matters affecting the establishment of accounts with banks or brokers." The board wishes to make clear that the Committee is also authorized to advise the board regarding the closure of such accounts.**

IT IS THEREFORE RESOLVED: That Energy Trust of Oregon, Inc., Board of Directors approves revisions to the Finance Committee Charter as indicated in Exhibit A attached hereto.

Moved by:

Seconded by:

Vote:
In favor:

Abstained:

Opposed:

Adopted on April 3, 2019, by Energy Trust of Oregon, Inc., Board of Directors.

Exhibit A

Energy Trust of Oregon, Inc.
Finance Committee Charter

Purpose and Scope

The primary function of the Finance Committee (the "Committee") is to assist the Board of Directors (the "Board") in fulfilling its responsibilities by advising the Board, and in certain instances by acting on behalf of the Board, on matters relating to the organization's investment policies and financial activities.

Composition

The Committee shall be comprised of a minimum of three members of the Board as appointed by the Board, each of whom shall be free from any relationship that, in the opinion of the Board, would interfere with the exercise of his or her independent judgment as a member of the Committee. Basic understanding of financial statements, general accounting policies and practices, investment, cashflow, and operations is encouraged. In addition, the executive director and ~~Chief Financial Officer~~Director of Finance will serve as staff representatives on the committee.

The members of the Committee shall serve until their successors are duly elected or until their resignation or removal. Unless the Board appoints a Committee Chair, the members of the Committee may designate a Chair by majority vote of the full Committee membership.

One member of the Committee shall serve in a liaison role with the Audit Committee.

Meetings

The Committee shall meet as necessary to enable it to fulfill its responsibilities and duties as set forth herein. The Committee shall report its actions to the full Board and keep written minutes of its meetings, which in turn shall be recorded and maintained with the books and records of the organization.

Responsibilities

The Committee shall:

1. Advise the Board regarding any proposed debt, equity or hybrid financing transaction of the organization and review any such proposed transaction for compliance with any applicable rules and regulations promulgated by any governmental or regulatory body exercising authority over the organization ("Regulatory Body").

2. Be responsible for recommending changes to the board-approved accounting policies.

3. Advise the Board regarding all matters affecting the establishment or closure of accounts with banks or brokers.

4. Review and assess the adequacy of the organization's investment guidelines as necessary, assess whether these guidelines are appropriate for the organization, review such guidelines for compliance with any applicable rules and regulations promulgated by any Regulatory Body and review and recommend to the Board any amendments or revisions to the guidelines.

5. Periodically meet with management to review matters within the Committee's authority.

6. Be available to consult with members of the organization's senior management on matters relating to any proposed financing transaction, investment or other finance-related strategy to be pursued by the organization.

7. Regularly meet with staff to review the financial results of the organization's operations, and other financial or management reports which are provided to the Board and provide staff guidance as necessary.

8. Review with staff the annual budget draft and make recommendations to the full Board. Review and recommend any necessary budget changes during the year.

9. Review and assess the adequacy of this Charter periodically as needed and recommend to the Board any modifications to this Charter.

Authority

1. To the extent it deems necessary, the Committee may engage outside counsel, investment bankers, accountants and/or independent consultants to review any matter under its responsibility.

2. The Committee may take such other actions in matters under its authority as the Committee deems to be in the best interests of the organization or as required by any Regulatory Body.

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Notes on December 2018 Financial Statements

February 22, 2019

Revenue

Revenue ended the year at 2% of budgeted amounts. We ended up earning over $1 million in interest.

	YTD Actual	YTD Budget	YTD Var	YTD %	PY
PGE Efficiency	95,505,251	93,756,625	1,748,626	2%	93,610,702
PGE Renewables	8,599,076	8,384,629	214,447	3%	8,593,247
PAC Efficiency	54,697,593	53,691,125	1,006,468	2%	57,564,806
PAC Renewables	6,310,563	6,350,611	(40,048)	-1%	6,429,328
NWN	21,730,787	21,266,006	464,781	2%	26,500,404
CNG	2,335,838	2,167,052	168,786	8%	2,622,395
Avista	1,325,133	1,156,870	168,263	15%	1,036,868
Grant Revenue	88,944		88,944	0%	50,651
Investment Income	1,073,286	230,000	843,286	367%	425,700
Total	191,666,469	187,002,918	4,663,554	2%	196,834,100

Reserves

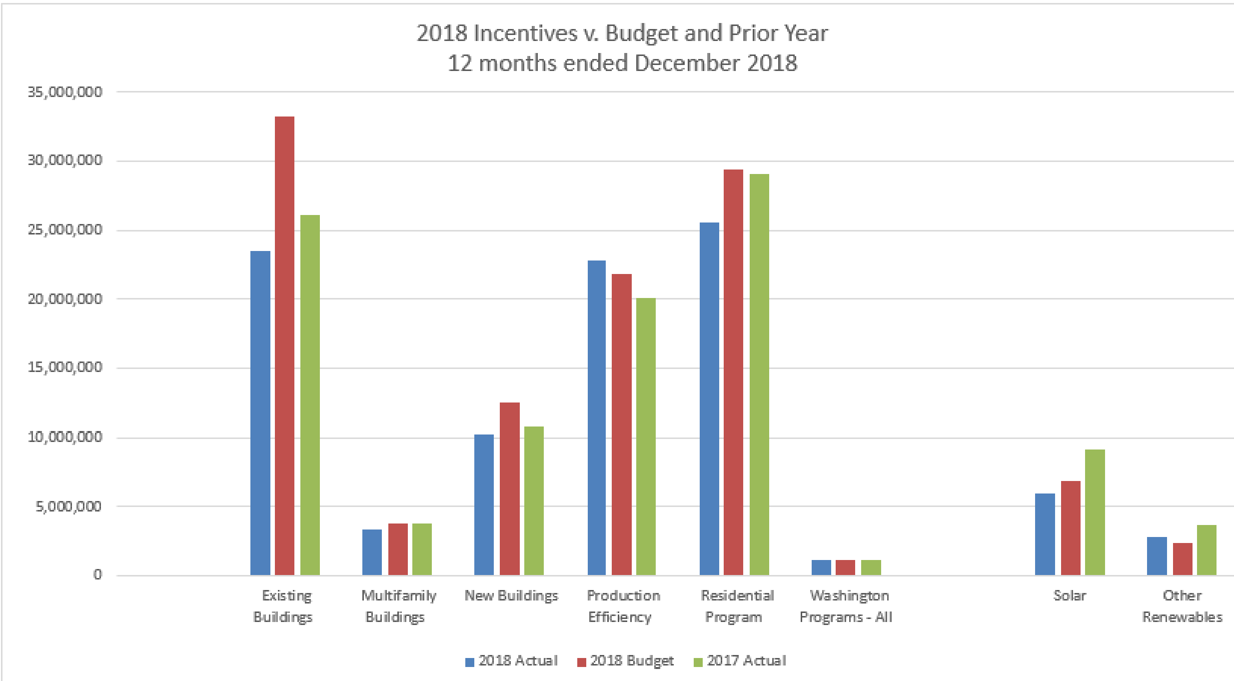
Reserves declined more than $31 million dollars in December. We ended the year above our forecasted reserve levels, primarily due to underspending in incentives. Avista ended the year slightly negative due to more activity than expected in Q4. Note that totals below do not include the reallocated interest amounts.

Reserves

	12/31/18 forecast	12/31/18 current	12/31/17 one year ago
PGE	17,352,727	22,034,160	12,210,374
PacifiCorp	4,537,102	9,187,488	6,211,995
NW Natural	3,189,165	3,531,025	3,527,721
Cascade	153,044	368,189	262,065
Avista	16,017	(46,071)	75,716
NWN Industrial	199,190	743,894	2,647,086
NWN Washington	436,902	495,306	176,503
PGE Renewables	8,606,385	9,369,702	7,073,074
PAC Renewables	5,811,252	6,382,129	6,268,078
Program Reserves	40,301,784	52,065,811	38,452,612
Other Reserves	-	24,356	38,710
Contingency Reserve	5,000,000	5,000,000	5,000,000
Board approved for program loans	1,800,000	1,800,000	-
Contingency Available	3,441,309	3,914,595	4,641,309
Total	50,543,091	62,804,775	48,132,611

Expenses

Total expenses for the month of December were 26% ($12 million) less than budgeted. December incentives came in $10.7 million below budget. This brings our incentive shortfall for the 10 months of the year to $15.6 million. Total expenses year-to-date are $21.9 million (11%) less than budget.

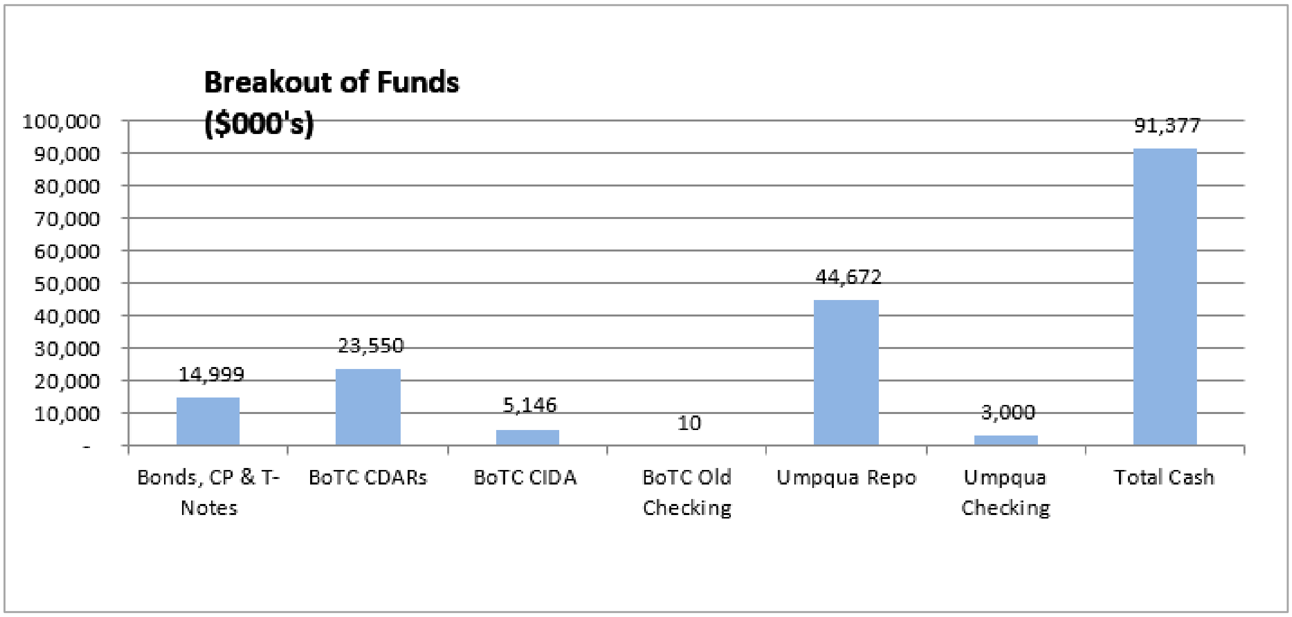


Total Incentives
Year-to-Date 2018

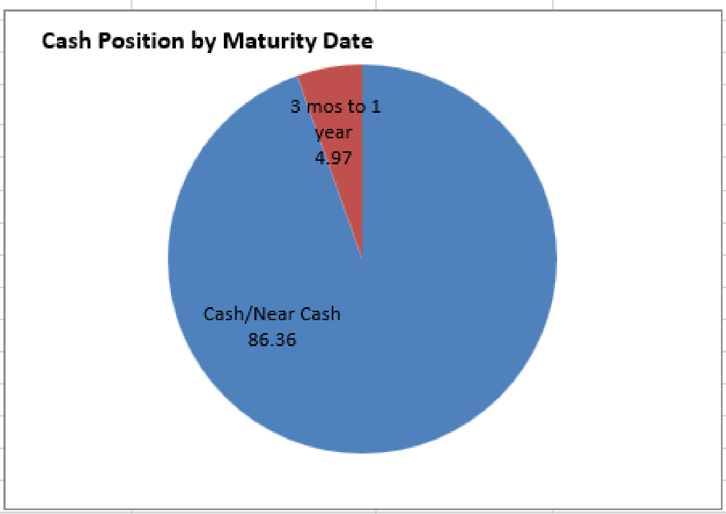
	2018 Actual	2018 Budget	2017 Actual
Existing Buildings	23,464,990	33,200,890	26,076,709
Multifamily Buildings	3,352,006	3,791,148	3,831,438
New Buildings	10,295,986	12,573,969	10,737,412
Production Efficiency	22,847,132	21,815,591	20,094,046
Residential Program	25,556,919	29,376,979	29,089,757
Washington Programs - All	1,120,547	1,107,956	1,182,874
Solar	5,986,209	6,815,500	9,099,860
Other Renewables	2,827,801	2,348,720	3,642,877
Total Incentives	95,451,589	111,030,753	103,754,973
Energy Efficiency Only	**86,637,579**	**101,866,533**	**91,012,236**

Investment Status

The graphs below show the type of investments we hold and the locations where our funds are held. We increased our cash levels in December in order to cover our expected January incentive payouts. In January, we were able to evaluate our needs and have moved some cash back into higher yield investments. We are continuing to keep a short term outlook, investing in maturities with due dates prior to January, 2020.



Average Days to Maturity:	**25**
Average Portfolio Yield:	**1.26%**



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Energy Trust of Oregon
BALANCE SHEET
December 31, 2018
(Unaudited)

	December 2018	November 2018	December 2017	December 2017	Change from one month ago	Change from Beg. of Year	Change from one year ago
Current Assets							
Cash & Cash Equivalents	53,104,536	32,904,756	52,223,904	52,223,904	20,199,780	880,632	880,632
Investments	38,440,394	61,568,780	22,721,392	22,721,392	(23,128,386)	15,719,002	15,719,002
Receivables	78,531	87,683	119,077	119,077	(9,152)	(40,547)	(40,547)
Prepaid Expenses	222,217	301,495	244,442	244,442	(79,278)	(22,225)	(22,225)
Advances to Vendors	2,238,777	734,276	2,489,421	2,489,421	1,504,501	(250,644)	(250,644)
Total Current Assets	**94,084,454**	**95,596,991**	**77,798,237**	**77,798,237**	**(1,512,537)**	**16,286,218**	**16,286,218**
Fixed Assets							
Computer Hardware and Software	3,869,226	3,934,165	3,733,082	3,733,082	(64,939)	136,144	136,144
Software Development in Progress	-	-	183,687	183,687.30	-	(183,687)	(183,687.30)
Leasehold Improvements	615,557	605,621	595,027	595,027	9,936	20,530.64	20,530.64
Office Equipment and Furniture	831,612	819,795	815,056	815,056	11,817	16,556	16,556
Total Fixed Assets	**5,316,395**	**5,359,581**	**5,326,852**	**5,326,852**	**(43,186)**	**(10,457)**	**(10,457)**
Less Depreciation	(4,658,292)	(4,815,806)	(4,442,925)	(4,442,925)	157,515	(215,366)	(215,366)
Net Fixed Assets	**658,103**	**543,774**	**883,926**	**883,926**	**114,329**	**(225,823)**	**(225,823)**
Other Assets							
Deposits	258,653	258,653	237,314	237,314	-	21,339.00	21,339.00
Deferred Compensation Asset	967,280	988,462	972,828	972,828	(21,183)	(5,548)	(5,548)
Note Receivable, net of allowance	430,669	430,669	263,669	263,669	-	167,000	167,000
Total Other Assets	**1,656,602**	**1,677,785**	**1,473,812**	**1,473,812**	**(21,183)**	**182,791**	**182,791**
Total Assets	**96,399,160**	**97,818,550**	**80,155,975**	**80,155,975**	**(1,419,390)**	**16,243,185**	**16,243,185**
Current Liabilities							
Accounts Payable and Accruals	30,565,097	13,194,444	29,180,745	29,180,745	17,370,653	1,384,352	1,384,352
Salaries, Taxes, & Benefits Payable	931,049	1,058,761	874,594	874,594	(127,712)	56,455	56,455
Total Current Liabilities	**31,496,146**	**14,253,205**	**30,055,339**	**30,055,339**	**17,242,941**	**1,440,807**	**1,440,807**
Long Term Liabilities							
Deferred Rent	1,133,461	1,133,461	990,344	990,344	-	143,117	143,117
Deferred Compensation Payable	962,564	982,081	976,378	976,378	(19,517)	(13,814)	(13,814)
Other Long-Term Liabilities	2,235	2,235	1,290	1,290	-	945	945
Total Long-Term Liabilities	**2,098,260**	**2,117,777**	**1,968,012**	**1,968,012**	**(19,517)**	**130,248**	**130,248**
Total Liabilities	**33,594,406**	**16,370,982**	**32,023,351**	**32,023,351**	**17,223,424**	**1,571,056**	**1,571,056**
Net Assets							
Unrestricted Net Assets	62,804,753	81,447,568	48,132,624	48,132,624	(18,642,815)	14,672,130	14,672,130
Total Net Assets	**62,804,753**	**81,447,568**	**48,132,624**	**48,132,624**	**(18,642,815)**	**14,672,130**	**14,672,130**
Total Liabilities and Net Assets	**96,399,160**	**97,818,550**	**80,155,975**	**80,155,975**	**(1,419,390)**	**16,243,185**	**16,243,185**

Energy Trust of Oregon
Cash Flow Statement-Indirect Method
Monthly 2018

	January	February	March	April	May	June	July	August	September	October	November	December	Year to Date
Operating Activities:													
Revenue less Expenses	$ 11,111,618	$ 11,785,867	$ 5,880,943	$ 6,097,341	$ 1,847,257	$ (3,889,820)	$ 2,539,130	$ 578,392	$ 1,070,747	$ 1,058,313	$ (4,764,839)	$ (18,642,815)	$ 14,672,130
Non-cash items:													
Depreciation	60,349	60,436	37,154	35,624	33,910	31,464	26,631	22,992	22,992	22,937	18,898	21,525	394,912
Change in Reserve on Long Term Note													-
Loss on disposal of assets													-
Receivables	25,330	13,597	(10,052)	(101,297)	89,402	(6,066)	(5,248)	34,210	(15,585)	(7,930)	(7,602)	24,291	33,051
Interest Receivable	11,816	701	586	(36,521)	59,170	(27,651)	55,102	(8,083)	(42,041)	1,362	8,194	(15,139)	7,496
Advances to Vendors	1,053,629	717,885	(1,549,230)	755,704	755,705	(1,563,795)	773,167	773,166	(1,429,591)	734,253	734,252	(1,504,501)	250,644
Prepaid expenses and other costs	(423,367)	(160,906)	52,859	53,228	(29,400)	67,421	(36,386)	74,911	(16,865)	92,964	64,515	100,461	(160,565)
Accounts payable	(18,224,160)	(151,198)	(3,016,589)	1,026,311	(486,892)	43,241	1,788,509	(2,652,679)	2,450,039	(570,275)	3,807,381	17,370,652	1,384,340
Payroll and related accruals	94,882	102,231	(227,298)	(11,396)	148,977	58,746	(44,306)	(132,682)	(85,099)	190,667	95,148	(147,229)	42,641
Deferred rent and other	12,093	12,092	12,092	12,093	14,051	12,093	12,092	12,093	12,092	11,079	22,192	-	144,062
Cash rec'd from / (used in) Operating Activities	(6,277,810)	12,380,706	1,180,465	7,831,087	2,432,180	(5,274,367)	5,108,691	(1,297,680)	1,966,689	1,533,370	(21,861)	(2,792,755)	16,768,715
Investing Activities:													
Investment Activity (1)	3,011,583	(2,002,711)	(8,416,303)	(3,992,551)	5,387,728	(16,077,806)	(8,988,537)	(591,615)	(4,064,963)	(80,307)	(3,031,906)	23,128,386	(15,719,002)
(Acquisition)/Disposal of Capital Assets	(2,843)	(8,444)	(3,397)		(7,955)					(10,595)		(135,854)	(169,087)
Cash rec'd from / (used in) Investing Activities	3,008,740	(2,011,155)	(8,419,700)	(3,992,551)	5,379,773	(16,077,806)	(8,988,537)	(591,615)	(4,064,963)	(90,902)	(3,031,906)	22,992,532	(15,888,089)
Cash at beginning of Period	52,223,904	48,954,835	59,324,388	52,085,153	55,923,690	63,735,643	42,383,470	38,503,624	36,614,329	34,516,054	35,958,523	32,904,756	52,223,904
Increase/(Decrease) in Cash	(3,269,070)	10,369,552	(7,239,235)	3,838,536	7,811,953	(21,352,173)	(3,879,846)	(1,889,295)	(2,098,274)	1,442,469	(3,053,767)	20,199,777	880,626
Cash at end of period	$ 48,954,835	$ 59,324,388	$ 52,085,153	$ 55,923,690	$ 63,735,643	$ 42,383,470	$ 38,503,624	$ 36,614,329	$ 34,516,054	$ 35,958,523	$ 32,904,756	$ 53,104,536	$ 53,104,536

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

Energy Trust of Oregon
Cash Flow Projection
January 2018 - December 2019

	Actual											
	January	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**
Cash In:												
Public purpose and Incr funding	18,964,634	21,537,912	17,624,324	17,785,777	15,360,373	12,544,226	13,567,185	13,864,679	15,994,676	15,519,129	12,940,634	14,800,691
Investment Income	48,230	35,414	48,768	21,666	136,385	71,477	171,619	115,601	70,862	119,747	127,284	113,729
From Other Sources	31,744	20,495	383	(96,406)	95,652	0	(55)	41,257	(8)	(65)	(0)	28,997
Total cash in	19,044,608	21,593,822	17,673,475	17,711,037	15,592,410	12,615,703	13,738,749	14,021,537	16,065,530	15,638,811	13,067,918	14,943,417
Cash Out:	(25,325,256)	(9,221,560)	(16,496,406)	(9,879,952)	(13,168,186)	(17,890,069)	(8,630,058)	(15,319,218)	(14,098,846)	(14,116,032)	(13,089,780)	(17,872,026)
Net cash flow for the month	(6,280,648)	12,372,261	1,177,069	7,831,085	2,424,224	(5,274,366)	5,108,691	(1,297,681)	1,966,684	1,522,779	(21,862)	(2,928,609)
Cash Flow from/to Investments	3,011,583	(2,002,711)	(8,416,303)	(3,992,551)	5,387,728	(16,077,806)	(8,988,537)	(591,615)	(4,064,963)	(80,307)	(3,031,906)	23,128,386
Beginning Balance: Cash & MM	52,223,904	48,954,835	59,324,381	52,085,150	55,923,690	63,735,643	42,383,469	38,503,623	36,614,326	34,516,047	35,958,523	32,904,756
Ending cash & MM	**48,954,835**	**59,324,381**	**52,085,153**	**55,923,690**	**63,735,643**	**42,383,470**	**38,503,624**	**36,614,329**	**34,516,047**	**35,958,523**	**32,904,756**	**53,104,536**
Future Commitments												
Renewable Incentives	8,300,000	8,500,000	6,400,000	4,900,000	5,200,000	7,000,000	7,200,000	7,600,000	10,700,000	10,200,000	10,100,000	9,800,000
Efficiency Incentives	84,300,000	85,700,000	88,200,000	90,600,000	89,500,000	98,400,000	100,700,000	113,600,000	89,400,000	90,100,000	84,900,000	75,300,000
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	97,600,000	99,200,000	99,600,000	100,500,000	99,700,000	110,400,000	112,900,000	126,200,000	105,100,000	105,300,000	100,000,000	98,600,000

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 2018 - December 2019

	2019 R2 Budget											
	January	**February**	**March**	**April**	**May**	**June**	**August**	**October**	**October**	**October**	**November**	**December**
Cash In:												
Public purpose and Incr funding	17,731,369	21,863,246	17,167,251	16,757,648	14,799,345	12,139,449	14,164,964	12,866,575	13,440,712	14,961,390	12,705,326	15,245,215
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												
Total cash in	17,781,369	21,913,246	17,217,251	16,807,648	14,849,345	12,189,449	14,214,964	12,916,575	13,490,712	15,011,390	12,755,326	15,295,215
Cash Out:	(24,986,310)	(10,156,816)	(12,851,975)	(13,440,371)	(13,951,600)	(15,033,565)	(15,854,199)	(14,054,336)	(14,690,875)	(15,891,839)	(16,736,445)	(20,673,505)
Net cash flow for the month	(7,204,941)	11,756,429	4,365,276	3,367,277	897,745	(2,844,116)	(1,639,235)	(1,137,760)	(1,200,163)	(880,449)	(3,981,118)	(5,378,290)
Cash Flow from/to Investments	-	-	-	-	-	-	-	-	-	-	-	-
Beginning Balance: Cash & MM	53,104,536	45,899,594	57,656,023	62,021,299	65,388,577	66,286,322	63,442,205	61,802,970	60,665,210	59,465,048	58,584,599	54,603,480
Ending cash & MM	**45,899,594**	**57,656,023**	**62,021,299**	**65,388,577**	**66,286,322**	**63,442,205**	**61,802,970**	**60,665,210**	**59,465,048**	**58,584,599**	**54,603,480**	**49,225,190**

Future Commitments												
Renewable Incentives	10,100,000	10,400,000	10,300,000	10,500,000	10,900,000	10,700,000	10,700,000	10,700,000	10,700,000	10,700,000	10,700,000	10,700,000
Efficiency Incentives	77,500,000	79,500,000	79,800,000	80,000,000	80,800,000	80,800,000	80,800,000	80,900,000	81,000,000	81,300,000	81,500,000	81,600,000
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	96,700,000	96,500,000	96,500,000	96,600,000	96,700,000	97,000,000	97,200,000	97,300,000

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 12 Months Ending December 31, 2018
(Unaudited)

	December				YTD			
	Actual	**Budget**	**Budget Variance**	**Variance %**	**Actual**	**Budget**	**Budget Variance**	**Variance %**
OREGON PPC REVENUE								
Public Purpose Funds-PGE	2,972,967	2,921,804	51,163	2%	38,451,343	37,484,629	966,714	3%
Incremental Funds - PGE	4,921,990	6,287,908	(1,365,918)	-22%	65,652,983	64,656,625	996,358	2%
Public Purpose Funds-PacifiCorp	2,271,329	2,449,981	(178,652)	-7%	28,375,373	28,525,981	(150,608)	-1%
Incremental Funds - PacifiCorp	2,488,417	2,658,949	(170,533)	-6%	32,632,784	31,515,755	1,117,029	4%
Public Purpose Funds-NW Natural	1,426,089	1,692,516	(266,426)	-16%	18,453,201	18,279,834	173,367	1%
NW Natural - DSM	328,750		328,750		848,774	520,024	328,750	63%
Public Purpose Funds-Cascade	276,778	359,673	(82,895)	-23%	2,335,838	2,167,052	168,786	8%
Public Purpose Funds-Avista	114,370	96,406	17,964	19%	1,325,133	1,156,870	168,263	15%
Total Oregon PPC Revenue	**14,800,691**	**16,467,238**	**(1,666,547)**	**-10%**	**188,075,428**	**184,306,770**	**3,768,659**	**2%**
NW Natural - Washington			-		2,428,812	2,466,148	(37,336)	-2%
Grant Revenue	4,706		4,706		88,944		88,944	
Revenue from Investments	128,868	20,000	108,868	544%	1,073,286	230,000	843,286	367%
Total Other Sources of Revenue	**133,574**	**20,000**	**(113,574)**	**-568%**	**3,591,042**	**2,696,148**	**(894,894)**	**-33%**
TOTAL REVENUE	**14,934,265**	**16,487,238**	**(1,552,973)**	**-9%**	**191,666,471**	**187,002,918**	**4,663,553**	**2%**
EXPENSES								
Incentives	27,465,954	38,145,853	10,679,899	28%	95,451,589	111,030,753	15,579,164	14%
Program Delivery Subcontracts	4,031,668	4,937,574	905,906	18%	57,113,020	58,297,400	1,184,380	2%
Employee Salaries & Fringe Benefits	897,416	1,143,315	245,899	22%	13,211,234	13,608,430	397,195	3%
Agency Contractor Services	82,443	133,974	51,531	38%	1,264,805	1,536,000	271,195	18%
Planning and Evaluation Services	469,786	335,673	(134,113)	-40%	2,834,300	4,028,074	1,193,774	30%
Advertising and Marketing Services	236,496	222,014	(14,482)	-7%	2,521,661	2,832,975	311,314	11%
Other Professional Services	286,774	453,255	166,481	37%	2,142,124	4,596,049	2,453,925	53%
Travel, Meetings, Trainings & Conferences	18,452	38,713	20,261	52%	370,370	476,550	106,180	22%
Dues, Licenses and Fees	8,199	11,262	3,063	27%	145,344	220,091	74,747	34%
Software and Hardware	21,261	45,512	24,251	53%	382,090	515,379	133,288	26%
Depreciation & Amortization	21,525	33,184	11,659	35%	394,911	522,465	127,554	24%
Office Rent and Equipment	25,690	87,869	62,180	71%	1,042,539	1,054,433	11,894	1%
Materials Postage and Telephone	10,923	11,346	423	4%	114,667	138,650	23,983	17%
Miscellaneous Expenses	494	250	(244)	-98%	5,686	4,500	(1,186)	-26%
TOTAL EXPENSES	**33,577,080**	**45,599,792**	**12,022,713**	**26% #**	**176,994,341**	**198,861,750**	**21,867,410**	**11%**
TOTAL REVENUE LESS EXPENSES	**(18,642,815)**	**(29,112,555)**	**10,469,740**	**36%**	**14,672,130**	**(11,858,833)**	**26,530,962**	**224%**

Energy Trust of Oregon
Income Statement - Actual and Prior Yr Comparison
For the 12 Months Ending December 31, 2018
(Unaudited)

	December				YTD			
	Actual	Actual Prior Year	Prior Year Variance	Variance %	Actual	Actual Prior Year	Prior Year Variance	Variance %
OREGON PPC REVENUE								
Public Purpose Funds-PGE	2,972,967	2,927,625	45,342	2%	38,451,343	38,436,607	14,736	0%
Incremental Funds - PGE	4,921,990	4,991,585	(69,595)	-1%	65,652,983	63,767,342	1,885,641	3%
Public Purpose Funds-PacifiCorp	2,271,329	2,347,229	(75,900)	-3%	28,375,373	29,130,929	(755,556)	-3%
Incremental Funds - PacifiCorp	2,488,417	2,758,548	(270,131)	-10%	32,632,784	34,863,205	(2,230,422)	-6%
Public Purpose Funds-NW Natural	1,426,089	1,483,748	(57,658)	-4%	18,453,201	18,458,974	(5,773)	0%
NW Natural - DSM	328,750.00		328,750.00		848,774	5,920,596	(5,071,822)	-86%
Public Purpose Funds-Cascade	276,778	265,440	11,338	4%	2,335,838	2,622,395	(286,557)	-11%
Public Purpose Funds-Avista	114,370	172,429	(58,059)	-34%	1,325,133	1,036,868	288,265	28%
Total Oregon PPC Revenue	**14,800,691**	**14,946,604**	**(145,913)**	**-1%**	**188,075,428**	**194,236,916**	**(6,161,488)**	**-3%**
NW Natural - Washington		100,000	(100,000)		2,428,812	2,120,834	307,978	15%
Grant Revenue	4,706	7,418	(2,711)	-37%	88,944	50,651	38,293	76%
Revenue from Investments	128,868	39,791	89,077	224%	1,073,286	425,700	647,586	152%
Total Other Sources of Revenue	**133,574**	**147,209**	**13,635**	**9%**	**3,591,042**	**2,597,185**	**(993,858)**	**-38%**
TOTAL REVENUE	**14,934,265**	**15,093,813**	**(159,548)**	**-1%**	**191,666,471**	**196,834,100**	**(5,167,630)**	**-3%**
EXPENSES								
Incentives	27,465,954	27,666,708	200,754	1%	95,451,589	103,754,973	8,303,384	8%
Program Delivery Subcontracts	4,031,668	4,045,485	13,817	0%	57,113,020	56,318,561	(794,460)	-1%
Employee Salaries & Fringe Benefits	897,416	1,011,311	113,895	11%	13,211,234	12,524,401	(686,833)	-5%
Agency Contractor Services	82,443	77,508	(4,934)	-6%	1,264,805	817,937	(446,868)	-55%
Planning and Evaluation Services	469,786	180,226	(289,560)	-161%	2,834,300	1,871,315	(962,985)	-51%
Advertising and Marketing Services	236,496	291,254	54,758	19%	2,521,661	2,402,219	(119,442)	-5%
Other Professional Services	286,774	221,554	(65,219)	-29%	2,142,124	1,907,327	(234,797)	-12%
Travel, Meetings, Trainings & Conferences	18,452	31,417	12,965	41%	370,370	402,916	32,546	8%
Dues, Licenses and Fees	8,199	9,527	1,328	14%	145,344	199,124	53,779	27%
Software and Hardware	21,261	34,654	13,393	39%	382,090	318,205	(63,886)	-20%
Depreciation & Amortization	21,525	68,077	46,552	68%	394,911	844,670	449,759	53%
Office Rent and Equipment	25,690	92,540	66,850	72%	1,042,539	1,035,111	(7,428)	-1%
Materials Postage and Telephone	10,923	13,114	2,191	17%	114,667	114,159	(508)	0%
Miscellaneous Expenses	494	4,386	3,891	89%	5,686	64,481	58,795	91%
TOTAL EXPENSES	**33,577,080**	**33,747,761**	**170,681**	**1%**	**176,994,341**	**182,575,398**	**5,581,057**	**3%**
TOTAL REVENUE LESS EXPENSES	**(18,642,815)**	**(18,653,948)**	**11,133**	**0%**	**14,672,130**	**14,258,702**	**413,427**	**3%**

Energy Trust of Oregon
Statement of Functional Expenses
For the 12 Months Ending December 31, 2018
(Unaudited)

	Energy Efficiency Total	Renewable Energy	Low and Moderate Income Solar	**Total Programs**	Office Space	IT	Management and General	Communications and Customer Service	Development	**Supporting Centers**	TOTAL
Incentives	$86,637,579	$8,814,010		$95,451,589							$95,451,589
Program Delivery Subcontracts	56,732,163	380,857		57,113,020							57,113,020
Employee Salaries & Fringe Benefits	5,469,071	1,306,815	8,923	6,784,809		2,070,478	2,336,675	2,005,349	13,923	6,426,425	13,211,234
Agency Contractor Services	475,767	142,078	46,868	664,713	6,183	347,618	175,736	70,555		600,092	1,264,805
Planning and Evaluation Services	2,763,671	23,261		2,786,932			1,629	45,738		47,367	2,834,299
Advertising and Marketing Services	1,273,453	171,021		1,444,474				1,076,757	431	1,077,188	2,521,662
Other Professional Services	943,200	447,889	21,400	1,412,489		43,305	569,500	116,830		729,635	2,142,124
Travel, Meetings, Trainings & Conference	142,076	43,919	3,668	189,663	378	32,275	90,570	57,485		180,708	370,371
Dues, Licenses and Fees	92,030	15,651		107,681		250	17,114	20,300		37,664	145,345
Software and Hardware		187,297		187,297	11,822	182,971				194,793	382,090
Depreciation & Amortization					119,920	274,992				394,912	394,912
Office Rent and Equipment					1,042,539					1,042,539	1,042,539
Materials Postage and Telephone	3,685	421		4,106	54,789	39,450	16,114	208		110,561	114,667
Miscellaneous Expenses	1,679			1,679	2,222		1,785			4,007	5,686
Shared Office Space	528,856	136,769	1,217	666,842	(1,237,853)	186,795	201,759	182,456		(666,843)	-
Shared Information Technology	2,099,224	279,783	2,468	2,381,475		(3,178,133)	426,832	369,826		(2,381,475)	-
TOTAL FUNCTIONAL EXPENSE	**157,162,450**	**11,949,772**	**84,544**	**169,196,769**			**3,837,714**	**3,945,506**	**14,354**	**7,797,573**	**176,994,341**

Energy Trust of Oregon
Administrative Expenses Classified by OPUC Performance Measure
For the 12 Months Ending December 31, 2018
(Unaudited)

	Total	Program	Administrative and Program Support
Incentives	$95,451,589	$95,451,589	
Program Delivery Subcontracts	57,113,020	57,113,020	
Employee Salaries & Fringe Benefits	13,211,234	6,784,809	6,426,425
Agency Contractor Services	1,264,805	664,713	600,092
Planning and Evaluation Services	2,834,299	2,786,932	47,367
Advertising and Marketing Services	2,521,662	1,444,474	1,077,188
Other Professional Services	2,142,124	1,412,489	729,635
Travel, Meetings, Trainings & Conferences	370,371	189,663	180,708
Dues, Licenses and Fees	145,345	107,681	37,664
Software and Hardware	382,090	187,297	194,793
Depreciation & Amortization	394,912		394,912
Office Rent and Equipment	1,042,539		1,042,539
Materials Postage and Telephone	114,667	4,106	110,561
Miscellaneous Expenses	5,686	1,679	4,007
TOTAL Expenses	**176,994,341**	**166,148,452**	**10,845,891**
Program Support			3,048,318
Management & General & Development			3,852,068
Communications and Outreach			3,945,506
TOTAL Expenses			**10,845,891**
divided by			
Total Revenue without Interest			190,504,240
OPUC Measure vs. 8%			**5.69%**

ENERGY TRUST OF OREGON
Summary of All Units
For the 12 Months Ending December 31, 2018

	ENERGY EFFICIENCY									
	PGE	PacifiCorp	Total	NWN Industrial	NW Natural	Cascade	Avista	Oregon Total	NWN WA	ETO Total
REVENUES										
Public Purpose Funding	29,852,268	22,064,810	51,917,077		18,453,201	2,335,838	1,325,133	74,031,249		74,031,249
Incremental Funding	65,652,983	32,632,784	98,285,767	848,774				99,134,541	2,428,812	101,563,353
Grant Revenue										
Realized Income from Investments										
TOTAL PROGRAM REVENUE	**95,505,251**	**54,697,594**	**150,202,844**	**848,774**	**18,453,201**	**2,335,838**	**1,325,133**	**173,165,790**	**2,428,812**	**175,594,602**
EXPENSES										
Incentives	45,254,663	26,899,872	72,154,535	1,566,266	9,642,918	1,392,475	760,838	85,517,033	1,120,547	86,637,580
Program Delivery Subcontracts	29,630,504	18,294,997	47,925,501	870,449	6,331,183	560,578	492,876	56,180,585	551,578	56,732,163
Employee Salaries and Fringe Benefits	1,805,443	1,110,769	2,916,212	63,802	407,151	45,119	31,832	3,464,117	92,608	3,556,725
Agency Contractor Services	238,093	136,682	374,775	10,392	32,702	4,982	2,636	425,486	-	425,486
Planning and Evaluation Services	1,379,183	768,738	2,147,921	34,679	123,353	21,844	11,564	2,339,363	-	2,339,363
Advertising and Marketing Services	630,040	406,001	1,036,040	18,744	185,624	19,213	13,830	1,273,451	-	1,273,451
Other Professional Services	354,505	242,725	597,230	8,304	128,570	11,302	9,144	754,549	14,070	768,619
Travel, Meetings, Trainings and Conferences	38,582	23,686	62,269	1,033	11,275	1,098	849	76,521	754	77,275
Dues, Licenses and fees	11,632	6,645	18,278	449	1,693	327	180	20,926	38,557	59,483
Software and Hardware	-	-	-	-	-	-	-	-	-	-
Depreciation and Amortization	-	-	-	-	-	-	-	-	-	-
Materials Postage and Telephone	1,331	870	2,202	80	88	25	10	2,405	-	2,405
Miscellaneous Expenses	861	459	1,321	3	311	21	24	1,679	-	1,679
Shared Office Space	176,079	109,045	285,125	6,415	38,972	4,357	3,041	337,911	9,221	347,132
Shared Information Technology	871,520	512,479	1,383,997	20,553	250,870	24,473	19,428	1,699,324	36,533	1,735,857
Customer Service Management	137,146	97,030	234,177	564	75,677	5,756	5,320	321,495	-	321,495
Trade Ally Management	103,521	75,321	178,839	671	57,222	4,624	4,064	245,421	-	245,421
Planning & Evaluation Management	1,280,450	761,966	2,042,414	28,538	350,894	35,463	27,654	2,484,966	153,350	2,638,316
TOTAL PROGRAM EXPENSES	**81,913,553**	**49,447,285**	**131,360,837**	**2,630,942**	**17,638,503**	**2,131,657**	**1,383,290**	**155,145,232**	**2,017,218**	**157,162,450**
ADMINISTRATIVE COSTS										
Management & General (Notes 1 & 2)	1,857,959	1,121,560	2,979,520	59,675	400,077	48,350	31,375	3,518,998	45,754	3,564,752
Communications & Customer Svc (Notes 1 & 2)	1,910,145	1,153,062	3,063,208	61,352	411,312	49,709	32,256	3,617,837	47,040	3,664,877
Total Administrative Costs	**3,768,104**	**2,274,622**	**6,042,728**	**121,027**	**811,389**	**98,059**	**63,631**	**7,136,835**	**92,794**	**7,229,629**
TOTAL PROG & ADMIN EXPENSES	**85,681,657**	**51,721,907**	**137,403,564**	**2,751,969**	**18,449,892**	**2,229,716**	**1,446,921**	**162,282,067**	**2,110,012**	**164,392,079**
TOTAL REVENUE LESS EXPENSES	**9,823,594**	**2,975,687**	**12,799,280**	**(1,903,195)**	**3,309**	**106,122**	**(121,788)**	**10,883,723**	**318,800**	**11,202,523**
NET ASSETS - RESERVES										
Cumulative Carryover at 12/31/17	12,210,566	6,211,801	18,422,366	2,647,089	3,527,716	262,067	75,717	24,934,948	176,506	25,111,445
Contingency Funds Temporarily Used							45,817	45,817		45,817
Change in net assets this year	9,823,594	2,975,687	12,799,280	(1,903,195)	3,309	106,122	(121,788)	10,883,723	318,800	11,202,523
Realized Investment Income Attributed to Reserves	293,858	132,145	426,003	29,099	60,572	5,408	254	521,336	5,765	527,101
Ending Net Assets - Reserves	**22,328,018**	**9,319,633**	**31,647,649**	**772,993**	**3,591,597**	**373,597**	**-**	**36,385,824**	**501,071**	**36,886,886**
Ending Reserve by Category										
Program Reserves (Efficiency and Renewables)	22,328,018	9,319,633	31,647,649	772,993	3,591,597	373,597	0	36,385,824	501,071	36,886,886
Net Assets Loaned through Craft3 Program										
Operational Contingency Pool										
Emergency Contingency Pool										
TOTAL NET ASSETS CUMULATIVE	**22,328,018**	**9,319,633**	**31,647,649**	**772,993**	**3,591,597**	**373,597**	**0**	**36,385,824**	**501,071**	**36,886,886**

Note 1) Management & General and Communications & Customer Service Expenses (Admin) have been allocated based on total expenses.
Note 2) Admin costs are allocated for mgmt reporting only. GAAP for Not for Profits does not allow allocation of admin costs to program expenses.
Note 3) Program Management costs include both outsourced and internal staff.
Note 4) Beginning in 2018, Realized Investment income is re-attributed to program reserves proportionate to average balances
Note 5) Realized investment income is interest collected, unrealized investment income is reported as income but not yet collected

ENERGY TRUST OF OREGON
Summary of All Units
For the 12 Months Ending December 31, 2018

	RENEWABLE ENERGY				Fund Development		TOTAL			
	PGE	PacifiCorp	Total	Solar LMI	Community Solar	Other	All Programs	Approved budget	Change	% Change
REVENUES										
Public Purpose Funding	8,599,076	6,310,563	14,909,639				88,940,887	87,614,365	1,326,522	2%
Incremental Funding							101,563,353	99,158,552	2,404,801	2%
Grant Revenue				88,944			88,944		88,944	
Realized Income from Investments						1,073,286	1,073,286	230,000	843,286	367%
TOTAL PROGRAM REVENUE	**8,599,076**	**6,310,563**	**14,909,639**	**88,944**	**-**	**1,073,286**	**191,666,470**	**187,002,917**	**4,663,553**	**2%**
EXPENSES										
Incentives	4,363,915	4,450,095	8,814,010	-			95,451,590	111,030,753	15,579,163	14%
Program Delivery Subcontracts	229,076	151,781	380,857	-			57,113,020	58,297,399	1,184,379	2%
Employee Salaries and Fringe Benefits	554,752	590,314	1,145,065	8,923	13,923		4,724,636	4,842,817	118,181	2%
Agency Contractor Services	77,058	62,363	139,421	46,868			611,775	810,000	198,225	24%
Planning and Evaluation Services	-	-	-	-			2,339,363	3,333,073	993,710	30%
Advertising and Marketing Services	95,414	75,607	171,021	-	431		1,444,903	1,759,975	315,072	18%
Other Professional Services	233,380	154,278	387,658	21,400			1,177,677	2,711,799	1,534,122	57%
Travel, Meetings, Trainings and Conferences	18,643	19,974	38,617	3,668			119,560	163,650	44,090	27%
Dues, Licenses and fees	7,832	6,076	13,908	-			73,391	87,543	14,152	16%
Software and Hardware	103,877	83,420	187,297	-			187,297	169,100	(18,197)	-11%
Depreciation and Amortization	-	-	-	-			-	87,500	87,500	100%
Materials Postage and Telephone	40	35	75	-			2,480	7,700	5,220	68%
Miscellaneous Expenses	-	-	-	-			1,679	-	(1,679)	-
Shared Office Space	59,600	62,041	121,642	1,217			469,991	496,267	26,276	5%
Shared Information Technology	120,765	127,940	248,705	2,468			1,987,030	2,325,845	338,815	15%
Customer Service Management	20,751	16,691	37,443	-			358,938	386,397	27,459	7%
Trade Ally Management	69,129	55,515	124,644	-			370,065	399,935	29,870	7%
Planning & Evaluation Management	71,317	68,091	139,409	-			2,777,725	2,998,123	220,398	7%
TOTAL PROGRAM EXPENSES	**6,025,549**	**5,924,221**	**11,949,772**	**84,544**	**14,354**		**169,211,120**	**189,907,876**	**20,696,756**	**11%**
ADMINISTRATIVE COSTS										
Management & General (Notes 1 & 2)	136,385	134,143	270,528	2,434	-		3,837,714	4,796,321	958,606	20%
Communications & Customer Svc (Notes 1 & 2)	140,513	138,149	278,662	1,966	-		3,945,505	4,157,543	212,038	5%
Total Administrative Costs	**276,898**	**272,292**	**549,190**	**4,400**	**-**		**7,783,219**	**8,953,864**	**1,170,645**	**13%**
TOTAL PROG & ADMIN EXPENSES	**6,302,447**	**6,196,513**	**12,498,962**	**88,944**	**14,354**		**176,994,341**	**198,861,750**	**21,867,410**	**11%**
TOTAL REVENUE LESS EXPENSES	**2,296,629**	**114,050**	**2,410,677**	**-**	**(14,354)**	**1,073,286**	**14,672,130**	**(11,858,834)**	**26,530,963**	**-224%**
NET ASSETS - RESERVES										
Cumulative Carryover at 12/31/17	7,073,073	6,268,079	13,341,154	-	38,710	9,641,309	48,132,624	43,871,177	4,261,447	10%
Contingency Funds Temporarily Used						(45,817)	-			
Change in net assets this year	2,296,629	114,050	2,410,677	0	(14,354)	1,073,286	14,672,130	(11,858,834)	26,530,963	224%
Realized Investment Income Attributed to Reserves	141,098	108,553	249,651		541	(777,294)	(1.00)			
Ending Net Assets - Reserves	**9,510,800**	**6,490,682**	**16,001,482**	**-**	**24,897**	**9,891,484**	**62,804,753**	**32,012,343**	**30,792,410**	**96%**
Ending Reserve by Category										
Program Reserves (Efficiency and Renewables)	9,510,800	6,490,682	16,001,482	-	24,897		52,913,265			
Net Assets Loaned through Craft3 Program						1,800,000	1,800,000			
Operational Contingency Pool						3,091,488	3,091,488			
Emergency Contingency Pool						5,000,000	5,000,000			
TOTAL NET ASSETS CUMULATIVE	**9,510,800**	**6,490,682**	**16,001,482**	**-**	**24,897**	**9,891,488**	**62,804,753**	**32,012,343**	**30,792,410**	**96%**

Energy Trust of Oregon
Attribution of undesignated funds

Undesignated Funds at beginning of year	841,306
Plus: Investment Income Earned in 2018	1,073,286
Less: Designation for Manufactured Homes Loan Program	(1,000,000)
Undesignated funds available for distribution	**914,592**

Distribution of undesignated funds	
...to efficiency program reserves for future use	527,101
...to renewable fund balances for future use	249,651
...to other funds for future use	541
sub-total	**777,294**
...to contingency fund for future use	137,298
Undesignated funds available for distribution	**914,592**

Detailed distribution of funds

	column A	column B	column C	column D	column E	column F	
			Distribute remaining undesignated funds to utilities				
	2017 Actual Ending Reserves	2018 Actual Ending Reserves	Simple Average	Share, based on Simple Average	Undesignated Funds, Distributed	2018 Ending Reserves after Distribution	2018 Ending Reserves after Transfer to Avista
			Average (A+B)/2	column C divided by sum of column C	Undesignated times % in column C	Column B plus distribution in Column C	
PGE	12,210,370	22,034,161	17,122,266	32.1%	293,858	22,328,019	22,328,019
PacifiCorp	6,211,995	9,187,489	7,699,742	14.4%	132,145	9,319,634	9,319,634
NWN Industrial	2,647,086	743,895	1,695,491	3.2%	29,099	772,994	772,994
NW Natural	3,527,721	3,531,025	3,529,373	6.6%	60,572	3,591,597	3,591,597
Cascade	262,065	368,189	315,127	0.6%	5,408	373,597	373,597
Avista	75,716	(46,072)	14,822	0.0%	254	(45,818)	0
NWN WA	176,503	495,307	335,905	0.6%	5,765	501,072	501,072
Program Reserves	**25,111,456**	**36,313,994**	**30,712,725**	**57.6%**	**527,101**	**36,841,095**	**36,886,913**
PGE	7,073,074	9,369,689	8,221,382	15.4%	141,098	9,510,787	9,510,787
PacifiCorp	6,268,078	6,382,121	6,325,100	11.9%	108,553	6,490,674	6,490,674
Renewables Total	**13,341,152**	**15,751,810**	**14,546,481**	**27.3%**	**249,651**	**16,001,461**	**16,001,461**
Other Funds, donations	**38,710**	**24,355**	**31,533**	0.1%	**541**	**24,896**	**24,896**
Sub-Total, to efficiency, renewables and other	**38,491,318**	**52,090,159**	**45,290,739**		**777,294**		
Emergency Contingency Pool	**5,000,000**	**5,000,000**	5,000,000	9.4%	-	5,000,000	5,000,000
					137,298		
Organization Contingency Pool	**3,000,000**	**3,000,000**	3,000,000	5.6%		3,137,298	3,091,480
Craft3 Loans	800,000	800,000				800,000	800,000
Manufactured Home Loans	-	1,000,000				1,000,000	1,000,000
Loan Designations	**800,000**	**1,800,000**				**1,800,000**	**1,800,000**
Undesignated, to be distributed	**841,306**	**914,592**			**914,592**	**-**	
All Funds	**48,132,624**	**62,804,751**	**53,290,739**			**62,804,751**	**62,804,751**

Energy Trust of Oregon
Program Expense by Service Territory
For the 12 Months Ending December 31, 2018
(Unaudited)

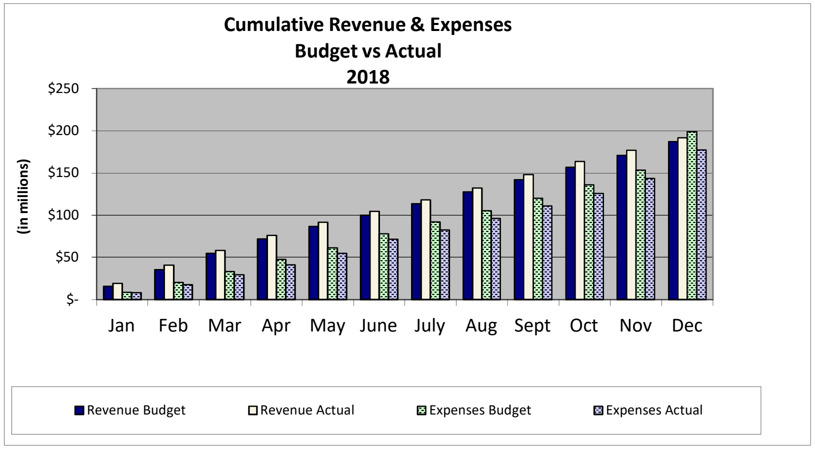
	PGE	Pacific Power	Subtotal Elec.	NWN Industrial	NW Natural Gas	Cascade	Avista	Subtotal Gas	Oregon Total	NWN WA	Solar LMI	Community Solar	ETO Total	YTD Budget	Variance	% Var
Energy Efficiency																
Commercial																
Existing Buildings	$23,664,164	$14,574,228	$38,238,392	$990,048	$2,993,520	$812,600	$430,954	$5,227,122	$43,465,514	$852,426			$44,317,940	$55,960,354	$11,642,414	21%
Multifamily Buildings	6,048,755	2,051,850	8,100,605	32,245	724,789	25,190	95,645	877,870	8,978,475				8,978,475	9,948,254	969,779	10%
New Buildings	12,782,891	4,063,748	16,846,638	243,966	1,614,777	198,766	108,518	2,166,027	19,012,665				19,012,665	22,112,528	3,099,863	14%
NEEA	1,579,056	1,191,220	2,770,276		280,547	30,136		310,683	3,080,959				3,080,959	2,721,050	(359,909)	-13%
Total Commercial	**44,074,866**	**21,881,046**	**65,955,912**	**1,266,259**	**5,613,633**	**1,066,692**	**635,117**	**8,581,701**	**74,537,613**	**852,426**			**75,390,039**	**90,742,186**	**15,352,147**	**17%**
Industrial																
Production Efficiency	21,402,619	14,383,166	35,785,785	1,485,710	791,638	245,574	37,603	2,560,526	38,346,311				38,346,311	38,016,760	(329,551)	-1%
NEEA	56,487	42,616	99,103						99,103				99,103	384,450	285,347	74%
Total Industrial	**21,459,106**	**14,425,783**	**35,884,888**	**1,485,710**	**791,638**	**245,574**	**37,603**	**2,560,526**	**38,445,414**				**38,445,414**	**38,401,210**	**(44,204)**	**0%**
Residential																
Residential Combined	17,806,545	13,648,957	31,455,501		11,381,092	846,174	774,201	13,001,468	44,456,969	1,257,586			45,714,555	50,859,635	5,145,080	10%
NEEA	2,341,143	1,766,125	4,107,268		663,526	71,276		734,802	4,842,070				4,842,070	5,526,815	684,745	12%
Total Residential	**20,147,687**	**15,415,082**	**35,562,769**		**12,044,619**	**917,450**	**774,201**	**13,736,270**	**49,299,039**	**1,257,586**			**50,556,625**	**56,386,450**	**5,829,825**	**10%**
Energy Efficiency Program Costs	**85,681,659**	**51,721,910**	**137,403,569**	**2,751,969**	**18,449,890**	**2,229,715**	**1,446,921**	**24,878,497**	**162,282,066**	**2,110,012**			**164,392,079**	**185,529,846**	**21,137,768**	**11%**
Renewables																
Solar Electric (Photovoltaic)	4,700,949	3,775,184	8,476,133						8,476,133		88,944		8,565,077	9,614,847	1,049,770	11%
Other Renewable	1,601,498	2,421,330	4,022,828						4,022,828				4,022,828	3,717,057	(305,771)	-8%
Renewables Program Costs	**6,302,447**	**6,196,514**	**12,498,961**						**12,498,961**		**88,944**		**12,587,905**	**13,331,904**	**743,999**	**6%**
Community Solar Development												14,354	14,354		(14,354)	
Cost Grand Total	**91,984,106**	**57,918,425**	**149,902,530**	**2,751,969**	**18,449,890**	**2,229,715**	**1,446,921**	**24,878,497**	**174,781,027**	**2,110,012**	**88,944**	**14,354**	**176,994,341**	**198,861,750**	**21,867,410**	**11%**

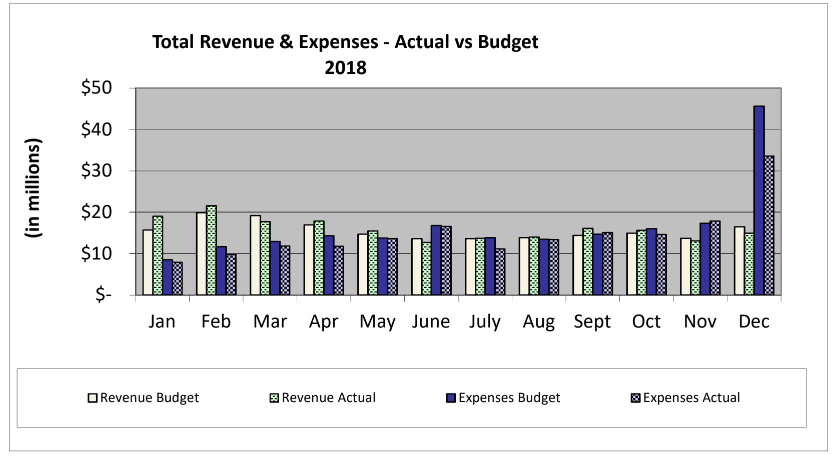
Energy Trust of Oregon
Administrative Expenses
For the 12 Months Ending December 31, 2018
(Unaudited)

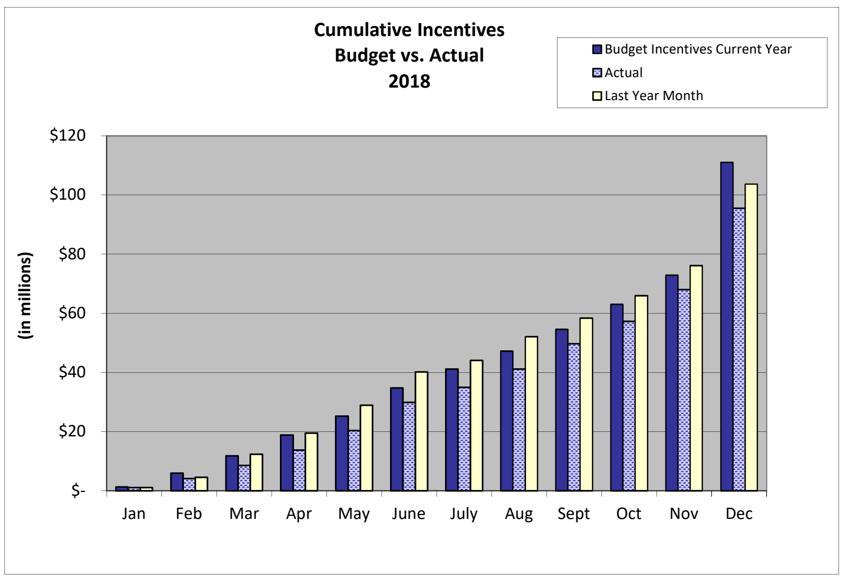
	MANAGEMENT & GENERAL						COMMUNICATIONS & CUSTOMER SERVICE					
	QUARTERLY			YTD			QUARTERLY			YTD		
	ACTUAL	BUDGET	REMAINING	ACTUAL	BUDGET	VARIANCE	ACTUAL	BUDGET	REMAINING	ACTUAL	BUDGET	VARIANCE
EXPENSES												
Outsourced Services	$219,717	$254,329	$34,612	$548,540	$1,127,650	$579,110	$284,934	$341,500	$56,567	$1,209,502	$1,366,000	$156,498
Legal Services	3,571	6,250	2,679	16,250	25,000	8,750						
Salaries and Related Expenses	638,681	717,753	79,072	2,510,374	2,759,663	249,290	472,638	480,828	8,190	1,966,133	1,923,311	(42,822)
Supplies	2,108	725	(1,383)	4,987	2,900	(2,087)	39	250	211	119	1,000	881
Postage and Shipping Expenses		750	750	497	3,000	2,503	31		(31)	38		(38)
Printing and Publications	1,660	1,125	(535)	10,630	4,500	(6,130)	44	0	(43)	48	2,500	2,453
Travel	6,629	13,850	7,221	36,779	55,400	18,621	14,132	12,500	(1,632)	44,091	50,000	5,909
Conference, Training & Mtngs	15,458	13,250	(2,207)	53,646	53,000	(646)	3,931	5,500	1,569	10,988	22,000	11,012
Interest Expense and Bank Fees	103		(103)	1,815	1,500	(315)						
Miscellaneous Expenses	(30)		30	(30)		30						
Dues, Licenses and Fees	5,762	2,663	(3,099)	16,985	38,610	21,625	2,468	4,500	2,032	18,153	18,000	(153)
Shared Allocation (Note 1)	53,916	53,310	(606)	201,154	215,608	14,455	43,574	43,813	238	172,370	177,197	4,828
IT Service Allocation (Note 2)	103,814	115,163	11,348	425,631	498,206	72,575	85,320	94,646	9,327	349,803	409,449	59,646
Planning & Eval	2,409	2,817	407	10,456	11,285	830	40,155	46,943	6,788	174,261	188,088	13,827
TOTAL EXPENSES	**1,053,797**	**1,181,984**	**128,187**	**3,837,714**	**4,796,322**	**958,610**	**947,265**	**1,030,480**	**83,215**	**3,945,506**	**4,157,545**	**212,040**

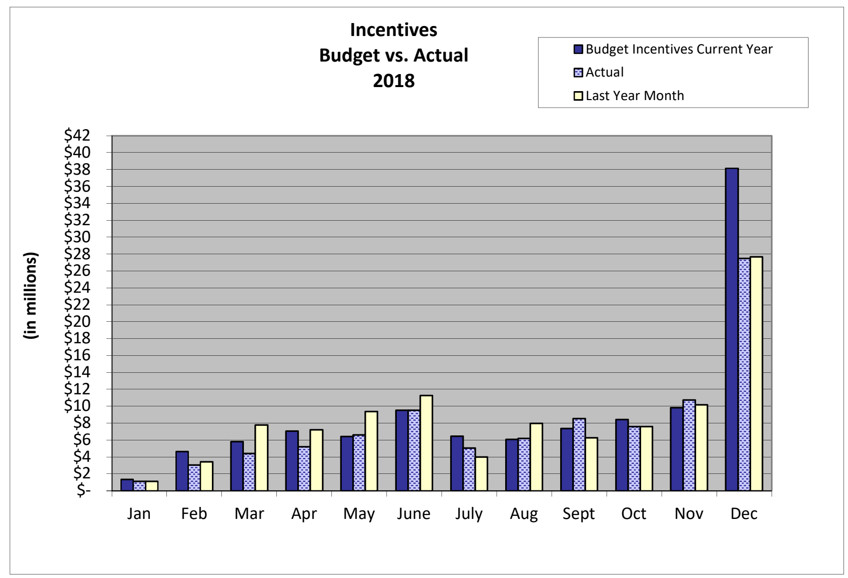
Note 1) Represents allocation of Shared (General Office Management) Costs
Note 2) Represents allocation of Shared IT Costs

Administrative Expenses 3rd Month of Quarter


Cumulative Revenue & Expenses
Budget vs Actual
2018
$250
$200
$150
$100
$50
$-
(in millions)
Jan Feb Mar Apr May June July Aug Sept Oct Nov Dec
Revenue Budget
Revenue Actual
Expenses Budget
Expenses Actual


Total Revenue & Expenses - Actual vs Budget
2018
$50
$40
$30
$20
$10
$-
(in millions)
Jan Feb Mar Apr May June July Aug Sept Oct Nov Dec
Revenue Budget
Revenue Actual
Expenses Budget
Expenses Actual


Cumulative Incentives
Budget vs. Actual
2018
Budget Incentives Current Year
Actual
Last Year Month
$120
$100
$80
$60
$40
$20
$-
(in millions)
Jan Feb Mar Apr May June July Aug Sept Oct Nov Dec


Incentives
Budget vs. Actual
2018
Budget Incentives Current Year
Actual
Last Year Month
$42 $40 $38 $36 $34 $32 $30 $28 $26 $24 $22 $20 $18 $16 $14 $12 $10 $8 $6 $4 $2 $-
(in millions)
Jan Feb Mar Apr May June July Aug Sept Oct Nov Dec

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Energy Trust of Oregon
Contract Status Summary Report

For contracts with costs through: 1/1/2019

CONTRACTOR	Description	City	EST COST	Actual TTD	Remaining	Start	End
Administration							
		Administration Total:	**13,572,018**	**5,626,728**	**7,945,290**		
Communications							
		Communications Total:	**4,789,412**	**3,395,196**	**1,394,216**		
Energy Efficiency							
Northwest Energy Efficiency Alliance	Regional EE Initiative Agmt	Portland	36,142,871	28,376,910	7,765,961	1/1/2015	7/1/2020
ICF Resources, LLC	2019 BE PMC	Fairfax	17,010,123	0	17,010,123	1/1/2019	12/31/2019
ICF Resources, LLC	2018 BE PMC	Fairfax	15,616,683	14,818,695	797,988	1/1/2018	12/31/2018
CLEAResult Consulting Inc	2018 Residential PMC	Austin	8,483,204	7,761,894	721,310	1/1/2018	12/31/2018
CLEAResult Consulting Inc	2019 Residential PMC	Austin	8,138,843	0	8,138,843	1/1/2019	12/31/2019
CLEAResult Consulting Inc	2019 NBE PMC	Austin	6,477,804	0	6,477,804	1/1/2019	12/31/2019
CLEAResult Consulting Inc	2018 NBE PMC	Austin	6,256,575	6,003,228	253,347	1/1/2018	12/31/2018
Northwest Energy Efficiency Alliance	Regional Gas EE Initiative	Portland	5,864,530	3,369,002	2,495,528	1/1/2015	7/1/2020
Lockheed Martin Corporation	2019 MF PMC	Grand Prairie	4,728,273	0	4,728,273	1/1/2019	12/31/2019
Lockheed Martin Corporation	2018 MF PMC	Grand Prairie	4,655,000	4,252,900	402,100	1/1/2018	12/31/2018
Energy 350 Inc	PE PDC 2019	Portland	3,523,160	0	3,523,160	1/1/2019	12/31/2019
Energy 350 Inc	PDC - PE 2018	Portland	3,373,954	3,218,301	155,653	1/1/2018	12/31/2018
Intel Corporation	EE Project Incentive Agmt	Hillsboro	2,400,000	0	2,400,000	11/13/2015	12/31/2019
Cascade Energy, Inc.	PE PDC 2019	Walla Walla	2,324,400	0	2,324,400	1/1/2019	12/31/2019
Evergreen Consulting Group, LLC	PE Lighting PDC2019	Tigard	2,232,000	0	2,232,000	1/1/2019	12/31/2019
RHT Energy Inc.	PE PDC 2019	Medford	2,199,922	0	2,199,922	1/1/2019	12/31/2019
TRC Engineers Inc.	2019 EPS New Const PDC	Irvine	2,135,341	0	2,135,341	1/1/2019	12/31/2019
Evergreen Consulting Group, LLC	PE Lighting PDC 2018	Tigard	1,968,000	1,898,000	70,000	1/1/2018	12/31/2018
TRC Engineers Inc.	2018 EPS New Const PDC	Irvine	1,946,406	1,754,453	191,953	1/1/2018	12/31/2018
Cascade Energy, Inc.	PE PDC 2019	Walla Walla	1,921,485	0	1,921,485	1/1/2019	12/31/2019
RHT Energy Inc.	PDC - PE 2018	Medford	1,836,230	1,756,175	80,055	1/1/2018	12/31/2018
Northwest Power & Conservation Council	RTF Funding Agreement		1,825,000	1,349,096	475,904	2/25/2015	12/31/2019
Cascade Energy, Inc.	PE PDC 2018	Walla Walla	1,823,250	1,763,250	60,000	1/1/2018	12/31/2018
CLEAResult Consulting Inc	2018 Retail PDC	Austin	1,645,112	1,467,595	177,517	1/1/2018	12/31/2018
CLEAResult Consulting Inc	2019 Retail PDC	Austin	1,403,837	0	1,403,837	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	104,435	434,565	7/1/2018	4/1/2019
Craft3	Loan Agreement	Portland	500,000	167,000	333,000	1/1/2018	12/31/2019
Pivotal Energy Solutions LLC	License Agreement	Gilbert	490,500	275,737	214,763	3/1/2014	12/31/2019
EnergySavvy Inc.	Optix Engage Online Audit Tool	Seattle	467,000	311,375	155,625	6/1/2016	5/31/2020
Michaels Energy, Inc.	NBE '15 & '16 Impact Eval	La Crosse	425,000	405,420	19,580	3/5/2018	3/1/2019
CLEAResult Consulting Inc	2019 Residential PMC - Pilots	Austin	400,790	0	400,790	1/1/2019	12/31/2019
Open Energy Efficiency, Inc.	Automated Meter Data Analysis	Mill Valley	400,000	150,000	250,000	1/1/2018	12/31/2019

For contracts with costs
through: 1/1/2019

CONTRACTOR	Description	City	EST COST	Actual TTD	Remaining	Start	End
Balanced Energy Solutions LLC	New Homes QA Inspections	Portland	381,575	184,312	197,263	4/27/2015	12/31/2019
KEMA Incorporated	EB & SEM 2017 Evaluation	Oakland	377,680	300,402	77,278	4/10/2018	7/31/2019
Cascade Energy, Inc.	PDC Transition Agreement	Walla Walla	311,107	311,107	0	9/1/2018	12/31/2018
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	0	270,876	1/1/2019	12/31/2019
ICF Resources, LLC	2018 BE PMC - WA	Fairfax	258,286	240,788	17,498	1/1/2018	12/31/2018
The Cadmus Group LLC	2017 NB Impact Eval	Portland	250,000	0	250,000	3/4/2019	3/31/2020
CLEAResult Consulting Inc	2018 Residential PMC - WA	Austin	238,129	213,366	24,763	1/1/2018	12/31/2018
CLEAResult Consulting Inc	2019 Residential PMC - WA	Austin	222,790	0	222,790	1/1/2019	12/31/2019
ICF Resources, LLC	2019 BE DSM PMC	Fairfax	215,972	0	215,972	1/1/2019	12/31/2019
CLEAResult Consulting Inc	2019 Residential PMC - CustSvc	Austin	176,490	0	176,490	1/1/2019	12/31/2019
CLEAResult Consulting Inc	2018 Residential PMC - CustSvc	Austin	174,000	163,617	10,384	1/1/2018	12/31/2018
The Cadmus Group LLC	Site Speciific Impact Evals	Portland	170,000	0	170,000	2/8/2019	1/31/2021
ICF Resources, LLC	2018 BE PMC - DSM	Fairfax	161,119	155,695	5,424	1/1/2018	12/31/2018
DNV GL Energy Services USA Inc	Ind O&M Persistence Study	Oakland	157,980	44,333	113,648	9/4/2018	6/30/2019
The Cadmus Group LLC	Residential DHP Study	Portland	155,000	116,479	38,521	4/18/2018	6/30/2019
Evergreen Economics	2018 EB Process Evaluation	Portland	150,000	148,975	1,025	5/14/2018	3/31/2019
Opinion Dynamics Corporation	PE Process Evaluation	Waltham	138,000	80,843	57,157	4/2/2018	6/14/2019
TRC Engineers Inc.	2019 EPS New Const PDC - WA	Irvine	124,474	0	124,474	1/1/2019	12/31/2019
SBW Consulting, Inc.	BPA Air Source HP Study	Bellevue	119,500	6,406	113,094	11/26/2018	11/30/2019
Opinion Dynamics Corporation	Fast Feedback 2018	Waltham	117,000	105,199	11,801	2/15/2018	5/31/2019
Portland General Electric	Intel Mega project transition	Portland	110,000	0	110,000	1/1/2019	12/31/2019
Alternative Energy Systems Consulting, Inc.	PE Review of Technical Studies	Carlsbad	100,000	84,991	15,009	5/22/2017	3/31/2019
Cadeo Group LLC	Propensity Model	Washington	99,840	0	99,840	3/15/2019	12/31/2019
WegoWise Inc	benchmarking license	Boston	90,000	42,572	47,428	6/15/2014	12/31/2019
EES Consulting, Inc	Professional Services Agmt	Kirkland	80,430	33,658	46,773	10/1/2016	9/30/2020
Opinion Dynamics Corporation	Evaluation MHR Pilot	Waltham	66,000	29,596	36,404	5/1/2017	3/31/2020
TRC Engineers Inc.	2018 EPS New Const PDC - WA	Irvine	63,456	62,747	709	1/1/2018	12/31/2018
BASE zero LLC	Quality Assurance Services	Bend	58,825	41,990	16,835	3/1/2016	12/31/2019
Craft3	SWR Loan Origination/Loss Fund	Portland	55,000	0	55,000	1/1/2018	12/31/2019
Opinion Dynamics Corporation	Marketing Customer Insights	Waltham	53,418	16,264	37,154	6/14/2018	3/31/2019
Navigant Consulting Inc	Evaluation Cosultant-DSM Proj.	Boulder	50,500	40,731	9,770	6/15/2017	6/1/2019
Alternative Energy Systems Consulting, Inc.	CSEM - PTT	Carlsbad	50,000	38,809	11,192	6/30/2018	9/30/2019
TRC Engineers Inc.	2019 EPS New Const-Grid Harmon	Irvine	50,000	0	50,000	1/1/2019	12/31/2019
Evergreen Economics	New Home Pilot- DHP	Portland	44,000	30,859	13,141	11/1/2017	3/31/2019
The Cadmus Group Inc.	Existing Homes DHP Study	Watertown	40,000	40,000	0	9/25/2017	3/31/2019

Energy Trust of Oregon
Contract Status Summary Report

For contracts with costs through: 1/1/2019

CONTRACTOR	Description	City	EST COST	Actual TTD	Remaining	Start	End
KEMA Incorporated	Billing Analysis Review	Oakland	35,000	5,501	29,499	3/15/2015	12/31/2019
MetaResource Group	Intel Mod 1&2 Megaproject	Portland	35,000	9,617	25,383	3/1/2018	12/31/2019
Research Into Action, Inc.	Evaluation - APS Pilot	Portland	34,645	31,039	3,606	7/1/2017	3/1/2019
INCA Energy Efficiency, LLC	Red Rock Evaluation	Grinnell	30,000	0	30,000	6/10/2018	6/9/2020
Pod4print	PGE 2019 Bill Inserts	Beaverton	30,000	0	30,000	1/1/2019	12/31/2019
Earth Advantage, Inc.	Decrease REA to EA	Portland	27,000	0	27,000	11/1/2018	10/31/2020
RWDI USA LLC	Net Zero Fellowship Grant		26,000	0	26,000	9/1/2018	9/1/2019
University of Oregon	NB 2018 Net Zero Fellows Grant	Eugene	26,000	0	26,000	10/1/2018	3/30/2020
Bridgetown Printing Company	NWN 2019 Bill Inserts	Portland	25,000	0	25,000	1/1/2019	12/31/2019
Ecotope, Inc.	LR MultiFamily Field Studies	Seattle	25,000	25,000	0	11/13/2018	11/11/2019
FMYI, INC	Subscription Agreement	Portland	24,650	24,650	0	4/25/2016	1/15/2019
Bridgetown Printing Company	Pacific Power 2019 Bill Insert	Portland	22,000	0	22,000	1/1/2019	12/31/2019
American Council for and Energy Efficient Economy	2019 Sponsorships		20,000	0	20,000	1/1/2019	12/31/2019
Michaels Energy, Inc.	Large NB Impact Evaluation	La Crosse	18,000	4,653	13,348	8/1/2018	3/31/2020
KEMA Incorporated	New Bldg Evaluation	Oakland	16,000	5,144	10,856	10/1/2017	4/30/2019
Efficiency for Everyone, LLC	Benefit Outreach- Appliances	Portland	15,000	0	15,000	1/1/2019	12/31/2019
HST&V, LLC	Enhance Continuous SEM	Portland	14,700	0	14,700	2/6/2019	5/31/2019
LightTracker, Inc.	Lighting Market Analysis	Boulder	9,000	9,000	0	4/1/2018	12/31/2018
City of Portland Bureau of Planning & Sustainability	2019 Fix it Fair Sponsorship	Portland	8,000	0	8,000	1/1/2019	12/31/2019
Resource Innovation Institute	2019 EE PETraining Sponsorhip	Portland	7,500	0	7,500	2/6/2019	12/31/2019
Northwest Energy Efficiency Council	2019 BOC Technical Webinar	Seattle	6,780	0	6,780	1/1/2019	12/31/2019
The Cadmus Group Inc.	NB Evaluation Plan	Watertown	6,500	0	6,500	10/1/2017	3/31/2019
Carleton Hart Architecture PC	Net Zero Leaders Grant	Portland	6,000	0	6,000	11/13/2018	6/15/2019
Otak Incorporated	Net Zero Leaders Grant	Portland	6,000	0	6,000	11/12/2018	6/15/2019
Urban Land Institute	2019 Event Sponsorships	Washington	5,000	0	5,000	2/24/2019	12/31/2019
Speranza Architecture	Net Zero Leaders Grant	Eugene	3,840	0	3,840	11/14/2018	6/15/2019
Hennebery Eddy Architects Inc	Net Zero Emerging Leader Grant	Portland	3,333	0	3,333	11/19/2018	6/15/2019
Holst Architecture Inc	Net Zero Leaders Grant	Portland	3,000	2,432	568	11/13/2018	6/15/2019
Northwest Energy Efficiency Alliance	Lighting Design Lab WS	Portland	2,500	0	2,500	2/21/2019	6/30/2019
		Energy Efficiency Total:	**156,127,188**	**82,154,238**	**73,972,950**		

Joint Programs

CONTRACTOR	Description	City	EST COST	Actual TTD	Remaining	Start	End
Structured Communications Systems, Inc.	ShoreTel Phone System Install	Clackamas	72,845	65,287	7,559	1/1/2017	12/31/2019
Infogroup Inc	Data License & Service Agmt	Papillion	26,114	13,057	13,057	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
Efficiency for Everyone, LLC	Equity Metrics Research Grant	Portland	9,000	0	9,000	2/1/2019	8/30/2019
		Joint Programs Total:	**127,959**	**78,344**	**49,616**		

Energy Trust of Oregon
Contract Status Summary Report

Report Date: 3/20/2019

For contracts with costs through: 1/1/2019

CONTRACTOR	Description	City	EST COST	Actual TTD	Remaining	Start	End
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
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
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	199,926	167,074	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	215,478	215,478	0	7/1/2017	6/30/2019
City of Astoria	Bear Creek Funding Agreement	Astoria	143,000	143,000	0	3/24/2014	3/24/2034
Energy Assurance Company	Solar Verifier	Milwaukie	100,000	22,890	77,110	11/15/2018	10/14/2020
Gary Higbee DBA WindStream Solar	Solar Verifier	Eugene	100,000	1,015	98,985	10/15/2018	10/14/2020
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
Kendrick Business Services LLC	Small Business Financial Dev	Albany	60,000	4,975	55,025	8/1/2018	6/30/2020
Oregon Solar Energy Industries Association	Solar soft costs install price	Portland	54,200	0	54,200	12/21/2018	6/30/2020
TRC Engineers Inc.	2019 EPS New Const PDC-Solar	Irvine	53,016	0	53,016	1/1/2019	12/31/2019
Site Capture LLC	SiteCapture Subscription	Austin	42,000	21,000	21,000	2/1/2018	1/31/2020
TRC Engineers Inc.	2018 EPS New Const PDC - Solar	Irvine	41,500	39,708	1,792	1/1/2018	12/31/2018
Clean Energy States Alliance	2018 CESA Sponsorship	Montpelier	39,500	39,500	0	6/1/2018	6/30/2019
Clean Power Research, LLC	WattPlan Software	Napa	38,000	38,000	0	11/17/2017	6/30/2019
Faraday Inc	Software Services Subscription	Burlington	36,000	0	36,000	1/15/2019	12/14/2019

Energy Trust of Oregon
Contract Status Summary Report

Report Date: 3/20/2019

For contracts with costs through: 1/1/2019

CONTRACTOR	Description	City	EST COST	Actual TTD	Remaining	Start	End
Craft3	NON-EEAST OBR Svc Agrmt	Portland	30,000	32,750	(2,750)	1/1/2018	12/31/2018
The Solar Foundation	Workforce Diversity Survey	Washington	27,500	27,500	0	7/17/2018	6/30/2019
University of Oregon	UO SRML Contribution 2019	Eugene	24,999	0	24,999	3/9/2019	3/8/2020
Wallowa Resources Community Solutions, Inc.	Renewables Field Outreach	Enterprise	24,999	15,701	9,298	2/1/2018	1/30/2020
Robert Migliori	42kW wind energy system	Newberg	24,125	24,125	0	4/11/2007	1/31/2024
Oregon Solar Energy Industries Association	2019 Sponsorship	Portland	20,000	0	20,000	1/1/2019	12/31/2019
Warren Griffin	Griffin Wind Project	Salem	13,150	9,255	3,895	10/1/2005	10/1/2020
Flink Energy Consulting	Barriers Solutions Small RE PD	Portland	13,145	0	13,145	11/1/2018	3/31/2019
Lewis & Clark	Small Scale 20MW RE Projects	Portland	13,145	0	13,145	11/1/2018	3/31/2019
Mid Columbia Economic Development	2019 LMI Solar Grant	The Dalles	10,000	0	10,000	1/25/2019	3/31/2019
Sustainable Northwest	LMI Solar Innovation Grant	Portland	10,000	0	10,000	1/25/2019	3/31/2020
Verde	2019 LMI Solar Grant	Portland	10,000	0	10,000	1/25/2019	4/30/2020
Wallowa Resources Community Solutions Inc	LMI Solar Innovation Grant	Enterprise	10,000	0	10,000	1/25/2019	11/30/2019
Umpqua Community Development Corp.	LMI Solar Innovation Grant	Roseburg	9,000	0	9,000	1/25/2019	10/30/2019
Seeds for the Sol	2019 LMI Solar Grant	Corvallis	8,350	0	8,350	1/25/2019	10/30/2019
African American Alliance for Homeownership	LMI Solar Innovation Grant	Portland	8,000	0	8,000	1/25/2019	11/30/2019
Oregon Clean Power Cooperative	2019 LMI Solar Grant	Corvallis	6,250	0	6,250	1/25/2019	10/30/2019
National Association for the Advancement of Colored People	LMI Solar Energy Development	Eugene	3,920	2,245	1,674	9/1/2018	6/30/2019
Lower Columbia Hispanic Council	LMI Solar Energy Development	Astoria	3,736	1,133	2,604	9/1/2018	6/30/2019
Mid-Columbia Housing Authority	LMI Solar Energy Development	The Dalles	3,691	1,073	2,618	9/5/2018	6/30/2019
NeighborImpact	LMI Solar Energy Development	Redmond	3,627	1,174	2,452	9/4/2018	6/30/2019
African American Alliance for Homeownership	LMI Solar Energy Development	Portland	3,102	2,024	1,078	9/1/2018	6/30/2019
Habitat for Humanity of Oregon Inc	LMI Solar Energy Development	Portland	3,102	2,000	1,102	9/1/2018	6/30/2019
Housing Development Center Inc	LMI Solar Energy Development	Portland	3,102	0	3,102	9/1/2018	6/30/2019
Native American Youth & Family Center	LMI Solar	Portland	3,102	0	3,102	9/1/2018	6/30/2019
Portland Community Reinvestment Initiatives Inc	LMI Solar Energy Development	Portland	3,102	2,000	1,102	9/1/2018	6/30/2019
		Renewable Energy Total:	**20,271,572**	**13,987,888**	**6,283,684**		
		Grand Total:	**194,888,149**	**105,242,394**	**89,645,755**		

Tab 8

Policy Committee Meeting Minutes

March 7, 2019

Attending at Energy Trust: Alan Meyer (Committee Chair), Henry Lorenzen

Staff attending: Adam Bartini, Amber Cole, Michael Colgrove, Tara Crookshank, Cheryle Easton, Fred Gordon, Marshall Johnson, Jed Jorgensen, Betsy Kauffman, Steve Lacey, Debbie Menashe, Amanda Potter, Zabyn Towner, Peter West

Attending by Teleconference: Roger Hamilton, Eric Hayes, Anne Root

Meeting began at 1:00 p.m.

Policies Reviewed

a. Cost Effectiveness Policy and General Methodology for Energy Trust of Oregon 4.06.000-P

This policy was up for its regular three-year review. Staff reviewed the policy to consider any needed changes. No changes were suggested, and the committee recommends that the policy be returned to the regular review cycle process. Committee members discussed how the policy affects Energy Trust programs and asked staff how they interact with the Oregon Public Utility Commission (OPUC) in discussions about the policy. Staff described extensive interaction with OPUC staff on cost effectiveness concepts and the tests and exceptions as these concepts relate and affect programs. Should developments in any OPUC dockets have implications for Energy Trust's Cost Effectiveness Policy, staff will return to the Policy Committee outside the regular review process for discussion and analysis.

b. Eligibility of Self-Direct Business for Energy Trust Incentives 4.10.000-P

The policy on Eligibility of Self-Direct Businesses for Energy Trust Incentives was up for its regular review. No changes were recommended by staff, but committee members asked staff to present information about the utilization of Energy Trust incentives by self-directors. Amanda Potter, Industrial and Agricultural sector lead, responded explaining that the Self-Direct policy has provided Energy Trust with extremely cost-effective savings. In addition, by continuing to work with self-directors, many previous self-direct customers have seen value in Energy Trust services and have opted out of self-directing.

Committee members asked for more high-level information to compare amounts paid into the public purpose fund to incentives paid by Energy Trust. Amanda agreed to work with her staff to provide some high-level estimates to committee members for their information. Committee members will discuss the information provided by staff at the next committee meeting.

Board Meeting Presentation Previews

Preview of Presentations regarding Irrigation Modernization Program Services Contract

Jed Jorgensen, senior program manager for the Other Renewables program, updated the committee on a competitive process for irrigation modernization program services. To date, Energy Trust has contracted with Farmers Irrigation Alliance to support these services, which have resulted in the support of a significant number of irrigation modernization projects that provide generation but as well as other benefits. The irrigation modernization program supports collaboration among many agencies to support irrigation modernization and leverage funding from many sources. At the next full board meeting, and following the completion of the competitive bid process, staff will present a recommendation for a new contract for these services for approval by the board.

Committee members expressed interest in this work, and asked Jed to present background information on the program as well as the proposed contract recommendation.

Preview of Presentations regarding Residential Program Management and Program Delivery Contract Extensions

Staff supports one-year extensions for one Residential program management contractor (PMC) agreement and two program delivery contractor (PDC) agreements (with CLEAResult, CLEAResult, and TRC, respectively), each currently set to expire on December 31, 2019. In accordance the terms of each of these agreements, the agreements may be extended for one-year extensions if Energy Trust staff determines that the firm has met the contract's extension criteria and the board of directors does not object to the extension. Marshall Johnson previewed his presentations on contract extensions for the committee. Committee members provided feedback on the presentations and briefing materials, and staff members will revise based on the committee's helpful suggestions.

Consent and Appointment to the Renewables Advisory Council (RAC)

Pursuant to board policy, Energy Trust staff requested Policy Committee approval for the appointment of a new member to the RAC: Josh Halley, Renewable Power Portfolio Manager for Portland General Electric. The committee approved the appointment of Josh Halley.

Staff Updates

Michael Colgrove provided updates to the committee on the following topics:

- Board governance assessment project.
- Community solar program subcontracting with Energy Solutions.
- Upcoming NEEA five-year funding agreement, strategic plan and business plan.
- Jay Ward updated the committee on legislative activities underway during the current Oregon Legislature's session.

Meeting adjourned at 3:10 p.m.

Next meeting date: May 9, 2019, 1:00 p.m.

Tab 9

Renewable Energy Advisory Council Meeting Notes

Wednesday, February 27, 2019

Attending from the council
Josh Halley, Portland General Electric
Michael O'Brien, Renewable Northwest
Dick Wanderscheid, Bonneville Environmental Foundation
Erik Anderson, Pacific Power
Alexia Kelly, Electric Capital Management (Phone)
Susanne Leta, SunPower (Phone)
Andria Jacob, City of Portland (Phone)
April Snell, Oregon Water Resources Congress (Phone)
Frank Vignola, University of Oregon (Phone)
Jaimes Valdez, Spark Northwest (Phone)
Anna Kim, Oregon Public Utility Commission (Phone)
Rebecca Smith, Oregon Department of Energy (Phone)

Attending from Energy Trust
Betsy Kauffman
Dave McClelland
Jed Jorgensen
Zach Sippel
Lizzie Rubado
Jeni Hall
Dave Moldal (Phone)
Peter West
Julianne Thacher
Jay Ward
Samuel Girma
Matt Getchell
Mike Colgrove
Mana Haeri
Tom Beverly
Mark Wyman

Others attending
Angela Crowley-Koch, Oregon Solar Energy Industries Association
Kate Hawley, TRC
Don MacOdrum, TRC
Moriah Johnson, Portland State University
Jasper Song, Portland State University

Executive Summary:

1. Solar has developed a program refresh following the Residential Energy Tax Credit Sunset
   - Focus will be on high-value solar, meaning more advanced solar technologies and targeted solar deployment.
   - This will mean a shift away from conventional solar in terms of staff time and program resources. The program will first focus on simplifying and streamlining applications and quality management to allow more time to then focus on new areas of interest.
   - Advanced solar will focus on supporting customers and trade allies in integrating solar with new control systems, battery storage and flexible loads.

    - Targeted solar will focus on equitable access to solar and areas where the grid can benefit from solar.
    - The Solar team needs feedback about the approach.
2. Energy Trust met or exceeded goals in 2018, based on preliminary numbers.
    - We exceeded our renewable energy generation goals, achieving 95 percent of the electric efficiency goal and exceeding gas goals.
    - Solar led the way for renewables, with a very large volume of applications early in 2018 due to the Residential Energy Tax Credit sunset.
3. Mark Wyman (Residential) and Jeni Hall (Solar) delivered a presentation that reviewed program concepts and different approaches to net zero in the residential sector. See the residential net zero specification attachment below for more information.
    - We are looking for feedback on approaches from renewable energy advisory council members and others.
    - This will help prepare the market for solar ready and zero energy ready requirements in the coming residential building code cycles, which were included in Executive Order 17-20.
    - Differing approaches were discussed, as detailed in the presentations.
    - This topic will return to the advisory council as part of the annual budget review.

1. Welcome, Introductions, Announcements

Jed Jorgensen called the meeting to order at 9:30 a.m. The agenda, notes and presentation materials are available on Energy Trust's website at: https://www.energytrust.org/about/public-meetings/renewable-energy-advisory-council-meetings/. The meeting was recorded on Go To Meeting. If you'd like to refer to the meeting recording for further detail on any of these topics, email info@energytrust.org.

Jed opened with brief notes and updates for the group:

- Energy Trust has a new conference room A/V system. We are recording today's renewable energy advisory council meeting for two reasons: we're testing the new system, and we're sending the recordings for audio transcription. We want to see if we can reduce staff time needed for renewable energy advisory council and conservation advisory council meeting notes.
- Diversity, equity and inclusion update: at the last meeting there were questions about the baseline data related to Energy Trust's diversity, equity and inclusion planning. Our plan is to bring a presentation to the next renewable energy advisory council meeting in April.
- We are launching a diversity advisory council. This was part of our diversity, equity and inclusion policy, and was recommended by many people, including staff. We're working with advisors who have experience in diversity efforts to help us draft a diversity advisory council charter by next month. The purpose is to guide our efforts and help us measure success.
    - As the diversity advisory council is formed, it may require us to look at how the conservation and renewable energy advisory councils operate and how we are structured.

2. Solar program strategies to support high-value installations

Dave McClelland presented on high-value solar.

Dave: The Solar team has been working on program planning in parallel with the organization's strategic planning process. We want feedback from the renewable energy advisory council members about how our plan resonates with your organizations and if you see potential areas where things could go wrong.

We've seen many years of success in the Solar program, and we have a long track record of scaling up while still supporting high quality systems. 2018 was a challenging year, though, due to the Residential Energy Tax Credit sunset. Our incentive budget is about $6 million/year, while the Residential Energy Tax Credit spending was around $12 million/year. We leveraged a lot of outside funding from the tax credit to help our program work. In the second half of the year as activity slowed, we took some time to think more about the future of our program in a changing policy environment.

Based on guidance from the Oregon Public Utility Commission in their 2016 report to the legislature on solar programs, we reflected on how we could better support "high-value applications" of solar. Better technology and better deployment are both higher-value. Sometimes they appear to be in opposition to each other: for example, newer technologies are more expensive, but we're also trying to keep costs down for lower income customers. We also realized through our planning work, that better technology and better deployment can overlap when we target advanced technologies to support specific locations on the grid or to improve community resilience.

Starting with better technology, we're interested in focusing on "advanced solar." This is developing technology that pairs onsite solar generation with controls and storage or other flexible resources. Some key points are:

- About 5 percent of our applications come in with storage included.
- We can have systems that are better customers for the grid—more harmonized with the grid.
- There's a potential challenge with net-zero homes feeding into the grid and pulling from it at certain times of the day.
- We have existing relationships with trade allies to help ready those resources for the market.

Michael O'Brien: Can you tell us more about dispatch-ready solar?

David McClelland: What I see as the potential would be systems that have controls in place. When the communication protocols and controls are ready, there are then opportunities for the utilities to shift and shape that resource. We could also have systems that are independently shaping themselves based on local controls or price signals. For example, systems that are pre-programmed to optimize on-site generation. Once the technology is in place, the next step would be for the utility to provide info to the customer or direct the customer regarding the grid's needs.

Jaimes Valdez: Does this framework envision the potential for microgrids and the opportunity for islanding – like for safety measures in situations like the California wildfires? Does it treat the customer as the definer of the high value and opportunity?

David McClelland: Resilience is part of our interest here. When we add advanced controls and storage, there are potential benefits for both customers and utilities. We need to learn how to balance these over the next several years. Rates and compensation are out of our hands, but we can help customers and trade allies understand the technology and we can help rationalize the market.

Jaimes Valdez: Can you talk about how the benefits and technology are being considered for a community that's harder to serve?

David McClelland: We're calling better deployment "targeted solar". In other words, we can better support customers and locations on the grid that would see the most benefit from solar. We have work underway in this area already: our focus on equitable access to solar and our low- and moderate-income solar working group and strategies. On the grid side, we're working with Pacific Power on targeted load management efforts to help address capacity concerns in specific locations and with PGE to support their smart-grid test beds around the Portland Metro area.

There's a longstanding docket at the Oregon Public Utility Commission about the resource value of solar. We're not looking to duplicate that work to quantify value. Instead we're looking in a directional way at what will be the next technology or next higher value that currently is difficult to quantify. As the docket wraps up, we can incorporate its findings.

We believe we have to shift the program as the market shifts. However, unlike the energy efficiency budget, the Solar program has a fixed budget, along with other constraints. We'll have to shrink part of what we do as we shift the program. Over the next two years, we propose to refresh the program by streamlining our conventional solar work to allow staff resources to shift toward higher value focus areas—advanced and targeted solar—and to better integrate solar with energy efficiency and external utility storage and demand response offerings.

Streamlining doesn't mean we're shifting all our incentive funds to advanced technologies or targeted deployment, but we need to refocus staff time and be efficient on conventional projects. Trade ally ratings are helping us shift more responsibility for quality to trade allies.

Angela Crowley-Koch: When you say 'shift quality to trade allies', what does that look like?

David McClelland: It means trusting the trade allies who have proven themselves. Making it simpler and easier to prove they've done great work. We have Samuel and Josh in-house doing involved technical reviews. They look closely at voltage drops, shading and other factors. We want to push more of this out to trade allies. Give them tools to submit a design that's already been pre-screened. We also have a remote verification tool that allows trade allies to take photos for review and remote verification. It's a bit challenging, because it's more work for the contractors, but it also has given managers at trade ally businesses a better look at what's going on in the field. It reduces the time spent with on-site verifications. As we push some work out to trade allies, we need to streamline our requirements, move projects along faster and find ways to remove other tasks from trade allies' plates, so the tradeoffs are worthwhile.

To shift deployment, we're using the work Energy Trust has already done on mapping equity opportunities, plus working with Kevala to map grid opportunities. As utilities shift to a distribution model, there will be better ways to target places where solar fits grid needs.

Michael O'Brien: Are the utilities sharing info with Kevala? How is that working out?

Jeni Hall: Kevala uses publicly available data collected from a variety of resources: data warehouses, Google Earth, etc. They can also include data from utilities. It can go both ways.

David McClelland: We have nine innovation grants underway to build capacity with the idea of supporting community-based organizations in developing their own approaches for providing low- and moderate-income access. There's a kickoff with Pacific Power next week on targeted load management. We're also working closely with PGE on smart grid test beds.

Alexia Kelly: This is a great presentation on strategy. Is there room or interest in using a community or two as guinea pigs on the targeted offerings? I serve on the council with the Hood River area looking at targeted deployment of resilience, storage, and electric vehicle integration. We would love to work with you on how to leverage this and look at opportunities to put together a working group to share on these objectives.

David McClelland: To be successful, we will need to support existing efforts to build resilience in communities. We have things underway, but we aren't there yet. We should continue discussing it.

One of the early concrete things to watch for is a differentiated incentive for moderate income customers: Solar Within Reach, similar to Savings Within Reach.

Andria Jacob: This definitely resonates with me as a customer. With the City of Portland trying to do advanced solar plus storage, it will be important to look at what's reasonable and to measure milestones. We have been way off in some ways. Integrating solar, storage, and the downtown grid with PGE's technology has made this a hard case. We should walk before we run. We've learned a lot and will be willing to share that experience. As a customer, the experience has been pretty bad. The market isn't ready yet, and this is a hi-tech controls and software project. It's on a different level than we've done before, and it needs to be factored into the projects we consider.

David McClelland: Your experience highlights the need for us to be able to better support customers.

Angela Crowley-Koch: This definitely resonates with us. I'm interested in how the streamlining process gives ways to add work along with reducing work in other areas. I'm hoping it will balance out.

David McClelland: We will continue to think about this and engage with trade allies.

Josh: What about consumer protection toward trade allies and how you handle that?

David McClelland: There are concerns to consider, however we can't hand-hold all contractors completely. We do need to move more responsibility to the industry. For both targeted and advanced approaches, we're not talking about a hands-off approach. For the simplest systems, can we make it easier and faster so then we can focus our efforts on more complex and risky projects.

Andria Jacob: The framework you laid out makes sense.

Frank Vignola: These really are applied research projects and should have utility monitoring and testing.

David Moldal: Given the current penetrations of residential and commercial solar, how much has distributed solar impacted the utilities?

Erik Anderson: The impact of solar is not concentrated, there are lots of places where it hasn't had an impact, like standalone systems on a circuit. There are many places where lots of solar was installed and caused the needs for system upgrades, which can be unpleasant for the people impacted. We're supportive but we need to find ways to narrow the focus by looking for places where it can help. It doesn't solve distribution problems in all places. We need to find the right locations and direct Energy Trust programs to focus on them. At the state level, we have found places where it will help. As technology improves, we will have ways to solve certain problems. We're consciously working on the baby steps. Solar has had inconsistent impacts so far.

Josh: In general, I would support what Erik said. We have areas with impact from concentrated facilities. I'll give it more thought.

Rebecca Smith: For those not aware, the Oregon Public Utility Commission released a staff white paper on distribution system planning and a meeting/workshop on Friday.

Alexia Kelly: As someone who has worked on these issues internationally, the US is behind on many of these things. Europe and Africa have distributed microgrids forming the backbone to meet needs. This work is very valuable as we continue building out that innovation and working through the hardest parts. We support you and appreciate the forward thinking.

Jaimes Valdez: I think we support this approach and thank you for the presentation. It's important for you to have a strong consumer protection element. We've seen problems elsewhere. Lower income and less savvy customers will need that help. How will the info be shared with historically less-engaged communities?

David McClelland: This is the first public presentation of this plan. It's our first opportunity to engage with stakeholders, today. Who else should hear about it, and how? We want to hear from you.

Dick Wanderscheidt: You are thinking about the right things. Energy Trust is in a unique place in Oregon, you have conflicting interests from trade allies, utilities, customers and the Oregon Public Utility Commission. They will need to work together to move forward. We are ahead and should continue forward.

Erik Anderson: You play a fundamental role in protection, particularly with contractors. People come in from other states with different standards than we're used to in Oregon. Established contractors can do more on their own. New contractors may need a staged approach. There are odd actors in other markets.

Michael O'Brien: I encourage you to fully engage in the Oregon Public Utility Commission process. Energy Trust has always been about transformation. Conventional solar was a big deal a few years ago. If we can do things together, we can move more quickly.

Anna Kim: Thank you for plugging the workshop on Friday. This is an exploratory introduction as we start to learn what people are interested in and what we're looking at. We are working with Energy Trust on a variety of collaborative projects with the utilities. We're looking at distribution planning opportunities. Energy Trust will play a role.

David McClelland: We'll continue to talk about this, so we would love your comments and feedback. I'm happy to meet or discuss with folks individually, also.

Jed Jorgensen: We need to share this feedback with the board. We need to be sure you're aware of it. What I'm hearing is: the renewable energy advisory council is generally supportive of the approach with people flagging things as they think it through. It will impact contractors, customers and the utility system as a whole.

3. Preliminary year-end results

Jed Jorgensen: Data in the presentation is preliminary, and not yet official. These are a shared success due to our program management contractors and network of 2,400 other trade allies and organizations. Thank you to all of you for contributing.

We exceeded our renewable energy generation goals, hit 95 percent of electric efficiency goal and exceeded gas goals. The Solar program completed more systems in 2018 than expected, as a result of the Residential Energy Tax Credit sunset. Solar was over in both electric utilities, primarily due to residential projects. There were 500 more projects than we forecasted in the budget. We received 300 applications in the first week of 2018 due to the Residential Energy Tax Credit deadline. We were about on target in commercial. We still saw customer interest in 2018 following the tax credit expiration. We passed on a large volume of leads to trade allies, but there was a 50 percent reduction in residential applications after tax credit ended.

We didn't expect non-solar projects to complete in 2018, but we had one small hydropower project complete early at the Three Sisters Irrigation District. Other renewables dedicated funds for four biopower and hydro project installations in future years and we also provided significant project development assistance incentives. We had a number of irrigation modernization projects that moved past the planning and development phases, so they dropped off our list in terms of the numbers of projects we funded, but we expect them to pop back up as they begin work. We wouldn't have had the biopower projects that we dedicated funds to without Dave Moldal's work over the past several years. There were significant irrigation modernization achievements in 2018. There is $75 million from the USDA to begin piping in the Deschutes Basin. Tumalo Irrigation District installed 8,500 feet of seven-foot diameter pipe last year. They are planning to do another 16 miles in 2019. We will do a joint ribbon cutting for Tumalo Irrigation District and Three Sisters Irrigation District on March 19, 2019.

Betsy Kauffman: It was a big year with a lot of things happening, starting with the Residential Energy Tax Credit sunset. We also finished planning the Solar refresh. People worked very hard this year.

Michael O'Brien: How much water is saved by the irrigation district projects?

Jed Jorgensen: I can give you information after the meeting. It's going to be very significant.

4. Residential net-zero specification

Jeni and Mark discussed net zero specifications. See the residential net zero specification attachment below for more information.

Mark Wyman: We've given a lot of thought about how to coordinate our efforts. Early engagement is better, as we've learned. We need feedback on what we've considered so far and a common baseline for what we're discussing. Fuel neutrality is very important and our programs aren't intending to induce fuel-switching. Net zero includes onsite generation and offsite renewables are not part of the discussion.

We normally come out with new initiatives at the same time as our budget, but this time we're trying to engage earlier to learn from everyone and challenge our own assumptions. We presume a strong value proposition, but this is a chance to challenge that also. If we move forward, this will come back for additional discussion first.

(Slides show an introduction to EPS™ New Construction and Solar programs.)

Solar has seen an increase in market share in new homes, both installed and solar ready. Out of all EPS New Homes, we've seen about 650 install solar later in the process. There's no such thing as an actual zero kilowatt-hour bill, but costs are offset through solar. There will still be fixed costs.

The governor issued Executive Order 1720 at the end of 2017, addressing climate change by looking at the built environment. Sections 4a and 4c direct the building code division to require all new construction to be solar ready by 2020 and create a standard that's equivalent to USDOE's net-zero standard. Oregon has a statewide building code, so this means every new home in Oregon must meet this code.

Alexia Kelly: Is there any meaningful deployment of solar plus battery storage?

Jeni Hall: We've seen an increase in the number of solar plus storage projects and we'll be able to share more detailed information as part of our annual reporting. For solar plus storage installations, some of the solar that would typically go back to the grid is stored in batteries onsite instead.

Mark Wyman: This code sets minimum values for components like R-value and U-value, along with efficiency values for mechanical systems. It sets a target that's about 20 percent more efficient than current code. It references net-zero energy and it appears we're moving toward this concept. We need to think about our role after this is met and what value will we provide? We are considering net zero as a dedicated program track. We have about 3,000 homes in our program and net zero may help us ramp up. There's no uniform definition of net zero but there is awareness of the concept. How do we market to the homebuyer? There's a marketing and consumer confidence piece, so we're trying to decide if we can or should provide some uniformity. It's defined differently depending on where you go.

We are considering questions like: what is the value to the stakeholders, ratepayers, contractors, homebuyer and state? And who are the actors that would come together to make this happen?

All of our options are fuel neutral and would allow mixed fuel homes to participate. Think about how a net-zero home interacts with the grid—it's important to remember that most homes participating in the program are mixed fuel.

Mark Wyman: The first scenario is 'zeroing all energy usage' or converting all energy usage to British thermal units and then offsetting all of that use with solar power. In Oregon, a homebuyer would not receive the full benefit of the solar installed under this structure due to our net metering rules. From the research we've seen, most buyers consider this to be 'net-zero'.

Jeni Hall: Another option is ‘zero all electric usage’, zeroing out only the electric usage with solar is another option for either a mixed-fuel or all-electric home. The homebuyer would receive the full benefit of their investment under this scenario and, like the ‘zero all energy’ scenario, they would still have a gas bill if they are mixed fuel.

Mark Wyman: The third option is ‘zero-sum usage’ which is a version of the approach that California developed as part of their recent code, an approach that is ready-made. It may not be what people think of as a net-zero home. This is starting with a voluntary above-code program. What we’re exempting wouldn’t be a significant part of the home’s load under the current program.

We really need to decide if we should come together on one definition and whether we should help drive that. Do any of the options appeal to people here? The volume of homes meeting this specification will grow based on our efforts. It has impacts on sections of the grid if all homes are generating in a specific area.

Smart-grid-responsive homes may create opportunity for a menu of more smart-grid-responsive options that can be activated at some future time. Building-in flexible resources is something we’ve heard as part of our research.

Angela Crowley-Koch: Transportation fuel doesn’t seem to be included in the calculations for electric vehicles. Did you look at it?

Mark Wyman: Because code is silent on it, it would be in the base or approved case. It would be something in the approved code; and could be an opportunity for efficiency. That load would be in the code or approved home. The load would be there in either case, so we’re focused on reducing the load above what’s required by code. Net zero hones-in on not just the difference, but modeling things beyond just the base case.

Jeni Hall: Electric vehicles show up right now in South Hillsboro development as an ‘electric vehicle-ready’ requirement that we are working with developers and PGE to define.

Mark: Do you anticipate there will be charging? Should we include it or not?

Angela: It should include transportation if it’s truly going to include everything in net-zero.

Frank Vignola: Smart grid responsive homes should be one aspect of the net-zero home and storage is very important as it makes the home more grid-neutral.

Alexia Kelly: Is the idea to develop an integrated incentive package to help people prepare for code, or help buildings build to a future code?

Mark Wyman: It’s on a scale for increasingly high levels of performance. We try to hover near the next code cycle and move the market to where they already meet code. Net-zero goes beyond that.

Jeni Hall: It’s also about brand awareness and coordination. There are many definitions so there’s value in defining net-zero.

Mark Wyman: The stakeholder perspective is that the homebuyer and builder are getting the full package. Do this and you’ll get financial and technical help. Rather than having two parallel tracks and payments, we are considering bringing this together as one spec and one offering for customers.

Michael O'Brien: The smart grid responsive home is an overlay—it's not mutually exclusive.

Mark Wyman: We don't know which is the best path is to follow. We need to anticipate how the homes interact with the grid – that overlay. It's less expensive to do that when the home is built, instead of later on.

Michael O'Brien: On the first two flavors, the first may be difficult for the customer. They may not differentiate between the two because excess kilowatt hours don't offset gas BTUs.

Jeni Hall: The first scenario may be a more expensive system. The overproduction would be donated to the low-income fund.

Michael O'Brien: That's a troubling concept, because customers don't think of it that way. They don't typically hand out electricity.

Andria Jacob: Cities are thinking of net-zero carbon buildings, but I understand why Energy Trust thinks of it in terms of energy.

Mark Wyman: Is there a role for us to play? We would provide structure to the concept, but it would be on the customer side of the meter and may not align with municipal offerings. We don't want it to be disruptive for our partners. This is an opportunity early on to consider whether or not we need to be involved.

Jeni Hall: It's not necessarily contrary to municipal carbon neutrality goals. The Energy Trust offer could be complementary by not encouraging one fuel over another. There are opportunities to connect builders and solar trade allies to work together to meet municipal and state goals.

Mike Colgrove: How is your thinking aligning with the commercial Path to Net-Zero offering?

Jeni Hall: That program is fuel-neutral, and we've kept in contact with them as we work on this concept. The path to net zero doesn't define net zero for customers and lets them identify their goals and find ways to get there. We want to align the residential offer with the commercial program and we appear to be on that path.

Alexia Kelly: This will be a policy decision that someone makes; maybe in California. It will be important to align our definitions and efforts to get builders on board.

Frank Vignola: It may be possible to manage loads in Northwest multifamily properties.

Mark Wyman: This is with some perspective of the homebuyer in the mind. EPS was a tool we gave the builders to sell efficiency to buyers. They say we need to do something more, better or different to sell energy efficiency and sustainability to customers. We are focused on residential and builders to help them sell the benefits of solar and energy efficiency to buyers.

Jeni Hall: Multifamily has access to Path to Net-Zero for new construction.

Hannah Cruz: This seems to be about on-site solar only. Is there potential to expand that?

Jeni Hall: We are thinking of something that can be deployed in 2020, so we don't currently have space for renewable offsets. That may be something in the conversation as we move forward.

Mark Wyman: We are into market transformation and have collected a lot of data which is used by policy makers and researchers currently. It's about providing value to stakeholders, plus leading the market regarding future codes. Code is focused on the structure, not what's happening around it. Energy Trust's focus is also on the physical structure.

Susan Badger-Jones: 25 percent of Oregon customers aren't in Energy Trust territory. On the new construction side, cooperation with BPA hasn't been very successful. Will there be any work to make this feasible in those territories?

Mark Wyman: The design of the new construction program got a head start on that. The NEEA and Energy Trust design has made its way into the BPA manual. We keep the design consistent, so the workflow is the same for all electric utilities. Every utility basically chooses their own adventure, and we support the market by exchanging data with NEEA. With net-zero, we would share our practices and systems, then adapt based on feedback we get to make it regionally adoptable.

Jeni Hall: On the market side of that, trade allies work around the state, as do builders. This framework has the ability to go outside our territory. Some solar leads go outside PGE and Pacific Power territory, but annualized retail rate net-metering is only within their territories. Other utilities provide net-metering, but customers may not benefit from the excess solar generated month to month. There are opportunities for customers outside of the territory to benefit from a net zero specification and lessons learned by trade allies.

5. Public comment

There was no other public comment.

6. Adjourn

The meeting adjourned at 12:05 p.m. The next council meeting will be held on April 10, 2019 from 9:30 a.m. – 12:00 p.m.

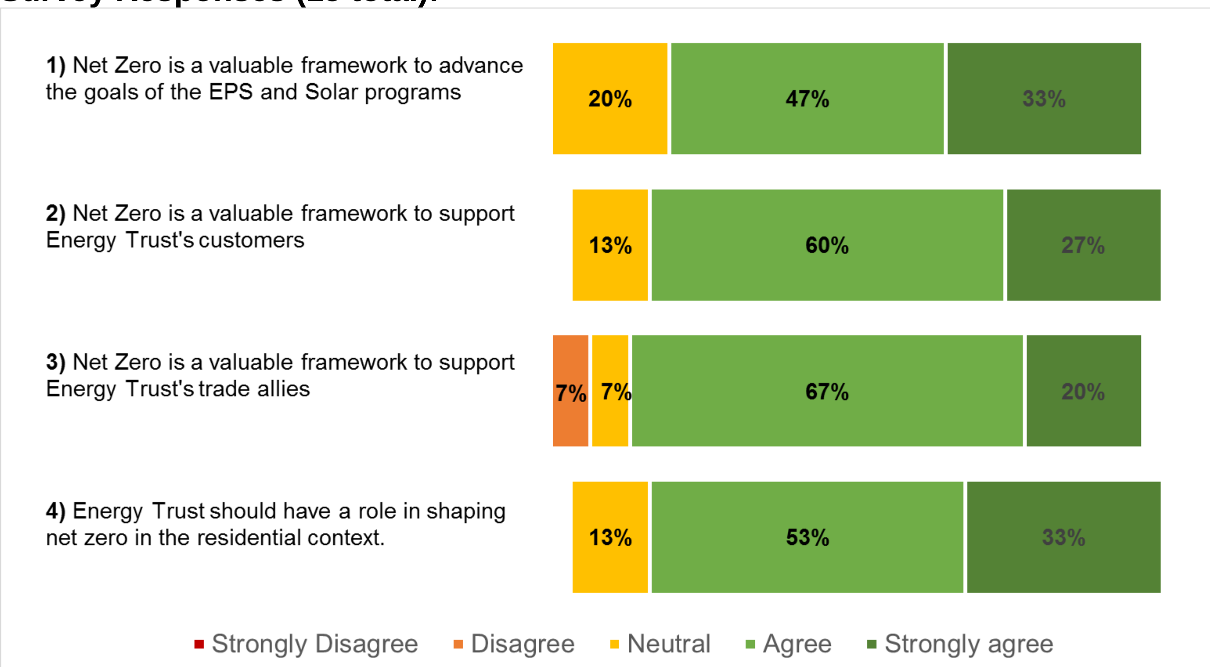
Attachment 1: Residential Net Zero Specification

Compiled survey responses and highlights from the discussion at the conservation advisory council and renewable energy advisory council on February 27, 2019.

Key points that should be considered in program design:

- How and whether to incorporate EV adoption and usage
- How the program would interact with carbon programs at the city, county and state level
- Creating a net zero specification that works for both home buyers and builders
- The importance of branding/marketing/communicating the concept to home buyers
- Coordination with other groups in Oregon and Washington defining net zero

Survey Responses (15 total):



Highlights from the discussion at both the renewable energy advisory council and conservation advisory council for each of the net zero concepts discussed

Zero all energy usage

- I would be concerned the homeowner might use more energy because they are overproducing and not getting the benefit.
- If you are encouraging a home buyer to build out a solar system that is larger and more expensive, does it tacitly encourage fuel switching?
- At scale, does this produce grid management issues? That could drive utility cost up.
- The potential for oversized solar to accommodate gas load could exacerbate issues with grid constraints.
- I am concerned that there could be some perverse incentives (or disincentives) under the [zero] all energy [usage] (gas + electric) definition of net-zero.
- It could work if our net metering policy is changed.

Zero all electricity usage

- Would an [zero all] electric energy only approach drive more all electric new construction vs gas?
- Cost to customer is something to consider whether the market will adopt. Zero all electric use or some would probably increase participation.
- Considering challenges with the other two methods this zero all electric usage seems most viable.
- Options 1 (zero all energy usage) or 2 (zero all electric usage) offer the most understandable process. We think option 2 (zero all electric usage) has more integrity than option 3 (zero some energy usage).

Zero some energy usage

- You will struggle with communication/marketing this to home buyers.
- Eliminating the space and water heating load is not the way to go.
- Cost to customer is something to consider whether the market will adopt. Zero all electric use or some [energy usage] would probably increase participation.

Grid Responsive

- Smart homes should be an aspect of net zero homes. Storage is very important. Makes more grid neutral, if can be integrated, multitude of benefits.
- I think the smart grid responsive homes should definitely be overlaid on whatever "net zero" definition is chosen. Far less expensive to integrate when home is built than to add distributed energy resources later.

General

- Make sure to coordinate with Washington as I understand they are fairly far down this road.
- Energy Trust’s skillset is in providing training and standardization to the community and trade allies. Seems like there is value to the state of Energy Trust developing a "standard program".