Energy Trust Board of Directors Meeting

November 2, 2016

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146th Board Meeting

Wednesday, November 2, 2016
421 SW Oak Street, Suite 300, Portland, Oregon

	Agenda	Tab	Purpose
12:15 p.m.	**Board Meeting—Call to Order** (Debbie Kitchin) • Approve agenda		
	General Public Comment *The president may defer specific public comment to the appropriate agenda topic.*		
	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.* • September 28 Board meeting minutes	**1**	Action
12:20 p.m.	**President's Report**		
12:30 p.m.	**Draft 2017 Annual Budget & Draft 2017-2018 Action Plan** (Michael Colgrove).....	**Separate Document**..	Info
2:00 p.m.	**Break**		
2:10 p.m.	**Energy Programs** • Annual Renewable Energy Certificate Value and Cost Review–R785 (Jed Jorgensen)	**2**	Action
2:30 p.m.	**Committee Reports** • Evaluation Committee (Alan Meyer).....	**3**	Info
	• Compensation Committee (Dan Enloe)		
	• Finance Committee (Dan Enloe)	**4**	Info
	o Cascade Natural Gas Temporary Funding Adjustment–R786 (Steve Lacey).....	*4*	Action
	• Policy Committee (Roger Hamilton)	**5**	Info
	• Audit Committee (Ken Canon)		
	• Strategic Planning Committee (Mark Kendall)	**6**	Info
3:00 p.m.	**Staff Report** • Highlights (Michael Colgrove)		
3:25 p.m.	**Adjourn**		

The next meeting of the Energy Trust Board of Directors will be held
Friday, December 16, 2016, at 12:15 p.m.
at Energy Trust of Oregon, 421 SW Oak Street, Suite 300, Portland

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October 21 Renewable Energy Advisory Council meeting notes will be emailed prior to the board meeting

October 21 Conservation Advisory Council meeting notes will be emailed prior to the board meeting

Tab 1

Board Meeting Minutes—145th Meeting

September 28, 2016

Board members present: Susan Brodahl, Heather Buesse Eberhardt, Ken Canon, Melissa Cribbins (by phone), Dan Enloe, Roger Hamilton, Lindsey Hardy, Mark Kendall, Debbie Kitchin, Alan Meyer, John Reynolds, Eddie Sherman, Stephen Bloom (OPUC ex officio), Warren Cook (Oregon Department of Energy special advisor)

Board members absent: Anne Root

Staff attending: Mike Bailey, Adam Bartini, Eric Braddock, Sarah Castor, Quinn Cherf, Scott Clark, Amber Cole, Mike Colgrove, Tara Crookshank, Kim Crossman, Phil Degens, Lindsey Diercksen, Sue Fletcher, Elizabeth Fox, Betsy Kauffman, Oliver Kesting, Steve Lacey, Debbie Menashe, Dave Moldal, Thad Roth, Sloan Schang, Mariet Steenkamp, Julianne Thacher, Sam Walker, Peter West

Others attending: Jonathan Belais (NEEA), BJ Moghadam (NEEA), Elaine Prause (OPUC), Chris Smith (Energy 350), Anne Snyder Grassmann (Portland General Electric), Susan Stratton (NEEA), Bob Stull (CLEAResult), Lydia White (Cascade Policy Institute)

Business Meeting

Debbie Kitchin called the meeting to order at 12:14. Reminder that consent agenda items can be changed to regular agenda items at any time.

General Public Comments

The president may defer specific public comment to the appropriate agenda topic.

There were no public comments.

Consent Agenda

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

MOTION: Approve consent agenda

Consent agenda includes:

1. July 20, 2016 Board meeting minutes
2. Bank signing resolutions

Moved by:	Heather Buesse Eberhardt	Seconded by: John Reynolds
Vote:	In favor: 12	Abstained: 0
	Opposed: 0	

Northwest Energy Efficiency Alliance Annual Activity Report

Susan Stratton, executive director of NEEA, presented a summary of NEEA activity for 2015.

Energy Trust is the second largest funder of NEEA electric activities, after Bonneville Power Administration, representing about 20 percent of funding. Natural gas market transformation activities are also funded separately by Energy Trust. NEEA budgets in five-year increments. Energy Trust's contribution on an average annual basis is about $6.7 million.

NEEA has two strategic goals. The first goal is to fill the energy-efficiency pipeline with new products, services and approaches. The second goal is to create market conditions that will accelerate and sustain the market adoption of emerging energy-efficiency products, services and practices—called market transformation.

NEEA has several advisory committees, including the Regional Portfolio Advisory Committee. Energy Trust has a representative on all advisory committees and also on the board. In 2015, NEEA expanded its board to include two governor-appointed board members from each state, including Washington, Oregon, Idaho and Montana.

NEEA requires unanimous support from all funders before moving forward on any initiatives.

In 2015, NEEA executed the first year of its five-year business plan, saving a total of 37 average megawatts at a total resource cost of 2.8 cents per kilowatt hour. In 2015, Energy Trust contributed $6.4 million to NEEA electric and gas savings. NEEA delivered 7 aMW of savings to Energy Trust.

NEEA is in year two of its natural gas business plan budget, and hopes to see results over time that are similar to electric results.

Over 20 years, Northwest Energy Efficiency Alliance has delivered 1,275 aMW of regional savings.

Susan provided an overview of how NEEA and Energy Trust work together. Energy Trust has been eager to collaborate with NEEA on pilot projects, including pilots regarding dedicated outdoor air systems, Next Step Homes and gas technologies. Within the electric portfolio, Energy Trust is collaborating on a commercial lighting pilot, a new manufactured home specification, commercial home enhancements and marketing of residential technologies. Energy Trust and NEEA have also collaborated on gas projects, including rooftop HVAC unit field testing, a heat pump water heater feasibility study and new opportunity scanning.

Eddie Sherman arrived at 12:28 p.m.

Looking forward, NEEA plans to increase work in electric vehicles, demand response and rural opportunities.

The board asked about NEEA's understanding of how approaches to codes are different for each state and region. Susan responded that NEEA works with each state individually. An example of success is NEEA’s work with Washington on commercial code. Susan also reported that NEEA's experience with codes in the Northwest can now inform the U.S. Department of Energy (U.S. DOE) as NEEA’s former codes manager in Portland, David Cohen, has been appointed to lead the U.S. DOE work on codes.

The board asked if manufactured housing work is with manufacturers or retailers. Susan responded that work is directly with manufacturers. All manufacturers use the same low-efficiency windows, and there’s an opportunity to improve this and other practices.

The board noted that a few years ago, a majority of manufactured homes in the U.S. were manufactured in the Northwest. Susan confirmed that this is still the case.

Susan acknowledged Margie Harris, Energy Trust’s founding executive director, for her contributions to NEEA’s success as a board member and through her leadership at Energy Trust. Debbie responded that Energy Trust appreciates its partnership with NEEA because of its effective regional approach to market transformation.

President's Report

Debbie noted that the 2017 schedule of board and board committee meetings is included in the packet. The board requested that calendar invitations be sent to members.

Debbie Kitchin welcomed Mike Colgrove to his first board of directors meeting as executive director.

Mike provided a brief overview of his professional and personal history. Mike was born in Nebraska. His father was in the military, and he moved several times during childhood to Alaska, Virginia and England. He began college at an extension unit of the University of Maryland in Munich, Germany, and completed his bachelor's degree in environmental science at the University of Alaska Fairbanks. He lived in Maui for 10 months before moving to New York City to pursue a graduate degree in energy studies at the New York Institute of Technology. Mike stayed in New York City for 20 years.

Mike described his career path, including work at the Community Environmental Center, the Association for Energy Affordability, APEX Environmental and New York State Research and Development Authority. His career started in low-income energy efficiency work and weatherization. His area of expertise is multifamily buildings, and he's particularly interested in Energy Trust's Diversity Initiative.

The board asked about Mike's graduate coursework. Mike responded that it was focused on building science with an elective focus on renewable energy. His undergraduate degree was in environmental policy and economics, which provided the technical grounding to speak the same language as building engineers.

Debbie thanked staff for planning and executing a wonderful event to recognize Margie's retirement.

Debbie asked for updates from the Evaluation Committee, and Alan Meyer responded that there are no Evaluation Committee updates to report.

The board asked about Path to Net Zero meters being located in inaccessible locations. Mike will follow up on this issue.

Budget Action Plans Preview

Peter West provided a preview of budget action plans for Energy Trust's 2017 Annual Budget and 2017-2018 Action Plan.

This is an early preview of program budget action plans. Note this presentation is only about the programs and not about operations. Energy Trust is interested in feedback about the board's interest in receiving this early preview in September, before the full draft budget is presented in November.

Peter reviewed the budget schedule. Energy Trust's budget development process begins in July and completes in December. The draft budget highlights will be presented to the Conservation Advisory Council and the Renewable Energy Advisory Council in October, and the full draft budget will posted online on October 26 and presented to the board on November 2. All public comments on the draft are due on November 9.

The board inquired if the due date for public comments is earlier than in past years, and Peter responded that this is intentional to include more time to clarify and respond to comments.

The board asked how board members can see public comments. Peter responded that Energy Trust will share comments received in the final proposed budget materials delivered to the board in early December and at the December 16 board meeting. The board will also have access to the immediate

reactions of those groups through advisory council notes. Board member requested to see the comments prior to the December board meeting.

Budgeting reflects Energy Trust's 2015-2019 Strategic Plan objectives of achieving goals, providing efficient operations, expanding participation, managing uncertainties, supporting innovation and utility partnerships and coordination.

Peter shared context for the action plans. The economy is relatively strong, project volume is up for renewable energy and the efficiency business sector, project volume is down in the residential sector, savings realization rates are down due to market penetration and efficiency standards, avoided costs are stable for efficiency and reduced for renewable energy, and there are several key policy and savings unknowns in 2018. Peter noted that urban economies remain stronger than rural economies.

The board asked why savings realization rates are down. Peter responded that achieving savings becomes more expensive as Energy Trust penetrates markets. In addition, codes and market baselines are increasing, reducing the amount of savings Energy Trust can claim for impacted measures.

The board asked why avoided costs for renewables are expected to decrease. Peter responded that this is regarding relatively low gas prices and reduced rates for Qualifying Facilities.

Energy Trust's core programs are mature and continue to be effective, so few changes are needed to delivery strategies and the overall measure portfolio in 2017.

The board acknowledged staff for early and regular stakeholder engagement with Conservation Advisory Council regarding recent program changes, such as multifamily incentive design changes.

Peter summarized activities related to the Strategic Plan theme of expanding participation. Energy Trust will grow program outreach in rural areas, including by supporting AmeriCorps Resource Assistance for Rural Environments interns.

The board asked how Energy Trust will ensure that trade allies in rural communities are responsive to local Latino and tribal communities. Peter responded that as part of its Diversity Initiative, Energy Trust plans to engage more diverse trade allies to reach and engage with these minority communities. Energy Trust is also engaging with the Immigrant and Refugee Community Organization.

Peter summarized activities related to the Strategic Plan theme of new approaches and emerging technology, including supporting efficiency in new markets such as cannabis production, emission control technologies, energy performance management approaches, smart thermostats and utility-led demand response efforts. Energy Trust will expand Strategic Energy Management (SEM) beyond one year of participation. The organization will also invest in eight to 12 pilots in 2017, and will continue to invest in NEEA efforts. Staff are exploring new roles in the market, such as solar plus battery storage, demand response and electric vehicles.

The board asked if these topics will be explored in 2017 and implemented in 2018, and Peter confirmed this timeline.

The board asked if continuous SEM is cohort based, and Peter explained that Energy Trust works one-on-one with each participating company for continuous SEM.

Peter summarized activities related to the Strategic Plan theme of managing transitions. Energy Trust will respond to solar policy decisions and the rapidly changing LED market. In 2015, 55 percent of bulbs incented by Energy Trust were LEDs. In 2016, 75 percent of bulbs incented are expected to be LEDs. In

2017, 100 percent of bulbs Energy Trust incents will be LEDs. LED prices are expected to drop from 20 to 40 percent in 2017. Energy Trust could discontinue incentives in the LED market as early as 2018 because they will no longer be needed to support customer adoption. Energy Trust will change some measures in the residential sector, including ending appliance recycling for 2017 and potentially retiring Energy Saver Kits in 2018.

Peter noted that all 95,000 Avista customers in Oregon will receive the full range of Energy Trust offerings in 2017. More than 80 percent of Avista customers are residential and the remainder are nearly all commercial. There are almost no Avista industrial customers in Oregon.

The board asked what percent of Avista customers are Pacific Power customers. Peter estimates it's more than three-quarters.

Peter summarized activities related to the Strategic Plan theme of efficient and effective operations. Staff will expand instant incentives, upstream rebates and online forms, all of which reduce delivery costs. The finance team is looking at possible improvements to incentive processing. In addition, Energy Trust will revise market solutions incentives packages for new construction to help developers maximize energy efficiency during very fast construction schedules.

The board affirmed that timing can be critical for multifamily builders driven by policy implementation dates.

Peter added that Energy Trust is supporting several governmental and municipal initiatives, including the Commercial Property Assessed Clean Energy pilot in Multnomah County and cities participating in the Georgetown University Energy Prize. Energy Trust can leverage these efforts to increase savings.

The board appreciated hearing about these broad action plan themes before seeing the budget data and details at the next board meeting. Mike added that Energy Trust is interested to see how this presentation impacts board discussions regarding the budget in November or December. If this is determined to be useful, Energy Trust could consider adding operations highlights to this early preview presentation next year.

The board noted that savings are harder to get as Energy Trust penetrates markets, and asked if NEEA will have the same issue. Peter confirmed that this issue also impacts NEEA.

Operations

Authorize contract amendment with Pollinate—R782, Sloan Schang

Sloan Schang, senior web manager, introduced Resolution 782.

Sloan provided a brief overview of Energy Trust's website and online activities. The website is Energy Trust's main mechanism for conveying benefits, facilitating action and providing transparency. In addition, Energy Trust sends targeted marketing, newsletters and transactional emails that drive customers to the web site for action. Social media activity is growing, including on Twitter, Facebook and LinkedIn. Energy Trust maintains two blogs, one for stakeholders and one for trade allies. It is a cost-effective mechanism to engage new customers, and features interactive tools to help customers easily meet their needs. The website is available at all times to the entire state. It is the core delivery mechanism for transparency via public records, reports and meeting information.

The board asked which online resource is most used, and Sloan responded that the website is the central resource.

Sloan offered an overview of digital trends. Traffic to Energy Trust's website grows an average of 25 percent per year, well above the nonprofit industry average of 16 percent annual growth. Nearly 50 percent of web visitors visit from phones and mobile devices. In the last year, Energy Trust has developed tailored experiences for new visitors through microsites, which customers are directed to through marketing campaigns.

In 2015, Energy Trust conducted a usability study to understand how visitors navigate the website and understand opportunities for improvement, engaging customers in cities from small to large.

The board asked why communities south of Roseburg were not engaged in the usability study. Sloan explained that the usability study contractor may have had difficulty finding customers south of Roseburg willing or able to participate. Energy Trust can conduct a future customer focus group south of Roseburg.

In 2017, Energy Trust will simplify website architecture, navigation and content delivery. The website will be optimized for all mobile devices. Online tools and Energy Trust's internal content management system will be streamlined.

Sloan summarized Resolution 782 to amend Energy Trust's contract with Pollinate to provide web design and development services. This resolution enables a one-year contract extension, allowing Pollinate to support these website improvements mentioned previously.

The board asked if Energy Trust expects serious bids for web management from competitors when this contract is complete. Sloan expects five to 10 proposals based on past experience competing this contract.

The board affirmed that the website is important, and it's important for Energy Trust to be nimble to update it with new offerings as they emerge. One of Energy Trust's key roles is to educate consumers so they make good decisions. Mike noted that Energy Trust is working on a proposal to enhance Energy Trust's education work, and one option is to enhance information on the website.

The board appreciated the microsite approach to deliver relevant information easily to customers.

The board asked if funds will also be allocated for web search optimization. Sloan responded that search optimization is part of the current web improvement activities.

The board thanked Sloan for a website that is mature, easy to use and gets better and better over the years.

The board requested that the total contract cost be added to resolutions going forward.

RESOLUTION 782
AMENDING AND EXTENDING CONTRACT WITH POLLINATE, INC.

WHEREAS:

1. **Energy Trust's website is a primary customer service and marketing channel, promoting services, programs, products and educational information. It is also increasingly used as a customer intake and self-service mechanism for program participation, primarily by way of web forms that integrate web services with Energy Trust's business information systems. The website hosts an average of 80,000 visits per month. Since the current version of the site was launched in 2009, visits have increased by about 25% per year.**

2. **In 2014, Energy Trust conducted a competitive RFP process for a contractor to provide website development and maintenance services. Pollinate, Inc. (Pollinate), a Portland-based digital creative agency, was chosen to provide these services.**
3. **In 2015, Energy Trust contracted with Pollinate for $499,800 to perform work on the website in 2015 and 2016. After the 2016 contract scope was finalized, staff identified additional work to be accomplished in 2016, including:**
    - **Development and enhanced analytics support for certain microsites**
    - **Development and support for the Farmer's Conservation Alliance and Energy Trust's hydro program**
    - **Expansion of the Energy Trust blog**
    - **Enhancement of the Insider trade ally email newsletter and blog**
4. **Staff proposes to add $60,000 to the 2016 contract cost to accomplish this work.**
5. **Staff also proposes to extend the contract through 2017 to continue work that Pollinate has previously done for Energy Trust and undertake enhancements identified in the 2016 web site redesign process. The cost for this work is expected to be $260,000.**
6. **Staff believe Pollinate is uniquely suited to do this work, that since 2009, Pollinate has consistently delivered high quality web development work, and through multiple RFPs has consistently demonstrated expertise and billing rates comparable to other providers in the market.**

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

1. **Sign a contract amendment with Pollinate, Inc. adding $60,000 for additional website development work in 2016, and**
2. **Extend the contract for a third year, 2017, at an additional cost of up to $260,000.**

Moved by: John Reynolds — Seconded by: Mark Kendall
Vote: In favor: 12 — Abstained: 0
Opposed: 0

Energy Programs

Contract extension for Program Delivery Contracts, Adam Bartini

Adam Bartini, senior program manager, presented contract extensions for program delivery contracts for the Production Efficiency program. Production Efficiency's three Custom Program Delivery Contractors, RHT, PGE-CTS and Energy 350, will complete the first of their three-year terms in 2016. This is the first of two possible one-year extensions for all three PDCs.

These PDCs deliver a broad range of services and incentives to customers of all sizes to achieve savings through custom capital projects, operations and maintenance projects and Strategic Energy Management (SEM).

The board asked what area Energy 350 covered. Adam responded that Energy 350 serves customers in the Portland Metro area, the lower Willamette Valley and Eastern Oregon.

The three PDCs have performed well based on contract extension criteria, including annual savings goals, delivery budget management, project pipeline development, data management, customer service, marketing coordination, quality control and project reporting.

During the current contract period, RHT and Energy 350 have met goals, with one exception for RHT gas savings in 2015. PGE-CTS did not meet goals in 2015, and Energy Trust has revised savings estimates for this territory. PGE-CTS has made several efforts to improve performance, including employing sales training and increasing outreach strategies.

The board asked about the potential for energy savings in the PGE-CTS territory. Kim responded that predicting energy savings by PDC territories is difficult because Energy Trust redesigned territories a few years ago, making historical trends less applicable because they are based on old territory boundaries. Resource potential studies in industrial are difficult to complete and predictions are not very accurate.

The board asked why the forecast for PGE-CTS is lower than for the other PDCs. Kim responded that a single very large customer in this territory can impact annual achievements based on when they choose to participate in projects.

The board asked how megaprojects are factored into PDC goals. Kim responded that megaprojects are not included in PDC goals because they are unpredictable.

The board asked what Energy Trust would do if it didn't extend these contracts. Adam responded that Energy Trust would run a request for proposals to receive applications from other contractors. Energy Trust has historically received six to seven bids when competing Custom PDC contracts.

The board asked if Energy Trust could get a custom PDC hired and trained in three months. Adam responded that a six-month timeframe is more reasonable. The competition takes about three months, and the customer transition takes longer. PDCs have multi-year relationships with customers, so gradual and careful transitions are needed to maintain strong customer relationships. Production Efficiency experiences lower savings in years when PDC transitions occur.

The board noted that several PMC contracts expire at the end of this year and asked why contracts are not staggered. Staff responded that the Custom PDC and Streamlined PDC contracts are currently staggered by two years, if all extensions happen. The Streamlined PDC contracts were rebid this year.

The board suggested Energy Trust consider mid-term review of delivery contractors. Kim suggested making similar presentations at the June board meeting in future years.

The board had no objections to extending contracts.

The board took a break from 2:24 p.m. to 2:40 p.m.

Committee Reports

Policy Committee, Roger Hamilton

The committee does not recommend changes to the reserves policy at this time. A working group recommends a maximum of $8 million for the contingency reserve for all utilities. Policy committee will evaluate in 2017 and report back to the board.

The committee also reviewed information about Energy Trust's incentive offerings for installation of energy-efficiency measures in cannabis growing facilities and learned more about Energy Trust's role on a governor-appointed task force to develop environmental and energy guidelines for the industry. Board

members asked staff to be clear in descriptions of service and incentive offerings to the cannabis industry that the incentives are for energy efficiency related to the production process, not for the cannabis product.

At its next meeting, the Policy Committee will discuss the potential for the U.S. Department of Agriculture loans to support a replacement program for older manufactured homes.

The committee appointed new members to the Conservation Advisory Council and the Renewable Energy Advisory Council.

The committee thanked Elizabeth Fox and Cheryle Easton for stepping in to support committees during staff transitions.

The Finance Committee introduced a board decision to amend conservation funding for schools policy.

Amend Conservation Funding for Schools Policy, Oliver Kesting
Oliver Kesting, commercial sector lead, explained Energy Trust's relationship with the Oregon Department of Energy to serve schools. The Oregon Department of Energy manages Senate Bill 1149 funding for schools, serving schools that retrofit educational facilities. Energy Trust receives SB 838 funding and gas funding for schools and provides services for new buildings and non-educational facilities.

Last month, the OPUC issued direction on how to pay and claim savings when Energy Trust and the Oregon Department of Energy work together on one project. This policy change is to align with the new direction from the OPUC.

Warren Cook clarified that the intent is to stretch funding for schools. Previously, a school could not receive Energy Trust incentives before utilizing its SB 1149 incentives in working with Oregon Department of Energy. Now they can receive both funding sources for the same project. Oregon Department of Energy will deduct amounts provided by Energy Trust to ensure that total public purpose funding does not exceed, on a measure basis, 100 percent of eligible funding support.

The board asked how funds are allocated, and Warren explained that allocation is based on number of students at each school.

The board asked if schools report to the Oregon Department of Energy on how funds are spent. Warren explained that a bi-annual public purpose charge report to the legislature includes funding from both Oregon Department of Energy and Energy Trust.

RESOLUTION 783
AMEND CONSERVATION FUNDING FOR SCHOOLS POLICY

WHEREAS:

1. **SB 1149, codified as ORS 757.612, specifically directs funds for the support of efficiency measures in Oregon's K-12 schools, with such funds to be administered by the Oregon Department of Energy (ODOE).**
2. **Energy Trust may provide ratepayer funds collected under SB 838, codified at ORS 757.689 and from natural gas ratepayers to K-12 schools, and Energy Trust and ODOE have coordinated to provide support from both sources of funding for energy efficiency.**

3. **Up for its regular three year review at this time, Energy Trust staff recommended revisions to the board's school funding policy to reflect Energy Trust and ODOE coordinating discussions on administration and deployment of energy efficiency funding support for K-12 schools.**
4. **Staff presented the recommended revisions to the board's Policy Committee on September 8, 2016. Based on suggestions for clarification from the Policy Committee, staff recommends the policy revisions indicated below at this time.**

It is therefore RESOLVED that the Energy Trust policy on conservation funding for schools is amended as shown below.

4.02.000-P Conservation Funding for Schools

History			
Source	Date	Action/Notes	Next Review Date
Board Decision	May 8, 2001	Adopted (R27)	November 28, 2001
Board	November 28, 2001	Reviewed/Revised (R58)	February 27, 2002
Board	February 27, 2002	Reviewed/Revised (R87)	February 2005
Board	October 6, 2004	Amended (R295)	October 2007
Board	April 6, 2005	Amended (R328) – see R331	April 2006
Board	May 4, 2005	Amended (R331)	June 2008
Board	February 14, 2007	Authorized funding to 2007 (R426)	June 2010
Board	July 28, 2010	Amended (R557)	July 2013
Board	August 17, 2011	Amended (R592)	August 2016

Policy on schools:

- SB 1149 specifically directs funds to efficiency measures in K-12 schools ("SB 1149 schools"). These funds are administered by ODOE in "the Schools Program." This policy coordinates how Energy Trust efficiency funds from non-SB 1149 sources, i.e., SB 838 and gas efficiency funds, may be combined with measures funded through the Schools Program.
- Energy Trust will make ~~electric~~SB 838 and gas funds available for SB 1149 schools through its New and Existing Buildings programs, provided the proposed measures meet the ~~relevant~~ Energy Trust cost-effectiveness criteria.
- Energy Trust SB 838 and gas funds ~~cash incentives~~ ~~funds~~ and ~~other SB 1149 s~~Schools Program funds may ~~not~~ be used for the same energy efficiency measure. However, Energy Trust funds (not including the cost of Energy Trust services such as audits or engineering support) and Schools Program funds, when combined, may not exceed the Schools Program's maximum allowable incentive or reimbursement amounts, or 100% of measure or project cost.
- To ensure this, Energy Trust will provide ODOE, for all Energy Trust-funded measures at SB 1149 schools, project information including: district name, school name, measure description, date of installation and ~~,project information including; district name, school name, project description, date of project, and~~ incentive amount paid for each measure.
- Energy Trust may provide technical and/or administrative support for school projects, provided Energy Trust can claim savings from the measures it supports.

- ~~Energy savings estimates, measures costs and other data identified in the school district audits will be accepted by the Existing and New Building Efficiency programs.~~
- Annually, Energy Trust will document how SB 838 or gas efficiency funds were used to fund efficiency measures in K-12 schools.
- In its biennial reports to the legislature, Energy Trust will not claim energy savings where (a) the school district still receives SB 1149 funds and (b) the district has not fully allocated such funds. However, Energy Trust will continue to claim energy savings for New Construction Schools Projects and non-educational facilities, which are not eligible for Schools Program funding.
- In reports to the OPUC, Energy Trust will report energy savings from school measures for which it provided funds.

Moved by: John Reynolds Seconded by: Susan Brodahl
Vote: In favor: 12 Abstained: 0
Opposed: 0

Finance Committee, Dan Enloe
The Finance Committee supports Energy Trust's manufactured home USDA grant efforts.

The year-to-date variance on revenue is down about $2 million, but reserves are up about $3.6 million. This sets Energy Trust up to increase spending in Q4. Efforts to reduce reserves have been successful.

The board asked why NW Natural revenues are down. Dan answered that NW Natural's rates will increase later in the year.

Staff Report

Highlights, Michael Colgrove
Mike provided an update on his transition as the new Energy Trust executive director. Mike has been with Energy Trust for six weeks. In that time, Mike has spent 20 hours learning from Margie. He has met with nine board members, with additional meetings scheduled in the near future. He is planning to visit remote board members in their hometowns, and also plans to tour the state to meet customers and stakeholders and get to know communities. He attended several board committee meetings.

Mike participated in five meetings with OPUC staff and commissioners, including joining Margie in her presentation of the Q2 Report to the commission. He has met with representatives from four of five utilities, attended advisory council meetings, and has begun meeting with key stakeholders. He has toured two Energy Trust projects at Umpqua Community College and Umpqua Dairy on a trip to Roseburg, Myrtle Creek and Eugene.

Mike thanked the board and staff for support, generosity, hospitality and attention to details. He plans to continue learning as much as possible about Energy Trust through November 15, and will provide a summary update on this effort at the December board meeting.

Mike acknowledged Elizabeth Fox for filling in as an executive assistant, and announced that Energy Trust is in the process of hiring a new executive assistant. Mike reported that Greg Stokes, human resource manager, is expected to return to work on a limited basis in mid-October

Debbie Menashe provided an update on Energy Trust's legislative policy. Energy Trust monitors legislative activities, and expects to track on several bills during the upcoming legislative session.

There are restrictions on how staff and board members participate in the political as representatives of Energy Trust, including restrictions on lobbying and political activity. Energy Trust's grant agreement with the OPUC states that no part of public purpose charge funds may be used for lobbying or for any other political purpose, such as endorsing or opposing candidates or ballot measures. Energy Trust can provide information based on technical expertise.

If board members participate in political activity as an individual, they should explicitly identify themselves as acting on their individual behalf and not on behalf of Energy Trust, regardless of whether the issue is related to energy. Board members are encouraged to use good judgement.

If board members receive requests for information, they should be forwarded to a staff member, including Amber Cole, Debbie Menashe, Jay Ward or Mike Colgrove.

Mike shared an update that Energy Trust's safety and security policies have been updated to bring Energy Trust into alignment with the building's safety and security policies and follow industry best practices. Doors to the lobby will remain closed and visitors need to check in and receive a name tag and visitor's badge. A panic button has been installed at the front desk.

The board discussed board member badges, and Mike added that board members will have preprinted badges stored at the reception desk. The board recommended Energy Trust also review its concealed carry policies in its employee handbook.

Adjourn

The meeting adjourned at 3:38 p.m.

The next regular meeting of the Energy Trust Board of Directors will be held Wednesday, November 2, 2016, at 12:15 p.m. at Energy Trust of Oregon, Inc., 421 SW Oak Street, Suite 300, Portland, Oregon.

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Alan Meyer, Secretary

Tab 2

Briefing Paper and Board Decision
Annual REC Value and Cost Review, Staff Recommendations

November 2, 2016

Summary

Energy Trust's Renewable Energy Certificate (REC) Policy requires staff annually to report on the market value of RECs to the Renewable Advisory Committee (RAC) and the board and, where the market value of any given REC category is less than the cost of registering them**,** recommend whether to continue to register them in the Western Renewable Energy Generation Information System (WREGIS). Staff has completed consultations, and based on the attached report, recommends that WREGIS registration not be required: (1) for Other Renewables program and large, custom solar projects where neither the project owner nor the utility is willing to pay for WREGIS registration; and (2) for solar program projects, where there continues to be no cost-effective way to register them.

Background

- In November, 2015 the board changed Energy Trust's REC Policy to provide that the RECs need not be registered in WREGIS where the board concludes the effort and expense are disproportionate to the REC market value (see **Attachment 1**). This determination would be based on market value analysis by Energy Trust staff after consultation with the utilities and the OPUC. The policy amendments were prompted by experience with small, net-metered solar projects, large in number, for which the cost of WREGIS registration so far exceeded REC market value as to be prohibitive.
- Staff has consulted with the utilities, the OPUC and the RAC, completed a report on REC values in relation to WREGIS registration cost (see **Attachment 2**), and developed recommendations on WREGIS registration.

Discussion

- Voluntary REC market prices continue to be low (see Voluntary Market price graph in Attachment 2). This is the market in which the large majority of Energy Trust projects fall.
- For some small to medium projects Energy Trust projects, neither the owner nor the utility is willing to in register RECs in WREGIS. For example, Pacific Power does not want to pursue metering and WREGIS registration activities for the City of Medford's biogas project, where Energy Trust has title to 45,000 RECs over 20 years. We take this as an implicit determination that the effort and expense of WREGIS registration are disproportionate to the REC market value.
- Small solar projects are subject to the same WREGIS metering and reporting requirements as other renewable energy projects. Between 2010 and 2015, staff spent significant time and energy working with the utilities, OPUC staff, Oregon Department of Energy staff and others looking for cost-effective ways to register small project RECs in WREGIS, or otherwise to make these RECs count. Staff is continuing conversations with OPUC and utility staff to find solutions, but still without success.

Recommendations

- RECs generated by projects funded through the Energy Trust Other Renewables program and custom solar projects: continue to take title to project RECs, but do not require WREGIS registration if neither the project owner nor the utility are willing to pay registration costs.

- RECs generated by Energy Trust Solar Program projects: do not require WREGIS registration for Solar program projects absent a cost-effective option for registration.

RESOLUTION 785
ANNUAL DETERMINATION REGARDING REC REGISTRATION REQUIREMENTS

WHEREAS:

1. **RECs represent renewable energy values that should be protected for ratepayers in Energy Trust programs.**
2. **Energy Trust's board policy regarding RECs, as amended in 2015, requires that staff "track the cost and effort involved in registering RECs and report to the RAC and board at least annually in order for the board to determine whether the cost and effort entailed in registering RECs of a given type is disproportionate to the market and other values associated with RECs. . . ."**
3. **This REC policy provision recognizes that in protecting the renewable energy values for ratepayers, there may be circumstances in which the cost of registering RECs in WREGIS is prohibitive;**
4. **In 2015, with the approval of the board upon determination that the cost of WREGIS registration was disproportionate to their value, Energy Trust staff retained contractual title only to RECs generated through the Solar program and through Other Renewables program and custom solar projects where neither the project owner nor the utility are willing to pay for WREGIS registration costs;**
5. **Energy Trust staff continues to track the market value of RECs and the cost and effort in registering them, and reported on these conditions to the Policy Committee and the RAC in October 2016, and recommends a continuation of the current approach REC registration for the coming year.**

It is therefore RESOLVED that the Board of Directors hereby concludes that:

1. **The cost and effort of registering RECs are disproportionate to current REC market value for RECs generated through projects in the (a) Energy Trust Other Renewables program and through custom solar projects where, in both cases, neither the project owner nor the utility are willing to pay REC registration costs and (b) Energy Trust Solar program; and**
2. **For RECs generated in the types of projects described in #1 above, Energy Trust staff shall continue to retain contractual title to project RECs, but are not required to register such RECs in WREGIS.**

Vote on resolution

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

ATTACHMENT 1

ENERGY TRUST REC POLICY

4.15.000-P Renewable Energy Certificate (REC) Policy

History			
Source	Date	Action/Notes	Next Review Date
Board Decision	March 3, 2004	Approved (R256)	February 2005
Board Decision	February 16, 2005 (residential tags)	Amended (R313)	
Board Decision	April 6, 2005	Rescind R313	February 2008
Board Decision	March 28, 2007	Amended R433	February 2010
Policy Committee	October 12, 2010	Reviewed, no changes	October 2013
Board Decision	May 4, 2011	Amended R584	May 2014

PRINCIPLES

The following principles should guide Energy Trust's ownership of renewable energy certificates (RECs) generated by renewable resources:

- **RECs generated by renewable energy are one of the multiple values for Oregonians provided through investing in renewable resources.**
- **Energy Trust RECs should be used for the long-term benefit of customers of Pacific Power and Portland General Electric, as long as the effort and expense associated with registering them is not disproportionate to their value.**
- **The disposition (retention, transfer) of RECs will coordinate with and further the goals of Energy Trust, state policies and regulatory requirements.**
- **Where Energy Trust takes ownership of RECs, its ownership should reflect both the REC value and the support provided by Energy Trust.**
- **Energy Trust should coordinate its REC policy with utility green power programs and rate processes.**
- **Energy Trust ownership of RECs and the mode of delivery of RECs to Energy Trust should be flexible over time, while reinforcing incentives for long-term project performance.**

POLICY

1. **Annual Board Review**
   - **Energy Trust will ascertain market values and forward price curves for relevant types of RECs and update them periodically.**
   - **In order to ascertain market values and forward prices curves for relevant types of RECs, Energy Trust will consult with PGE, Pacific Power and the OPUC staff and will give consideration to federal and state policies that may affect such values and forward price curves.**
   - **Energy Trust will track the cost and effort involved in registering RECs and report it to the RAC and the board at least annually, and where the market value of any given REC category is less than the cost of registering them, recommend whether to continue to register them in WREGIS.**
   - **Where the board determines, after RAC review, that the cost and effort entailed in registering RECs of a given type is disproportionate to the market and other values associated with RECs, the board may authorize staff to take title to the RECs without registering them in WREGIS and shall effectuate such authority by board resolution.**

2. Ownership

- **Where the board determines that Energy Trust should secure RECs for the benefit of ratepayers, the quantity of RECs for which Energy Trust will take ownership rights will be based on the ratio between Energy Trust's incentive and above-market cost, with an adjustment in cases where the REC market value exceeds the per-REC value of the incentive, determined as follows:**
  - **Step 1: Multiply the number of RECs that would be generated by a project over the term of the funding agreement with Energy Trust by the percentage of the above-market cost represented by Energy Trust's incentive.**
  - **Step 2: Divide the incentive amount by the quantity of RECs calculated in Step 1.**
  - **Step 3: Compare the per-REC value of Energy Trust's incentive to the REC market value ascertained in Section 1 of this policy.**
  - **Step 4: If the per-REC value of the incentive exceeds the per-REC market value, Energy Trust will take the full amount of RECs calculated in Step 1. If, however, the per-REC market value exceeds the per-REC incentive value, Energy Trust will reduce its REC ownership so that the per-REC incentive value is equivalent to the per-REC market value.**
- **Energy Trust will reduce its ownership of RECs to the extent that a utility retains RECs for the benefit of its ratepayers pursuant to the utility's green power program or power purchase agreements.**

3. Delivery of RECs

- **Unless the Energy Trust board determines under Section 1 that a type of REC need not be registered in WREGIS, RECs should be delivered to a utility WREGIS account specified by Energy Trust.**
- **Energy Trust may agree to up-front retention of RECs by a developer or project owner if there are contractual assurances that future RECs will revert to Energy Trust.**

ATTACHMENT 2

Annual REC Value and Cost Review, Staff Recommendations

October 6, 2016

At its November 4th, 2015 meeting Energy Trust's board approved a set of changes to Energy Trust's Renewable Energy Credit (REC) Policy. The policy requires an annual RAC and board review of the value of RECs done in consultation with both utilities and the OPUC and a report from staff on the cost and effort involved in registering RECs. If the cost and effort of registering RECs is disproportionate to the market and other value of RECs, the board may authorize staff to take contractual title to RECs only, and not register them in the Western Renewable Energy Generation Information System (WREGIS).

This memo is prepared in accordance with the policy and will be shared with the RAC at its October meeting and the Board at its November meeting.

Review of REC value:

From the utility perspective REC value is driven by compliance with Renewable Portfolio Standard (RPS) mandates. Right now both utilities report that they are in compliance. Portland General Electric (PGE) reports compliance at least through 2020 and Pacific Power (PAC) reports compliance at least through 2028. As utility compliance mandates grow, especially under the now-doubled RPS, Energy Trust's REC portfolio becomes a smaller portion of the total the utility needs to deliver.

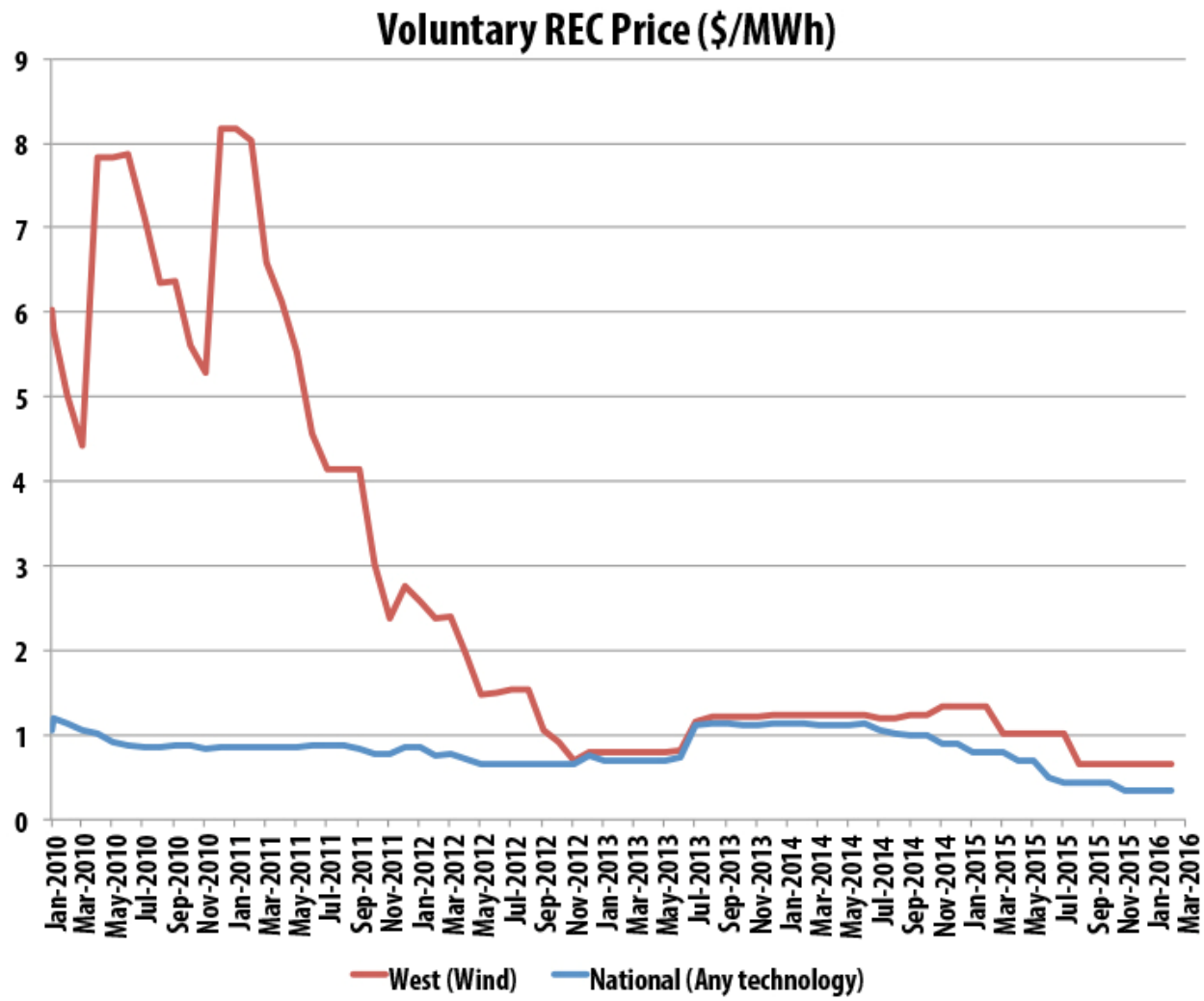
Over the summer PAC held an RFP for renewable energy projects and RECs and chose to purchase RECs from seven projects representing 168MW of capacity. The smallest project in the portfolio is 8.5MW. PAC has stated to the media that the compliance costs from their REC purchase will increase customer rates by a total of 0.05% to 0.1% between now and 2028[1]. PGE is working through a similar RFP process with the OPUC at this time.

On Sept. 27, 2016 the OPUC adopted Order 16362[2] regarding Alternative Compliance Payment value under the RPS. That order also provides data regarding the value of RECs to the utilities:

> *Regional REC wholesale prices: PGE's 2015 RPS Compliance Report reports the average weighted cost of unbundled renewable energy certificates (REC) at about $3.30 per MWh. (An unbundled REC represents the environmental attributes of the underlying power that is generated but is purchased separately from the power).*

This value is somewhat higher, but in the ballpark, of national voluntary REC prices as tracked by the U.S. Dept. of Energy. In March 2016 nationally sourced RECs were trading at ~$0.34 per MWh.[3] The graph below[4] shows REC prices dropping from a high of ~$8 in 2011 to less than $1 in 2012 and dropping slowly since then. This is consistent with reports from Bloomberg arguing that RPS driven supply in the west precludes any long-term upside in the REC market.

[1] http://cascadebusnews.com/pacific-power-expands-renewable-energy-portfolio/, http://pamplinmedia.com/pt/9-news/317669-196100-replacing-coal-wont-break-the-bank-after-all
[2] http://apps.puc.state.or.us/orders/2016ords/16-362.pdf
[3] http://apps3.eere.energy.gov/greenpower/markets/certificates.shtml?page=5
[4] Ibid.



REC marketers continue to note some interest in "farmers market" or "boutique" voluntary RECs (e.g. RECs from a project with a good story). Marketers may pay more for such boutique RECs but the cost is offset by large quantities of low cost wind RECs. This reinforces what Energy Trust staff have seen in recent years – most project owners are not able to get more than $1 - $2, at most, for RECs although in unusual and infrequent cases, project owners have been able to make a sale at $7 per REC or more. The voluntary market remains illiquid and the Oregon compliance market, notwithstanding PAC's summer RFP, is essentially nonexistent for the projects that Energy Trust supports.

Cost and effort involved in registering RECs:

Energy Trust tracks the cost and effort involved in registering RECs for projects independently by program, separating Other Renewables projects and Solar projects. The main cost drivers are the same, however: to meet WREGIS registration standards project generation has to be metered and monitored according to approved standards.

Other Renewables program Costs and Effort -

Appropriate metering adds cost for larger projects, especially those where power is utilized on site[5]. The recent biopower projects at the wastewater reclamation and reuse facilities owned by the City of Gresham and Clean Water Services required meters and associated infrastructure which added approximately $15,000 in costs to each project.

REC registration efforts by Energy Trust staff are focused in two areas: project incentive negotiations and registration activities. The amount of effort required by Energy Trust staff in negotiation varies according to the interest the project owner has in retaining and registering their share of RECs. On average 5-10 hours of staff time is spent on internal and external REC negotiations per project.

The amount of effort related to REC registration activities varies based on the registration methodology being employed by the project. For projects undertaking registration activities themselves, annual tracking by staff requires 2-6 hours of time annually, per project. If the utility is going to register the project 2-6 hours of Energy Trust staff time is required for the initial setup but less than an hour is required annually moving forward.

A problem area exists for projects where neither the owner nor the utility is interested in registering RECs in WREGIS. Energy Trust has encountered this situation in small to medium projects for which WREGIS registration or utility transaction costs are considered prohibitive.

For example, PAC staff do not want to pursue metering and WREGIS registration activities for the City of Medford's biogas project at its wastewater reclamation and reuse facility. Energy Trust's contract claims 45,000 RECs from the project over 20 years.

Energy Trust staff recommend not requiring WREGIS REC registration in project funding agreements for projects where neither the project owner nor the utility want to register their share of RECs. Energy Trust would still take contractual ownership of the RECs in these situations, but not pursue registration activities. By taking contractual ownership Energy Trust preserves its ability to go back and register RECs later if the value of RECs or the utilities desire to register the RECs changes.

Staff recommendation: Retain contractual title to project RECs, but do not require WREGIS registration for Other Renewables program projects where neither the project owner nor the utility are willing to pay REC registration costs.

Solar program Costs and Effort –

Solar projects are subject to the same WREGIS metering and reporting requirements as other renewable energy projects and cannot be cost effectively registered in WREGIS. Staff expended significant time and energy between 2010-2015 working with the utilities, OPUC staff, staff from the Oregon Department of Energy and others in searching for and attempting to effectuate new pathways both within and outside of WREGIS to make Solar program RECs count in a cost-effective manner. That work was not successful.

[5] For qualifying facilities, additional metering cost is not usually necessary as a utility meter will already be required and included in the above-market cost.

At the end of 2015 the board agreed that Energy Trust should retain contractual title to project RECs, but not require WREGIS registration for Solar program projects until a cost-effective solution for their registration is created by a third party or REC values make registration cost-effective.

In 2016 no new solutions for solar REC management have become available. However, a small group of OPUC and utility staff recently convened to discuss solar REC issues again. Energy Trust staff are participating in those conversations to determine if any new options exist.

It's important to note that despite the continuing inability to cost-effectively register solar RECs, the utilities do get an RPS benefit from net-metered solar projects, among the other benefits these systems provide. This RPS benefit is realized as a reduction in load, which directly reduces a utility's RPS requirement. Were RECs able to be registered cost effectively they would be in addition to the load-reduction benefit.

Staff recommendation: Continue the current policy of retaining contractual title to project RECs, but do not require WREGIS registration for Solar program projects until a cost-effective solution for their registration is created by a third party or REC values make registration cost-effective.

Tab 3

Evaluation Committee Meeting

August 19, 2016, 12:00 p.m.-3:00 p.m.

Attendees

Evaluation Committee Members
Alan Meyer, Board Member, Committee Chair
Susan Brodahl, Board Member
Ken Keating, Expert Outside Reviewer
Jennifer Light, Expert Outside Reviewer
Lindsey Hardy, Board Member (phone)

Energy Trust Staff
Michael Colgrove, Executive Director
Mike Bailey, Engineering Manager, Planning
Jackie Goss, Planning Engineer
Phil Degens, Evaluation Manager
Sarah Castor, Evaluation Sr. Project Manager
Dan Rubado, Evaluation Project Manager
Erika Kociolek, Evaluation Project Manager
Andy Eiden, Planning & Evaluation Data Analyst
Andy Hudson, Planning Project Manager
Elise Breshears, Planning Intern
Sue Fletcher, Sr. Manager, Communications and Customer Service
Jessica Iplikci, Program Manager, New Business
Susan Jowaiszas, Sr. Marketing Manager
Jay Olson, Sr. Program Manager, Existing Buildings
Andrew Shephard, Sr. Project Manager, Residential

Other Attendees
Elaine Prause, Oregon Public Utility Commission
Jeff Schwarz, ICF International
Cindy Strecker, CLEAResult
Monica Thilges, CLEAResult

1. 2015 Fast Feedback Results

Presented by Erika Kociolek

Background: At this point in time we do not have a report, but we wanted to share satisfaction and free-ridership numbers. Fast Feedback is a short phone survey done one month after participants receive their incentive check. The survey averages six and a half minutes for residential and five minutes for non-residential. The response rate is 37% for residential and 38% for non-residential. Topics include satisfaction with various elements of participation in Energy Trust's programs, investment decision-making process, use of tax credits, suggestions or program changes, and pet questions. We strive to get a sufficient number of completed surveys so the results are representative and target a 90/10 confidence/precision level. In 2015, just over 3,000 surveys were completed.

Open-ended comments are provided to program staff for review. Satisfaction numbers are used in quarterly and annual reports to the OPUC. A mid-year and annual report are distributed internally; the annual report is available on Energy Trust's website.

There are two OPUC performance metrics related to satisfaction, and Fast Feedback results are used to measure against these metrics. We are required to achieve greater than 85% overall satisfaction for residential and non-residential, and greater than 85% satisfaction with program representative for non-residential.

Fast Feedback results are used to calculate free ridership, which is used in True-Up and informs program decision-making. Fast Feedback covers most, but not all programs – notable exceptions are New Buildings and New Homes. In these programs, there are many market actors and it is difficult to know who is best to contact.

As shown in the table below, we were not able to meet 90/10 confidence/precision target for Existing Buildings – Washington or commercial solar PV due to low numbers of participants. In 2015, a change was made to increase the number of completed surveys. In the past, we only called customers once per year at a maximum; we changed this to be able to call non-residential customers every six months. We have not heard any negative feedback, and this has boosted the number of completed surveys, especially in programs' custom track.

Number of completed surveys by non-residential program

	Completed surveys (2015)
Existing Buildings – Oregon	208
Existing Buildings – Washington*	13
Multifamily	73
Production Efficiency	190
Commercial Solar PV*	20
Small Wind	0
Total	504

*Did not meet 90% confidence / 10% margin of error (uses finite population correction factor in cases where the sample includes more than 5% of observations in the population)

On the residential side, we did not meet the 90/10 confidence/precision target for Home Performance due to low numbers of participants.

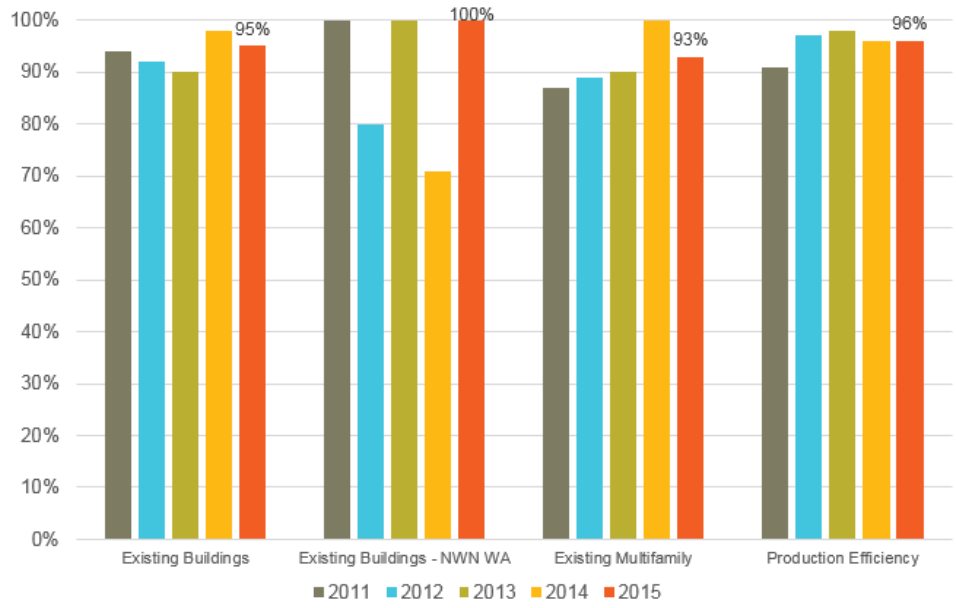
Alan asked who conducts this phone survey. Erika responded that currently, Abt SRBI, a firm based in Florida, conducts Fast Feedback surveys on Energy Trust's behalf.

Non-Residential Results: As noted before, the main change for 2015 surveys was allowing participants to surveyed up to once every six months, rather than only once per year. In addition, third party solar is now included. Andrew asked what is meant by third party solar.

Erika responded that instead of a homeowner purchasing, installing, and taking care of the system, it is a third party that then sells power to the homeowner.

The chart below shows satisfaction for non-residential programs. It looks like satisfaction for Existing Buildings – Washington has varied quite a bit, but the number of completed surveys is low; for example, in 2017, only 7 respondents completed a survey. Five of 7 said they were satisfied and two said "neutral." Overall, satisfaction is high and fairly stable.

Non-residential satisfaction, by program and year



There have been many discussions about free-ridership in evaluation committee meetings. As you may recall, we decided to require a minimum of 30 responses for calculating free-ridership. If we did not get 30 responses in a year, we would use data from prior years, along with the current year, to estimate free-ridership. The gas free-ridership rates are shown in the table below. As you can see, the free-ridership rates for some years include responses from prior years. The Existing Multifamily free-ridership rate went down by 8 percentage points, and the Existing Buildings free-ridership rate went up by 7 percentage points; the Production Efficiency free-ridership rate has been relatively stable over time.

Non-residential gas free-ridership rates, by program and year

Program	Free Ridership Rate	Year	Years Included
Existing Buildings	**35%**	**2015**	**2014-2015**
	28%	2014	2012-2014
	28%	2013	2013
	18%	2012	2012
	27%	2011	2011
Existing Multifamily	**34%**	**2015**	**2012-2015**
	42%	2014	2012-2014
	51%	2013	2011-2013
	37%	2012	2012
	48%	2011	2011
Production Efficiency	**22%**	**2015**	**2013-2015**
	21%	2014	2012-2014
	23%	2013	2011-2013
	26%	2012	2012
	20%	2011	2011

Ken commented that Energy Trust has a vetted approach to free-ridership that doesn't vary by program due to having different contractors estimate free-ridership. Also, Energy Trust uses a rolling average to smooth out year-to-year variance. The OPUC wants free-ridership estimates; the Power Council doesn't care who pays for savings. Susan Brodahl asked for clarification about why the free-ridership rates for some years include prior years. Erika responded that some years had a sufficient number of responses, so we didn't need go back in time to achieve 30 responses. If in a given year we did not achieve 30 respondents, we then had to go back to prior years. We reach back as far as needed to hit 30 respondents.

The electric free-ridership rates are shown in the table below. The Existing Buildings program experienced a 9 percentage point increase in electric free ridership, while the Production Efficiency program experienced a 9 percentage point decrease.

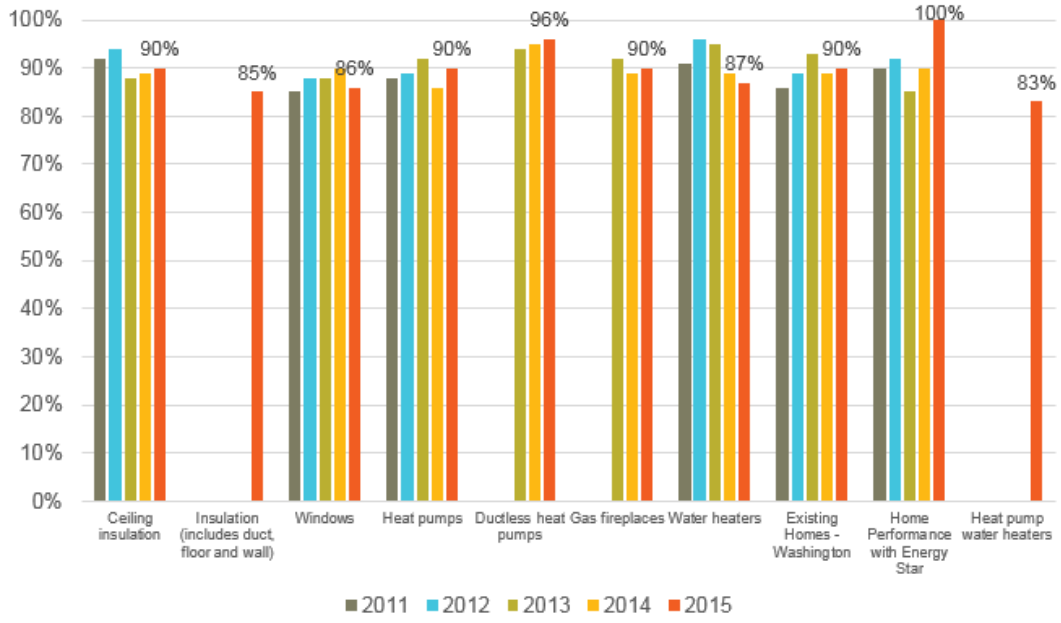
Non-residential electric free-ridership rates, by program and year

Program	Free Ridership Rate	Year	Years Included
Existing Buildings	**33%**	**2015**	**2015**
	24%	2014	2013-2014
	38%	2013	2013
	16%	2012	2012
	30%	2011	2011
Existing Multifamily	**19%**	**2015**	**2015**
	16%	2014	2014
	18%	2013	2013
	17%	2012	2012
	27%	2011	2011
Production Efficiency	**23%**	**2015**	**2015**
	32%	2014	2014
	20%	2013	2013
	16%	2012	2012
	14%	2011	2011

Residential Results: The main change for 2015 surveys was adding heat pump water heaters and collapsing duct, wall, and floor insulation into a single “insulation” group. In addition, third party solar is now included.

Alan asked about issues with heat pump water heaters. Sarah responded that there were operational issues with one model, but those were not present in the 2015 program year.

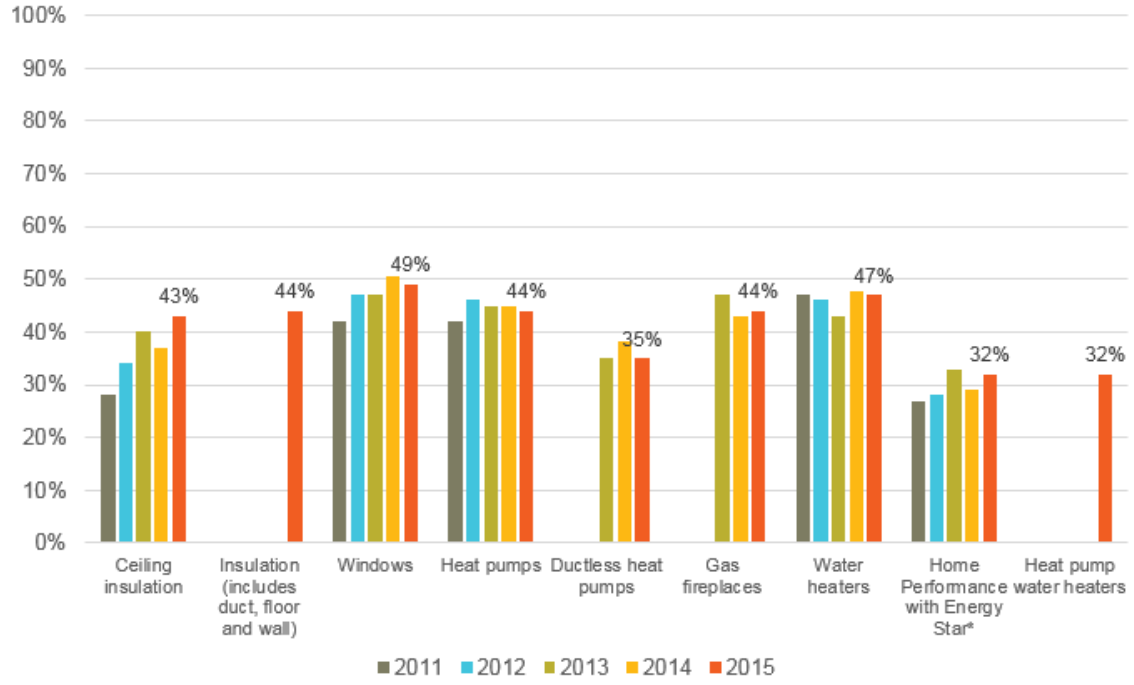
Existing Homes satisfaction, by year



As shown in the chart above, satisfaction is high across the board. Heat pump water heaters had slightly lower satisfaction; we're not sure what is driving that result. It will be interesting to see what happens in the future. Satisfaction is high and relatively stable for products measures (clothes washers, refrigerators, and refrigerator recycling). Alan commented that these numbers are extraordinarily high.

Jennifer asked if Energy Trust's program limits the location of heat pump water heaters to certain spaces. Mike responded that they did when the measure was only installed by contractors. Now, these restrictions have been removed to allow for a retail incentive. Jennifer commented that units installed in homes may make more noise and lead to customers being less satisfied. Erika commented that we could look at the other satisfaction questions, e.g., satisfaction with the product to dig into this a bit more. Mike commented that heat pump water heaters have gotten better and quieter.

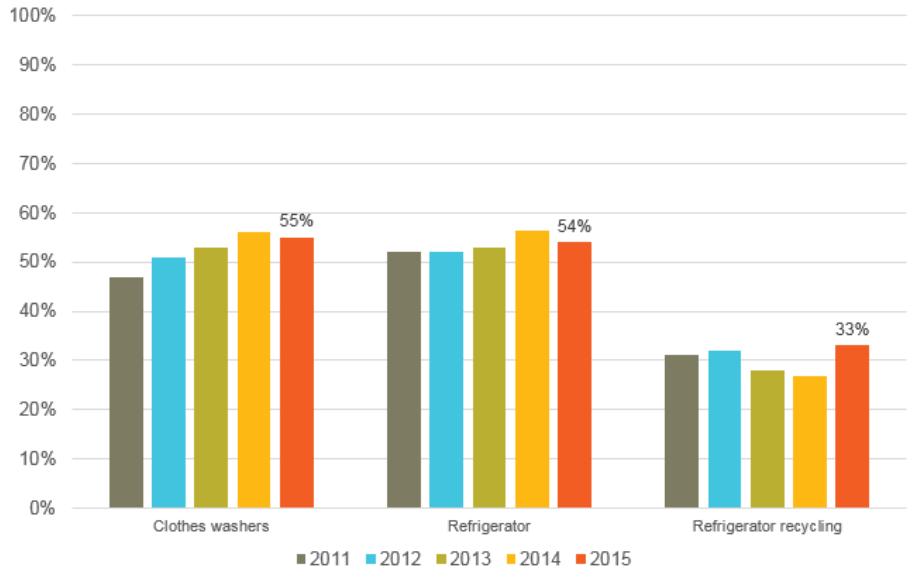
Existing Homes free-ridership, by measure and year



*The 2015 Home Performance with Energy Star rate includes projects from 2014-2015.

The chart above shows free-ridership for Existing Homes measures. Free-ridership rates for ceiling insulation and windows have shown fairly steady increases over time. The free-ridership rate for heat pump water heaters is fairly low compared to other measures.

Products free-ridership, by measure and year



Free-ridership rates for clothes washers and refrigerators have been increasing over time. We saw a bit of an increase in free-ridership for refrigerator recycling in 2015, but it is still fairly low.

Alan asked when we consider free-ridership rates to be too high. Phil responded that when the measures are no longer cost-effective, then they are not worth doing anymore. Free-ridership has been used in the past as an argument that the market has been transformed. Erika commented that there is other information that needs to be collected to determine when to pull out a market; this information shouldn't be used on its own. Ken said that everyone has different philosophies about free-ridership. Ken said if savings are still there and the measure is cost-effective, then we should still go after them, even if the free-ridership rates are high. Jennifer said that the Power Council doesn't care about free-ridership rates; if a measure is cost-effective, it still indicates savings are occurring. Alan said that we might still make a better, more influential investment somewhere else with a bigger impact. Phil said we are getting market transformation savings as well from NEEA for the underlying push on the market from programs.

Solar Results: As mentioned previously, third party solar projects were added to the non-residential and residential samples. Satisfaction numbers did not change very much, even with inclusion of third party solar; in 2015, residential solar achieved 96% overall satisfaction and commercial solar achieved 100% overall satisfaction.

Summary: In 2015, Energy Trust achieved 96% overall satisfaction and 98% satisfaction with program representative. There were a mix of increases and decreases in free-ridership rates – especially for non-residential programs.

Next Steps: The 2015 report containing the detailed survey responses will be finalized soon. We will continue to ensure that non-residential participants are eligible to be surveyed every six months, rather than once per year. We will be investigating the effect of strategic energy management (SEM) on free-ridership; this is important as the commercial and industrial programs expand their SEM offerings. Finally, Energy Trust staff are working on a literature

review of free-ridership and spillover methods; the findings from this work will be presented at a future meeting.

2. Existing Buildings Process Evaluation

Presented by Sarah Castor

Background: The prior Existing Buildings (EB) program process evaluation was completed in 2014, and focused primarily on the Program Management Contractor (PMC) transition from Lockheed Martin to ICF International. That prior evaluation involved interviews with program staff, allies, and utility staff; no customer interviews were conducted. For this process evaluation, Evergreen Economics was selected. The evaluation focuses on the standard and custom tracks only (not lighting) because there are plans to do a separate process evaluation of all non-residential lighting (which is managed by a single group, Evergreen Consulting) next year. This will ensure that Evergreen and other market actors are not interviewed multiple times as part of different program process evaluations.

Objectives: The objectives of this evaluation were to document recent and planned program changes; document successes and challenges; assess the satisfaction levels of staff, allies, and participants and to explore relationships with utility representatives; assess the effectiveness of program operations; identify opportunities for new measures, services, or target markets; and develop recommendations for improvements. Other questions of interest included:

- How is the program identifying new projects in a mature program environment?
- If (and if so, how) are small and medium businesses doing projects beyond lighting to achieve deep savings?
- Are large businesses placing increased emphasis on energy efficiency, and is this reflected in formal capital planning?

Methods: The methods used included reviewing program documents and data and conducting interviews with staff from Energy Trust, ICF, and RHT (the outreach subcontractor to ICF for southern Oregon), utility representatives, allied technical assistance contractors (ATACs), trade ally and non-trade ally contractors, participants, and non-participants. Non-participants for the purposes of this evaluation refer to customers that have completed a lighting project, but not a custom or standard project.

Alan asked if RHT is also an ATAC for the EB program. Jay responded that RHT is a subcontractor to the New Buildings and Production Efficiency programs, in addition to the EB program, supporting southern Oregon. RHT is an ATAC that primarily works with the PE program; they are not an ATAC for the EB program.

The table below shows the number of interviews conducted with each group of market actors.

Number and length of interviews with EB program actors

Program actor	Length of interview	Interviews completed
Program staff – Energy Trust, ICF, RHT	1 hour	8
PGE, Pacific Power (group interviews)	2 hours	2
NW Natural, Cascade Natural Gas	1 hour	2
Clark PUD	30 minutes	1
ATACs	1 hour	13
Contractors (trade ally and non-trade ally)	30-45 min	12
Participants	20 minutes	23
Nonparticipants	5 minutes	8

Group interviews were conducted with PGE and Pacific Power representatives. These interviews involved utility and Energy Trust staff, including both Energy Trust program managers and marketing managers. Since there is more collaboration with the electric utilities due to SB 838 funding, we typically like to allow for longer interviews with those utilities. Interviews with staff from NW Natural, Cascade Natural Gas, and Clark Public Utilities were conducted by phone, and were shorter.

Document and Data Review Findings: The program implementation manual was clear and well-organized. The evaluator did note that there are duplicate records for contractors and participants in Energy Trust's customer relationship management system. The evaluator found it confusing that participants could be listed as the installer if equipment was self-installed. The evaluator recommended changing the relationship in the database; making this change is not currently a high priority, and it's not necessarily binary (a participant may have installed some or all of the equipment).

Program Staff Interview Findings Evergreen spoke with 4 Energy Trust staff, 3 ICF staff, and 1 staff member from RHT. There is good communication between the three organizations. Staff noted that the program is very mature at this point; projects are becoming smaller, and there are more of them. The increase in incentives in 2015 seems to be working as intended; it is driving more gas and more dual-fuel projects. Custom track therm savings have increased relative to 2014.

The program is relying more on trade allies, ATACs, and other contractors and distributors to market program offerings. Staff noted that HVAC contractors don't tend to do as much proactive marketing as other contractors; there has been good success with food service equipment vendors and insulation contractors. Staff reported some confusion among contractors about needing to apply to be a trade ally with each program. The program is putting greater emphasis on marketing and advertising as opposed to one-on-one outreach (although this is still done in certain cases), and staff note that the trade ally cooperative marketing funds are not being used extensively. The program has increased focus on targeted studies, and seen more projects from these studies. The program is moving more of the incentive application process online and making improvements to program tracking systems.

Oregon Utility Interview Findings: There is frequent communication between Energy Trust and utility marketing and outreach staff. Gas utility staff would like to have more frequent

communications with Energy Trust, and see information about outcomes from marketing activities. Energy Trust and the utilities create annual marketing plans, which help avoid overlap in utility and Energy Trust advertising and help coordinate messaging. The electric utilities tend to focus on small to medium businesses.

Utility representatives feel well informed about program design changes; PGE and Pacific Power staff said that they feel their customers have good awareness of Energy Trust programs, and are satisfied with their participation experiences with Energy Trust. NW Natural and Cascade Natural Gas would like to have more input into marketing efforts. One utility staff member suggested clarifying Energy Trust staff roles – e.g., the difference in program manager and marketing manager responsibilities.

Washington Utility Interview Findings: The relationship between Energy Trust and Clark Public Utilities (Clark PUD) is different than the relationship between Energy Trust and PGE, Pacific Power, NW Natural, and Cascade Natural Gas. Energy Trust and Clark PUD coordinate on specific projects, and do not do much in the way of joint marketing and outreach. Clark PUD feels that coordination has been working well, and they perceive good customer experiences, despite occasional confusion about why incentives are available in Washington from Energy Trust of Oregon. Clark PUD suggested developing co-branded marketing materials for Washington customers.

ATAC Interview Findings: Thirteen ATACs were interviewed as part of this process evaluation. All ATACs were primarily Portland-based, although they provide services throughout the state, to all types of businesses. Eight have completed studies in SW Washington. The ATACs interviewed had a wide range of activity in 2014-2015, completing between 1 and 73 studies in this time period. Studies make up a small part of revenue for most ATACs, although three said studies comprised 15-25% of their business revenue. ATACs tend to conduct studies due to relationships with existing customers rather than program referrals, and conduct focused technical analysis studies rather than whole building studies, which matches what the evaluator heard from program staff.

ATACs reported that hard-to-service segments of the market include small businesses and schools. They feel the participation process is easy, and that customers are satisfied. They are not doing a lot of marketing or using Energy Trust marketing materials – one ATAC suggested that they could use training on how to market. ATACs reported frequent and effective communication with program staff, and were satisfied with ICF's study review times. Spencer asked if the evaluator was able to obtain any more intelligence regarding ATACs not marketing the program. Sarah commented that they may be doing lots of studies and marketing, but they didn't report or feel that there was an increased focus on studies and marketing relative to what they used to do; there may be more projects coming to them due to growth in the economy. Jay commented that the standard ATAC business model is to bid projects; ATACs are on bid lists for general contractors. Their business model is not to go out and market. They would be well served to rely on Energy Trust materials rather than co-branded marketing. Ken commented that it seems that some type of meeting to clarify the roles for the program and for ATACs with regards to marketing would be useful. Phil noted that the definition of "marketing" may not be clear – what we think of as marketing may be different from what ATACs think of as marketing.

ATACs reported that the study reimbursement amounts and study processes are acceptable. They have a positive regard for ICF processes and staff. They would like to avoid the Q4 spike in studies due to bonuses. The reimbursement amounts and processes are acceptable. There

were no significant differences noted for Washington. All ATACs reported that they were satisfied with the program, although it is worth noting that one ATAC refused to be interviewed.

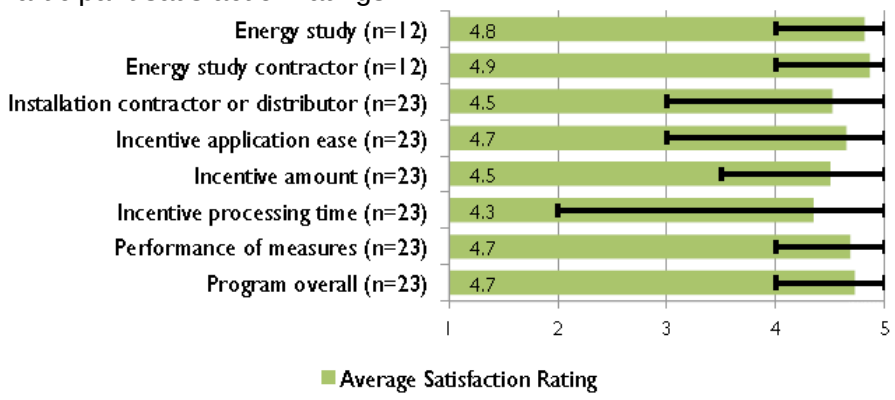
Trade Ally Contractor Interview Findings: Nine trade allies were interviewed, and they represented a wide range of trades, geographies, market sectors, activity with the program, and length of time as a trade ally. Seven of the interviewed trade allies completed projects in SW Washington, and 6 also participate in other Energy Trust programs. A few minor differences were noted in SW Washington – namely, different incentive levels and that it takes longer for Clark PUD to process incentives. Overall, trade allies feel that customer experience with the program is very positive.

About half of interviewed trade allies use program marketing materials; they reported very little use of cooperative marketing funds. They suggest targeting niche applications or small businesses. Trade allies feel that the incentive forms are easy to work with, and that the incentive turnaround time is good. They feel well supported and satisfied with communications from the program.

Non-Trade Ally Contractor Interview Findings: Only three non-trade ally contractors were interviewed. These contractors are from around the state, and do a non-trivial amount of business involving Energy Trust incentives. They feel the program is easy for their customers, and have not experienced issues with the incentive process or turnaround time. They report that the incentives are influential in getting projects completed. They do not use program marketing materials, but do explain available incentives. They are satisfied with the communication they receive from program staff and with their experience working with the Existing Buildings program overall.

Participant Interview Findings: Eighteen participants from Oregon and 5 from SW Washington were interviewed. These participants represented a mix of business types, regions, and project types. Overall, participants had very positive experiences and regard for the program. They felt the participation process was easy. Of those who had a study, most said it was influential to their project scope. When asked if they would have done the project without Energy Trust information and incentives, only 4 of 23 said they “very likely” would have made the same upgrades without the program. The chart below shows how satisfied interviewed participants were with various elements of the program. This is a comparison point to Fast Feedback surveys (which are conducted soon after the project is completed); we can see that the results are similar to Fast Feedback. Participants expressed high overall satisfaction; the lowest average satisfaction rating was for incentive processing time, but all others were quite high.

Participant satisfaction ratings



Most participants that received studies said they were influential; a few said they already knew what they wanted to do. Most reported that they did not act on all study recommendations. Washington participants reported that it was generally easy to get incentives from both Energy Trust and Clark Public Utilities. Thirty percent of participants said they have a strategic energy management plan in place, and an additional 35% said they have a general policy to save energy. Seventy-eight percent said they plan to undertake more upgrades in the next two years, and most of those said they would be very likely to participate again.

Non-Participant Interviews: Four of the eight interviewed non-participants had completed non-lighting projects that did not receive Energy Trust incentives. The reason that non-participants did not participate was due to lack of awareness; in one case, the contractor advised against participating. Most were satisfied with their lighting project experience, but were not as satisfied as non-lighting participants. Four of the non-participants are considering upgrades in the next two years, and 2 said they are likely to pursue incentives.

Recommendations and Next Steps: Eliminate duplicates from CRM data and add a field to indicate self-installs. Sarah noted that Energy Trust is continuously working to eliminate duplicates, and while the suggestion for a self-install indicator is a good idea, it is not currently a priority.

The evaluator recommended clarifying that contractors must apply to be a trade ally in each program. Sarah commented that the new online application now makes enrollment in multiple programs easier.

Other recommendations were to increase communication with gas utilities, which is underway, and to explore co-branded marketing with Clark Public Utilities, which the program is exploring.

The evaluator recommended that the program emphasize to trade allies and ATACs that the program is relying on them to bring in more projects, find ways to support the program's marketing efforts, and encourage cross-promotion with lighting. Sarah noted that the program is currently encouraging cross-promotion and is developing co-brandable marketing materials.

Lastly, the evaluator recommended trying to avoid a spike in studies at the end of year, and notify ATACs of expected slowdowns; the program is working is achieve smooth project volume, and is not planning any fall bonuses in 2016. The evaluator also recommended exploring non-cost-effective upgrades with reduced incentives. Sarah noted that Energy Trust cannot incentivize non-cost-effective measures, and will continue to explore opportunities for new cost-effective measures.

Energy Trust Take: The program is operating well, with good communication between program staff, market actors, and electric utilities; the program is working to improve communication with gas utilities. The participation process is easy for customers and allies, and experiences are positive. There are opportunities for small tweaks to marketing to bring in more projects, but not major changes are needed.

Elaine commented that the evaluator's recommendation to explore incentivizing non-cost-effective upgrades was surprising to see; the program has done a lot of outreach to ATACs, contractors, and customers about cost-effectiveness itself, and Energy Trust created customer-facing documentation about cost-effectiveness. Sarah responded that the evaluator was provided with many program documents; we don't think they fail to understand cost-

effectiveness, but maybe they thought it was open for negotiation. We aren't exactly sure why they made this recommendation, although one of the evaluation goals was to generate ideas for new measures; this may have been an attempt on their part to be creative since there were no new measures identified through the evaluation.

Ken commented that in the last few years, as the numbers of cost-effective measures has shrunk, lots of people are espousing a return to the utility cost test, and moving away from the total resource cost test. The goal is to be as accurate as we can in comparing cost (the real base cost – excluding any "bells and whistles") and efficiency. This is what we are trying to do with the total resource cost test. It's not perfect, but the other methods aren't either.

Jennifer asked about hard to reach markets – what are the strategies the program is using to identify and get to hard to reach markets. Jeff responded that in most (80%) of cases, ATAC firms are doing studies for customers with whom they have a relationship as an engineering firm or as an energy advisor/consultant. In the remainder (20%) of cases, customers are interested in a study or project but are not working with an ATAC. They may be working with a program account manager. We are planning to add account management resources to increase the number of customers brought in through this second path.

3. New Buildings 2011-2014 Impact Evaluation of Selected Large Projects

Presented by Dan Rubado

This evaluation was an impact evaluation of five large New Buildings projects completed between 2011 and 2014. Due to the small number of projects evaluated, this portion of the meeting was conducted in closed session; prior to the start of the presentation, Phil asked anyone who was not a board member or had not signed Energy Trust's Nondisclosure Agreement to step out of the room or off the phone. Notes from this portion of the meeting were reviewed by staff and board committee members, but are not publicly available.

Wrap-Up & Next Steps

We are thinking about scheduling another evaluation committee meeting in September or October. Erika will send out a Doodle poll to see what days would work best for folks.

EVERGREEN ECONOMICS

PWP Inc.

Energy Trust of Oregon Existing Buildings Program Process Evaluation Report

FINAL REPORT

Submitted by Evergreen Economics

August 11, 2016

Executive Summary

Evergreen Economics, along with PWP Inc., was hired by Energy Trust of Oregon (Energy Trust) to conduct a process evaluation of its Existing Buildings program. This evaluation focused specifically on the Standard and Custom program tracks in Oregon and Southwest Washington for the 2014 and 2015 program years. The Lighting track, Strategic Energy Management (SEM), pilots, and other initiatives are not addressed in this evaluation. This report presents the objectives, methods, and findings of this evaluation.

Program Background

The Existing Buildings program has been offered by Energy Trust since 2003 and provides energy study services and incentives for energy efficient upgrades to commercial buildings. Customers of Portland General Electric (PGE), Pacific Power, NW Natural, and Cascade Natural Gas (CNG) on qualifying rate schedules are eligible for the program. The program serves customers of these utilities in Oregon and customers of NW Natural in Southwest Washington. There are two distinct program tracks: Standard and Custom. The Standard track follows a prescriptive approach with an approved list of measures and associated incentives. The Custom track is designed to provide incentives for any other equipment or improvements with cost effective gas or electric savings that is not covered by the Standard track of the program. ICF International (ICF) is the current program management contractor (PMC), handling all implementation activities for the Standard and Custom program tracks.

Table 1 below shows the program achievements by year, state, and program track for 2014 and 2015. The majority of program savings come from the Custom track even though the majority of measures and projects occur within the Standard track. This reflects the fact that Custom projects are typically larger with greater savings.

Table 1: Summary of Program Achievements, 2014-2015

Year	State	Program Track	Measures	Projects	kWh Savings	Therm Savings
2014	OR	Custom	586	342	22,626,619	430,546
		Standard	1,803	1,016	8,146,820	454,341
	WA	Custom	28	13	0	72,607
		Standard	98	50	0	80,069
2015	OR	Custom	532	409	23,004,865	663,118
		Standard	1,483	1,256	5,790,038	421,815
	WA	Custom	13	12	0	39,719
		Standard	36	33	0	33,718
Total			4,579	3,131	59,568,342	2,195,932

Evaluation Methods

The two sources of information for this evaluation were a review of program documents and data, and interviews with various program actors. These interview subjects included program staff, utility staff, allied technical assistance contractors (ATACs), installation contractors ("contractors"), participants, and nonparticipants. Table 2 below summarizes the interviews completed for this evaluation. A total of 69 interviews were completed among all the various program actors listed below.

ATACs and program participants were given advanced notice by ICF that they would be contacted for interviews for this evaluation. Energy Trust staff coordinated the scheduling of interviews with the electric utilities. All other groups were contacted directly by Evergreen without prior notice from ICF or Energy Trust. All interviews were held by phone, with the exception of interviews with Portland General Electric and Pacific Power, which were held in-person at the respective utility's offices.

Table 2: Summary of Evaluation Interviews

Program Actor	Length of Interview	Interview Target	Interviews Completed
Program Staff – Energy Trust, ICF, and RHT	1 hour	Up to 12	8
Electric Utilities – Portland General Electric and Pacific Power	2 hours	2	2
Gas Utilities – NW Natural and Cascade Natural Gas	1 hour	2	2
Clark PUD	30 minutes	1	1
ATACs	1 hour	10	13
Contractors – Trade Ally and Non-Trade Ally	30-45 minutes	15	12
Participants	20 minutes	30	23
Nonparticipants	5 minutes	Up to 10	8
Total		**82**	**69**

Key Findings and Recommendations

Overall, Energy Trust's Existing Buildings program appears to be working well, with the vast majority of program actors very satisfied with the collaboration and communication involved in keeping the program running smoothly.

Program staff highlighted the need to pursue hard-to-reach customers and deeper retrofits, as the program has been operating for 13 years and much of the readily available energy savings have been achieved. Energy Trust's utility partners are generally satisfied with the collaboration on marketing and outreach activities, with the gas utilities expressing a desire for a bit more regular communication with Energy Trust.

The allied technical assistance contractors (ATACs) we spoke with have also been satisfied with their involvement in the program, expressing that there is strong and clear communication with ICF International (ICF) and straightforward reporting requirements that make the program easy to navigate. Contractors also had positive feedback on the program, but we found that there is room for contractors to do more in marketing the program and available incentives.

Participants are also generally very satisfied with their participation experience and only had minor suggestions for improvement to the program, indicating that program

processes are working well overall. The small number of nonparticipants we interviewed brought to light that there is still a lack of awareness of incentives that are available for non-lighting equipment and upgrades.

Below are the overarching findings resulting from this evaluation and corresponding recommendations for improvements to Energy Trust's Existing Buildings program.

Finding: Program tracking data are generally complete and well maintained, but our review found some instances where trade ally contractors appear in both the trade ally and non-trade ally data (i.e. installer data) with different ID numbers. There are also cases where participants appear in the installer data alongside contractors when they installed their own equipment. This combination of trade allies, non-trade allies, and participants all included in the same set of installer data does not accurately reflect their roles in the program.

> **Recommendation:** Energy Trust should consider implementing a quality control procedure for program data that cross checks trade ally data against other contractor data to help eliminate duplicate entries and ensure that trade allies are accurately identified and tracked. Additionally, participants with self-installed projects should be identified as such in the data with an additional data field, perhaps a binary variable, so that participants can be easily identified as distinct from contractors in the installer data.

Finding: We heard from program staff and contractors that there has been some confusion on the part of contractors about whether they need to sign up to be a trade ally for residential and commercial programs separately. Two contractors we spoke with expressed confusion on this point, mistakenly thinking that they were trade allies for all sectors if they had applied once.

> **Recommendation:** Energy Trust should communicate to existing trade allies and those who apply in the future that if they want to be a trade ally for both residential and commercial programs, they need to apply for those designations separately. Where possible, the application process and forms should support such dual applications.

Finding: NW Natural would like to have more feedback on outcomes of collaboration and the program, and said that overall, it would like to have greater frequency of communications with Energy Trust. NW Natural also would like to have more input into marketing efforts. Similarly, Cascade Natural Gas (CNG) would like to have more opportunity to provide input up-front on commercial marketing efforts.

> **Recommendation:** Energy Trust should provide more opportunities for regular contact with NW Natural and CNG and consider increasing collaboration on marketing with the gas utilities.

Finding: Clark Public Utilities (commonly known as Clark PUD) suggested that co-branded program materials may increase awareness of the Existing Buildings program in Southwest Washington.

> **Recommendation:** Energy Trust should explore the opportunity for co-branding with Clark PUD on informational program materials in Clark PUD and NW Natural territory to increase customer awareness of Energy Trust incentives in Southwest Washington.

Finding: The Existing Buildings program relies heavily on its network of ATACs and trade allies to promote and bring projects into the program. Program staff reiterated the importance of this program design. ATACs and trade allies currently spread awareness of the program with existing customers and by word of mouth, but did not seem to understand that they are in fact relied on to bring in the majority of participation for the program. Most ATACs do not have a strong focus on marketing energy studies for the program, but some ATACs expressed an interest in getting more feedback on how many projects they are bringing into the program compared to other ATACs. Others mentioned that additional marketing support would be helpful, such as knowing what techniques have worked well for other ATACs to bring customers into the program.

Additionally, there may be an opportunity for lighting contractors to cross-promote non-lighting incentives offered by Energy Trust. Although we did not conduct interviews with lighting contractors, we heard from nonparticipants that their lighting contractors did not promote incentives for non-lighting upgrades. This would likely increase awareness among customers that make a lighting upgrade, but have yet to upgrade other equipment.

> **Recommendation:** Energy Trust should make clear to ATACs and trade allies that the program design relies on them to initiate projects and should emphasize the program resources available to make that possible. Providing ATACs with additional information and tips for how to promote energy studies will likely help them take a more active role in seeking out customers for energy studies. Energy Trust should reiterate to trade allies that there are co-op marketing funds available for their use.
>
> For lighting trade allies, Energy Trust should emphasize the importance of cross-promoting non-lighting upgrades and available incentives, and encourage these contractors to discuss the opportunity for additional upgrades with their customers. If they do not already do so, Evergreen Consulting Group staff should promote non-lighting upgrades anytime they are working on a lighting project. Lighting trade allies and Evergreen Consulting Group should be provided with sufficient information to enable them to provide customers with the appropriate point of contact or web link for non-lighting projects, and that information should be updated in a timely fashion.

Finding: Many ATACs reported an end-of-year slowdown in the processing of project paperwork by ICF due to an increase in projects; this increase was often spurred by bonus incentives announced in the fall of each year. Anticipating these bonuses, customers would delay projects until the bonus was announced. Under these circumstances, ATACs found that it was difficult for them to keep their customers' projects moving and avoided initiating new projects during this time, which resulted in a lull in activity once the bottleneck cleared. Recognizing this as a potential problem, Energy Trust made the decision to not offer end of year bonus incentives for gas measures in 2015.

> **Recommendation:** ICF should work to maintain a relatively consistent level of program activity throughout the year and/or communicate with ATACs ahead of time that they should expect a slowdown in processing at certain times of year.

Finding: The main source of confusion and difficulty for customers, as reported by ATACs, is the issue of cost effectiveness. Many customers do not understand why an upgrade that saves energy would not receive an incentive, and ATACs reported that some customers would pursue additional upgrades that have savings but are not currently cost effective from Energy Trust's perspective and therefore ineligible for incentives. ATACs also experience occasional frustration when they find that a recommended upgrade is found to not be cost effective after ICF's review of the energy study.

> **Recommendation:** Energy Trust should explore the option of allowing upgrades that will yield energy savings but are currently not considered cost effective. Incentives could be offered on a pro-rated basis so that they are in line with the magnitude of savings, even if small. This would likely encourage some customers to pursue additional upgrades beyond the low hanging fruit to achieve deeper savings, and would allow ATACs to make recommendations for any upgrades that would yield energy savings.

MEMO

Date: September 7, 2016
To: Board of Directors
From: Jay Olson, Sr. Program Manager – Commercial
Andrew Shepard, Sr. Project Manager, NW Natural Washington
Sarah Castor, Evaluation Sr. Project Manager
Subject: Staff response to the Existing Buildings Program Process Evaluation

The last process evaluation of the Existing Buildings program was completed in 2014 and examined the transition in 2013 from the previous program management contractor (PMC) to ICF International (ICF). The current process evaluation focused on the years 2014, 2015 and early 2016 with a more narrow evaluation scope of the standard and custom tracks of the program; the lighting track will be evaluated separately in 2017, as it crosses multiple programs in the commercial and industrial sectors.

The evaluation found that the Existing Buildings program is working effectively, with good communication between Energy Trust, ICF, allied technical assistance contractors (ATACs), trade allies and other contractors. Likewise, PGE and Pacific Power feel that they have good working relationships with Energy Trust commercial program staff. NW Natural and Cascade Natural Gas also reported that they have positive relationships with Energy Trust and expressed a desire for more communication with Energy Trust and more input into commercial marketing. Since receiving this feedback, Energy Trust has taken steps to increase communication with the gas utilities around marketing efforts. Energy Trust's current coordination activities with Clark Public Utilities are effective and the possibility of developing co-branded marketing materials, as recommended, is being explored.

Over the last few years, the program has increasingly relied on trade allies and equipment vendors to market incentive offerings and program services. This strategy has been effective in helping the program meet savings goals and reduce costs, and will be continued. As recommended by the evaluator, the program does encourage the cross-promotion of non-lighting upgrades by lighting trade allies where it is practical for the trade ally. The evaluator noted that some contractors are not aware that they must apply to be a trade ally for individual programs. In 2016, Energy Trust launched an online trade ally enrollment process aimed at making it easier for contractors to enroll for the first time or to enroll in additional programs.

The evaluator noted that ATACs and trade allies felt the program processes and experience were very similar between Oregon and Southwest Washington. Among Washington participants, most noted that they did not have difficulties applying for incentives from both Energy Trust and Clark Public Utilities, and all were satisfied with

their participation experience with Energy Trust. Neither allies nor customers suggested the need for any substantive changes to the program in Southwest Washington.

Finally, the evaluator recommended that Energy Trust consider incentivizing non-cost-effective measures at a reduced rate, proportional to the energy savings. Energy Trust is not able to incentivize measures that are not cost-effective, per our grant agreement with the Oregon Public Utility Commission. Energy Trust will continue efforts to make our cost-effectiveness guidelines easily understandable by customers and market actors, and pursue opportunities to add new cost-effective measures, as they are identified.

May 12, 2016

Pay-for-Performance Pilot –

Process Evaluation Phases 1 and 2

Prepared by:

MetaResource Group

Portland, Oregon

For:

Energy Trust of Oregon, Inc.

Energy Trust Pay-for-Performance Pilot – Process Evaluation

EXECUTIVE SUMMARY

This report describes MetaResource Group's (MRG) findings and recommendations from their process evaluation of Energy Trust's first commercial Pay-for-Performance pilot. Under this pilot, Energy Trust makes an incentive payment at the end of each year for three years, based on verified energy savings. This differs from Energy Trust's other programs that pay a one-time incentive post-implementation, based on forecasted, rather than verified, savings. Energy Trust issued an RPF in February 2014, seeking three or more commercial office buildings to participate. In the late spring of 2014, Energy Trust selected two pilot pay-for-performance projects. Ultimately, Energy Trust signed a contract with just one customer in October 2014. In March 2016 following project completion and savings verification, Energy Trust made the first of three annual performance payments.

Findings

- Energy Trust staff worked diligently to create a pilot Pay-for-Performance program at the OPUC's request, and the OPUC assisted them. The pilot has demonstrated advantages for achieving savings.
- With a multi-year incentive payout, customers and service providers are "on the hook" for savings, creating a long-standing relationship that encourages participants to "push the envelope" with measures.
- The pilot included both low- and no-cost O&M measures *and* capital measures. This enabled the service provider to select a comprehensive set of measures with full knowledge of operations.
- In 2016, Energy Trust will move capital measures into their standard incentive track, and focus pay-for-performance on O&M. It is unclear how this might impact service provider participation, delivery of comprehensive projects, and project economics.
- The service provider worked closely with contractors to ensure correct installation and operation of capital measures. Even with additional field time, the service provider says the business model for this arrangement works and the project is cost-effective. Cost-effectivity was an important pilot objective for Energy Trust.
- Energy Trust capped the incentive at 125 percent of the savings projected in the service provider's proposal to mitigate Energy Trust's risk, while still encouraging more measures. The verified savings exceeded the cap primarily because the service provider implemented additional measures.
- The service provider would like Energy Trust to raise the cap. In the interviews, Energy Trust staff said that they are going to raise it in 2016 but have not settled on an amount.
- Pay-for-Performance enables customers who do not participate in Energy Trust's Strategic Energy Management (SEM) offering to receive incentives for low- and no-cost measures.
- Given Energy Trust's many offerings, they may add "outreach managers," to "sell" the best combination of programs. The participating service provider is concerned about an added layer of customer interaction.
- The customer and service provider have their own performance-based contract; the customer purchases savings from the service provider at the end of each year for three years at market cost. This solves the

problem of the owner paying for upgrades while tenants benefit. In this case, the participating customer bills the service provider's fee to the tenants as part of their triple net lease payment.[1]

- To verify savings after measure implementation, the service provider is doing top-down regression analysis. MRG reviewed the report and found the estimation to be sound. This met Energy Trust's pilot objective of understanding whole-building energy savings analysis. Energy Trust has verified the service provider's savings estimate: it is 16 percent of the building's total annual electric usage.
- MRG believes the market will respond well to an expanded program. The pilot customer is pleased with the experience so far. They are on the board of the local Building Owners and Managers Association (BOMA) and plan to present Pay-for-Performance to the membership.
- In the Phase 2 interview with the service provider, he said the retro-commissioning (RCx)[2] program launched in October 2015 has a much higher incentive and measure life than Pay-for-Performance. Energy Trust staff say that they will bring the RCx offering into alignment with Pay-for-Performance.
- Among the factors that led to a failure to sign a contract between Energy Trust and a second customer, none suggests that Pay-for-Performance should not be expanded and offered again.
- Interviews with a Northwest utility doing a Pay-for-Performance pilot revealed that their offering is somewhat different, primarily because of a much higher incentive level.

Recommendations:

- Consider lowering the savings threshold from 10 to 15 percent to perhaps 5 to 10 percent to allow broader participation. This lower threshold may also be needed with capital measure removed.
- Expand the target market to include office-type space in industrial facilities.
- Customers and service providers interviewed agreed that quarterly incentive payments, rather than annual, would be helpful, particularly because the service provider fronted the money for the improvements.
- Because Energy Trust has decided to remove capital measures, we recommend cross-marketing the standard incentive track and continuing to encourage service providers to take a holistic approach.
- Before making a decision on expanding the Pay-for-Performance offering, research whether there are at least several contractors in the market willing to bid and able to effectively deliver on this.
- After our first-round interviews, MRG suggested shortening the RFP. In our second round, Energy Trust said that in 2016, they will eliminate the RFP, and pre-qualify service providers with a streamlined application.
- Interviews and MRG's non-legal review of the customer contract found it long and complex. Energy Trust staff said that in 2016, they would simplify the customer contracting process and document. (A new contract document was not available for review by MRG at the time of this report.)
- If Energy Trust expands the program, we recommend involving a Program Management Contractor (PMC). A PMC can handle engineering tasks, data entry, etc. and also help 'translate' between Energy Trust program objectives and the perspective of customers and service providers.

[1] In commercial real estate, a net lease requires the tenant to pay, in addition to rent, some or all of the property expenses that normally would be paid by the property owner.

[2] Energy Trust defines RCx as "a systematic process applied to existing buildings for identifying and implementing operational and maintenance improvements and ensuring their performance over time"

MEMO

Date: 9/5/2016
To: Board of Directors
From: Phil Degens, Evaluation Manager
Sam Walker, Senior Project Manager, Commercial
Subject: Staff Response to the Pay for Performance Pilot

The Pay for Performance pilot resulted in restructuring the Pay for Performance offering. In 2017 the new Pay for Performance offering will be marketed through a set of pre-qualified contractors. This is expected to allow for a more effective communication of Pay for Performance goals and expectations leading to a better understanding of Pay for Performance by contractors and owners. This will also remove the need for a lengthy request for proposal process and contract negotiation process.

The 2017 offering will allow projects to include only operations and maintenance (O&M) measures or O&M with capital measures. Projects with capital measures will have different incentive rates, as well as incentive caps.

A simple weather adjusted pre/post billing analysis was used to estimate savings in the pilot. This is viewed as adequate to measure contracted savings, while remaining transparent in its savings methodology, as well as cost effective for the contractor to implement and report on. A similar methodology will be used to estimate contracted savings in 2017.

Energy Trust sees Pay for Performance as providing another way to obtain in-depth, multi-year O&M savings from a niche group of buildings that are not receiving incentives through the Existing Building Program's other offerings.

Tab 4

Finance Committee Meeting Notes

October 20, 2016

Attendance

Board members: Dan Enloe, Susan Brodahl (phone)
Staff present: Michael Colgrove, Mariet Steenkamp, Steve Lacey, Pati Presnail

1. **Review of August meeting notes**

   Approved as submitted.

2. **Program and organization contingency reserves**

   Steve attended the meeting and provided background information on projected program reserve levels for 2017 and discussions with the Policy Committee. Preliminary funding models show in increase in activity in 2017 and 2018 and are anticipating a reduction in activity in 2019. This will result in potentially significant tariff adjustments in 2017 and 2018 with a decrease in 2019 what staff refer to as a "whipsaw" effect". Staff discussed this with the committee and received recommendations on how to proceed that may include applying for a line of credit and utilizing the organization contingency reserves.

   In reforecasting the 2016 budget, Cascade Natural Gas is projected to have a program deficit of $150,000. Staff recommended that organization contingency reserves are used and reimbursed by Cascade Natural Gas in 2017. The Using Reserve Accounts Policy requires Board action. The Finance Committee discussed this and authorized staff to move forward with presenting a Board resolution at the November Board meeting.

3. **Discussion of 2017 proposed budget**

   Staff gave a brief high level overview of the upcoming budget to be presented to the full board at the upcoming November 2 meeting.

   Summary of 2017 proposed budget:

   1. Invest $201.2 million to acquire 56.88 aMW and 7.74 MMTh through efficiency and 2.75 aMW through renewable generation
   2. Overall spending up 6.4% due to increased project volume and growth in incentive, delivery and internal costs
   3. Staffing costs for the 3-year rolling average projected at 6.6%, well below OPUC performance measure
   4. Low administrative and program support costs at 5.8%

4. **Review and discussion of year to date financial results**

   Mariet presented the September financial statements, revenue is under budget by about $2.4 million or 2.1% with the biggest variances in PGE and NW Natural. The budget variance for Pacific Power has been reduced from $1.1 million YTD in August to $146,000 in September. Incentives came in $3.6 million above budget in September and are over budget by $6.5 million for the year. Total expenses are $3.2 million or 2.8% over budget. The 2016 expense reforecast is within $251,000 of 2016 budget. At the end of June we had 105 days to maturity in investments and has dropped to 73 days to maturity as we are not re-investing maturing investments while maintaining the portfolio yield.

The next meeting will be February 13, 2017, from 3:00 – 4:30 p. m.

Notes on September 2016 Financial Statements

October 19, 2016

Revenue

Revenues remain slightly below budgeted amounts. PAC will make up some of the shortage by year end.

	YTD Actual	YTD Budget	YTD Var	YTD %	PY
PGE	58,977,525	60,018,290	(1,040,766)	-1.7%	60,786,617
PAC	39,592,086	39,738,386	(146,300)	-0.4%	36,983,399
NWN	14,499,743	15,955,261	(1,455,518)	-9.1%	13,699,887
CNG	1,232,752	1,337,958	(105,206)	-7.9%	995,459
Avista	109,200		109,200		
Investment Income	452,756	225,000	227,756	101.2%	463,812
Total	114,864,060	117,274,895	(2,410,834)	-2.1%	112,929,173

Reserves

Reserves decreased by $5.7 million from last month, due both to increased spending and to lower revenues compared to budget.

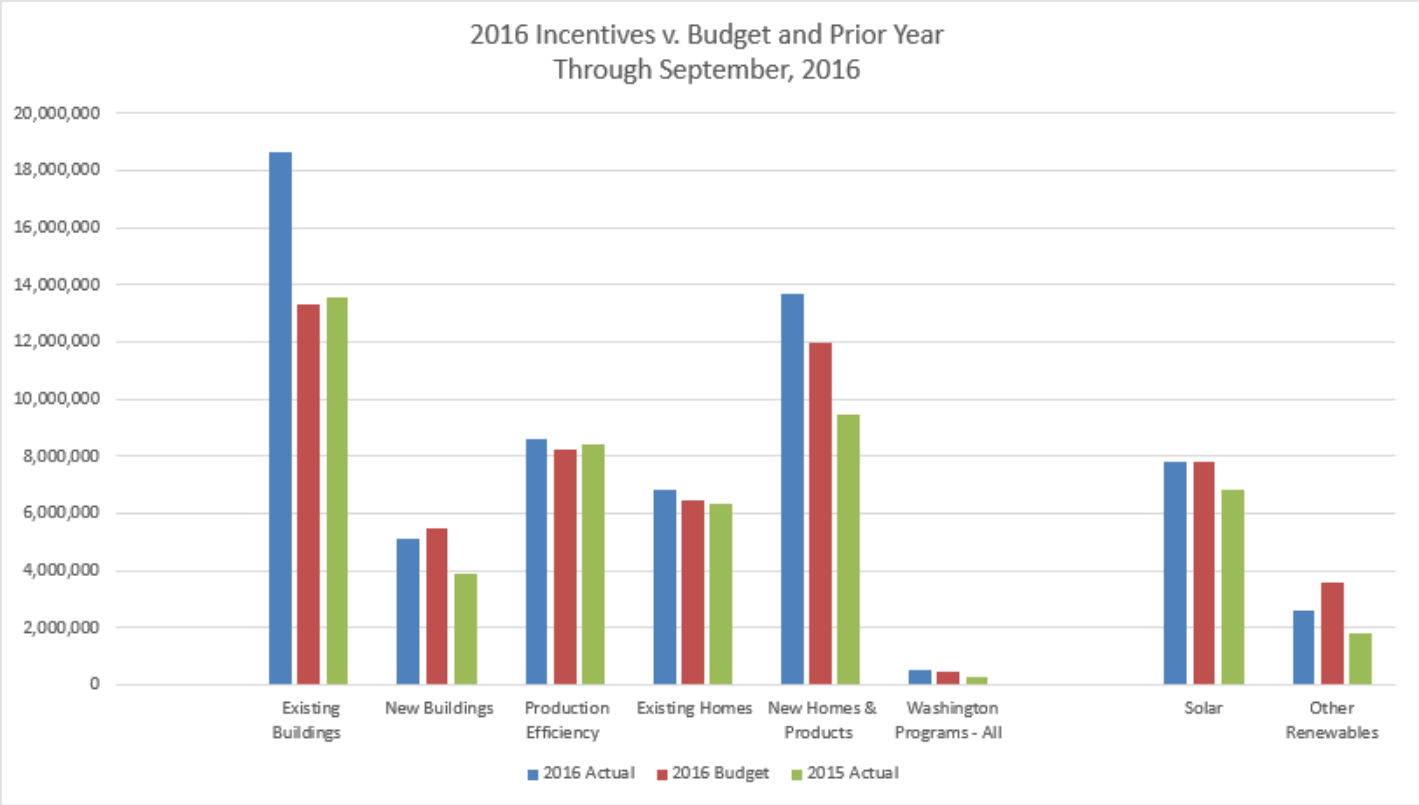
Reserves

	9/30/16 Amount	Actual 12/31/15 Amount	YTD % Change
PGE	20,268,765	23,006,282	-12%
PacifiCorp	6,995,792	7,481,735	-6%
NW Natural	5,931,581	6,430,002	-8%
Cascade	106,012	229,935	-54%
Avista	73,170	0	
NWN Industrial	1,211,640	1,032,752	17%
NWN Washington	667,054	257,872	159%
PGE Renewables	8,528,559	10,144,624	-16%
PAC Renewables	10,123,657	10,910,203	-7%
Program Reserves	53,906,230	59,493,405	-9%
Contingency Reserve	5,000,000	5,000,000	0%
Contingency Available	4,192,641	3,739,885	12%
Total	63,098,879	68,233,284	-8%

Expenses

Total expenses for September were $18 million, about $3.5 million above budget. The increase was due to incentives coming in $3.6 million above budget.

Year to date incentives are above budget by $6.5 million (11%). September incentives were $3.6 million above the budgeted monthly amount. We have now spent $13 million more (26%) on incentives than we did at this time last year - $63.8 million vs. $50.6 million Y-T-D.



Total Incentives
Year-to-Date 2016

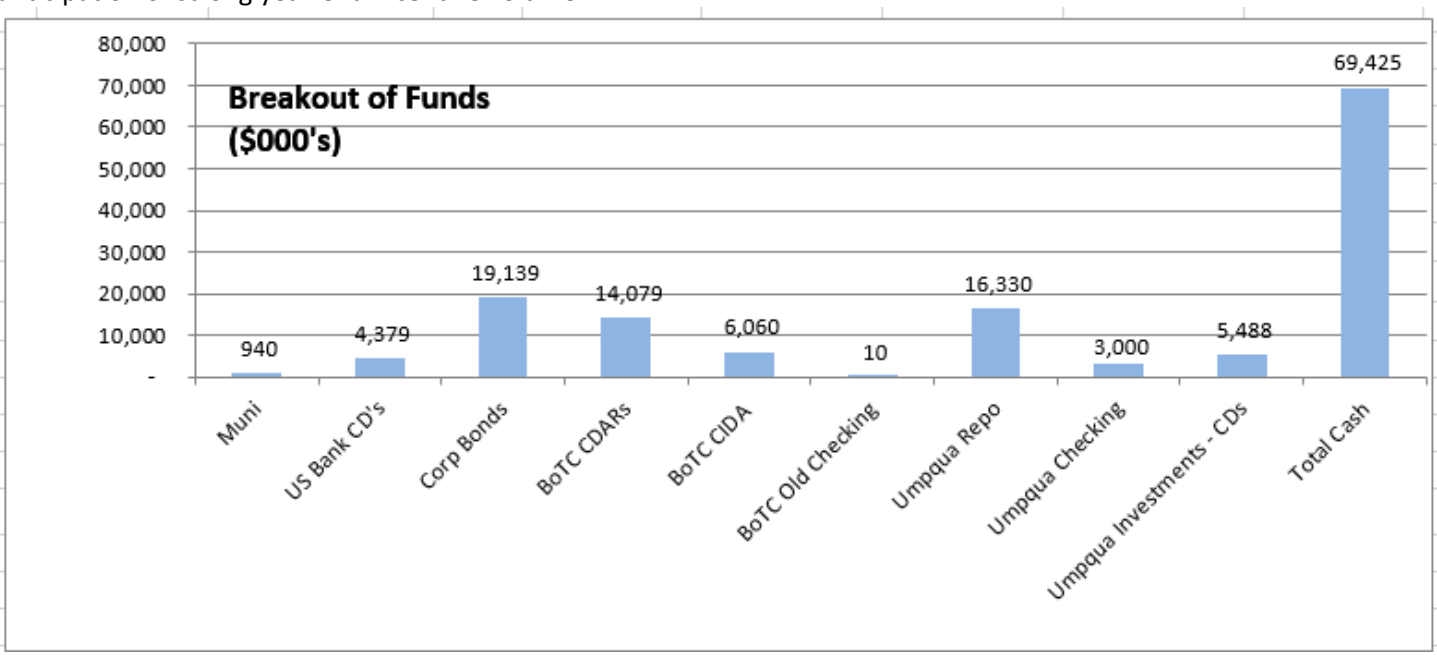
Incentives thru September 2016	Actual	Budget	Variance	Var %
Existing Buildings	18,669,087	13,350,903	(5,318,184)	-40%
New Buildings	5,142,003	5,486,175	344,172	6%
Production Efficiency	8,605,236	8,260,834	(344,402)	-4%
Existing Homes	6,859,687	6,477,398	(382,289)	-6%
New Homes & Products	13,685,153	11,967,008	(1,718,145)	-14%
Washington Programs - All	494,403	455,801	(38,601)	-8%
Solar	7,793,202	7,785,300	(7,902)	0%
Other Renewables	2,593,632	3,568,550	974,918	27%
Total Incentives	63,842,403	57,351,970	(6,490,434)	-11%
Energy Efficiency Only	**53,455,569**	**45,998,120**	**(7,457,450)**	**-16%**

Total Incentives
Year-to-Year Comparison

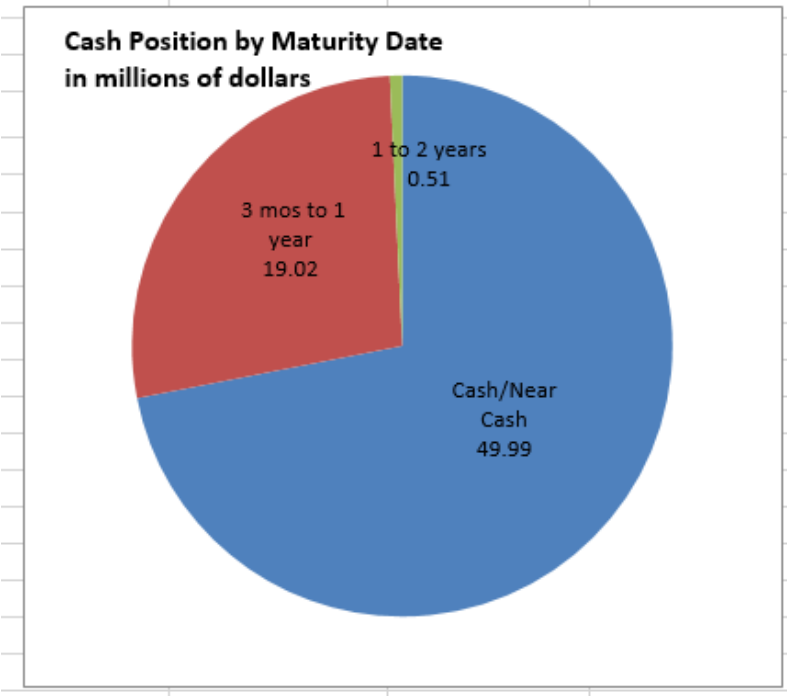
September 2016 vs. September 2015	Current Year	Prior Year	Variance	Var %
Existing Buildings	18,669,087	13,587,204	(5,081,883)	-37%
New Buildings	5,142,003	3,876,872	(1,265,131)	-33%
Production Efficiency	8,605,236	8,410,398	(194,838)	-2%
Existing Homes	6,859,687	6,331,486	(528,201)	-8%
New Homes & Products	13,685,153	9,463,490	(4,221,663)	-45%
Washington Programs - All	494,403	303,430	(190,973)	-63%
Solar	7,793,202	6,800,172	(993,029)	-15%
Other Renewables	2,593,632	1,823,941	(769,691)	-42%
Total Incentives	63,842,403	50,596,993	(13,245,414)	-26%
Energy Efficiency Only	**53,455,569**	**41,972,880**	**(11,482,689)**	-27%

Investment Status

The graphs below show the type of investments we hold and the locations where our funds are held at the end of August. Overall cash has dropped 6.5 million from last month end. As items mature, we are banking the proceeds in anticipation of strong year-end incentive volume.



Average Days to Maturity:	73
Average Portfolio Yield:	0.59%



Energy Trust of Oregon
BALANCE SHEET
September 30, 2016
(Unaudited)

	September 2016	August 2016	December 2015	September 2015	Change from one month ago	Change from Beg. of Year	Change from one year ago
Current Assets							
Cash & Cash Equivalents	25,404,894	26,852,144	27,186,505	34,300,080	(1,447,250)	(1,781,611)	(8,895,186)
Investments	43,908,093	48,927,057	63,884,187	67,132,386	(5,018,964)	(19,976,094)	(23,224,293)
Receivables	127,192	164,457	374,615	269,258	(37,265)	(247,423)	(142,065)
Prepaid Expenses	451,839	438,724	479,349	494,000	13,115	(27,510)	(42,161)
Advances to Vendors	2,042,069	756,099	2,049,018	2,164,517	1,285,970	(6,949)	(122,448)
Total Current Assets	**71,934,087**	**77,138,481**	**93,973,675**	**104,360,241**	**(5,204,393)**	**(22,039,587)**	**(32,426,154)**
Fixed Assets							
Computer Hardware and Software	3,671,135	3,671,135	3,509,829	3,481,079	-	161,305.83	190,056
Software Development in Progress	0	0	150,148	133,154	-	(150,148)	(133,154)
Leasehold Improvements	318,964	318,964	318,964	318,964	-	-	-
Office Equipment and Furniture	701,604	701,604	701,604	698,874	-	-	2,730
Total Fixed Assets	**4,691,703**	**4,691,703**	**4,680,545**	**4,632,071**	**-**	**11,158**	**59,632**
Less Depreciation	(3,378,519)	(3,299,112)	(2,672,098)	(2,443,554)	(79,407)	(706,422)	(934,966)
Net Fixed Assets	**1,313,184**	**1,392,591**	**2,008,447**	**2,188,518**	**(79,407)**	**(695,264)**	**(875,334)**
Other Assets							
Deposits	223,339	223,339	132,340	132,340	-	90,999	90,999
Deferred Compensation Asset	788,418	785,558	724,981	707,711	2,860	63,437	80,707
Note Receivable, net of allowance	288,909	88,909	85,609	86,789	200,000.00	203,300.00	202,120
Total Other Assets	**1,300,666**	**1,097,806**	**942,930**	**926,840**	**202,860**	**357,736**	**373,825**
Total Assets	**74,547,937**	**79,628,878**	**96,925,052**	**107,475,599**	**(5,080,941)**	**(22,377,115)**	**(32,927,662)**
Current Liabilities							
Accounts Payable and Accruals	9,309,069	8,634,619	26,910,003	8,516,029	674,450	(17,600,934)	793,040
Salaries, Taxes, & Benefits Payable	830,087	845,351	735,510	754,791	(15,264)	94,577	75,296
Total Current Liabilities	**10,139,156**	**9,479,970**	**27,645,513**	**9,270,820**	**659,186**	**(17,506,357)**	**868,336**
Long Term Liabilities							
Deferred Rent	514,402	498,532	314,472	324,686	15,871	199,930	189,716
Deferred Compensation Payable	791,218	785,558	727,781	707,711	5,660	63,437	83,507
Other Long-Term Liabilities	4,290	4,290	3,990	6,630	-	300	(2,340)
Total Long-Term Liabilities	**1,309,910**	**1,288,379**	**1,046,243**	**1,039,027**	**21,530**	**263,667**	**270,883**
Total Liabilities	**11,449,066**	**10,768,349**	**28,691,756**	**10,309,847**	**680,717**	**(17,242,690)**	**1,139,219**
Net Assets							
Unrestricted Net Assets	63,098,871	68,860,529	68,233,296	97,165,752	(5,761,658)	(5,134,425)	(34,066,881)
Total Net Assets	**63,098,871**	**68,860,529**	**68,233,296**	**97,165,752**	**(5,761,658)**	**(5,134,425)**	**(34,066,881)**
Total Liabilities and Net Assets	**74,547,937**	**79,628,878**	**96,925,052**	**107,475,599**	**(5,080,941)**	**(22,377,115)**	**(32,927,662)**

Energy Trust of Oregon
Cash Flow Statement-Indirect Method
Monthly 2016

	January	February	March	April	May	June	July	August	September	Year to Date
Operating Activities:										
Revenue less Expenses	8,446,762	6,323,151	300,614	(342,524)	(1,950,876)	(9,444,407)	699,656	(3,405,143)	(5,761,657)	$ (5,134,424)
Non-cash items:										
Depreciation	76,179	75,997	76,143	80,055	79,660	79,660	79,660	79,660	79,407	$ 706,422
Change in Reserve on Long Term Note	-	-	-	-	-	-		-	-	-
Loss on disposal of assets										-
Receivables	(0)	18,000	(9,000)	-	12,191	7,230	3,579	(2,008)	31,710	61,702
Interest Receivable	14,398	(18,742)	103,825	(31,503)	(33,151)	107,300	16,499	21,540	5,555	185,721
Advances to Vendors	626,135	626,136	(1,232,162)	644,727	676,296	(1,357,111)	620,573	688,325	(1,285,970)	6,949
Prepaid expenses and other costs	47,275	(241,163)	56,960	88,757	(60,342)	126,395	(79,437)	102,180	(13,115)	27,510
Accounts payable	(17,410,869)	(2,320,614)	303,039	1,936,464	(921,656)	5,642,030	(5,259,156)	(246,235)	674,449	(17,602,548)
Payroll and related accruals	54,950	24,319	119,657	(42,788)	26,784	26,125	(39,666)	(155)	(9,604)	159,622
Deferred rent and other	(15,317)	(20,616)	(98,216)	(10,318)	63,094	65,393	35,253	10,211	(186,990)	(157,506)
Cash rec'd from / (used in) Operating Activities	(8,160,486)	4,466,467	(379,140)	2,322,869	(2,107,999)	(4,747,385)	(3,923,039)	(2,751,625)	(6,466,215)	(21,746,552)
Investing Activities:										
Investment Activity (1)	3,750,021	45,768	4,263,600	(1,479,036)	2,021,989	3,578,771	2,010,266	765,751	5,018,964	19,976,094
(Acquisition)/Disposal of Capital Assets	(166)	-	(691)	(370)	(9,931)				-	(11,158)
Cash rec'd from / (used in) Investing Activities	3,749,855	45,768	4,262,909	(1,479,406)	2,012,058	3,578,771	2,010,266	765,751	5,018,964	$ 19,964,936
Cash at beginning of Period	27,186,505	22,775,874	27,288,109	31,171,878	32,015,382	31,919,401	30,750,789	28,838,017	26,852,144	27,186,505
Increase/(Decrease) in Cash	(4,410,631)	4,512,235	3,883,769	843,504	(95,981)	(1,168,614)	(1,912,773)	(1,985,874)	(1,447,251)	(1,781,616)
Cash at end of period	$ 22,775,874	$ 27,288,109	$ 31,171,878	$ 32,015,382	$ 31,919,401	$ 30,750,789	$ 28,838,017	$ 26,852,144	$ 25,404,894	$ 25,404,893

(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 2016 - December 2017

	Actual									2016 Adjusted Budget		
	January	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**
Cash In:												
Public purpose and Incr funding	14,818,951	15,914,519	13,829,079	13,092,884	10,950,974	10,292,719	11,760,638	11,451,085	12,300,458	12,600,000	12,200,000	15,000,000
Trsfr from maturing investments	3,750,021	45,768	4,263,600		2,021,989	3,578,771	2,010,266	765,751	5,018,964			5,000,000
Investment Income	110,687	28,809	180,066	11,289	24,534	136,120	58,610	45,180	43,182	25,000	25,000	25,000
From Other Sources		18,000			12,191	7,230	3,579	(2,008)	31,710			
Total cash in	18,679,659	16,007,096	18,272,745	13,104,173	13,009,688	14,014,840	13,833,093	12,260,008	17,394,314	12,625,000	12,225,000	20,025,000
Cash Out:	(23,090,291)	(11,494,861)	(14,388,972)	(10,781,678)	(13,105,625)	(15,183,447)	(15,745,862)	(14,245,878)	(18,841,562)	(14,700,000)	(15,100,000)	(17,600,000)
Trsfr to investments				(1,479,036)								
Net cash flow for the month	(4,410,631)	4,512,235	3,883,773	843,459	(95,981)	(1,168,607)	(1,912,769)	(1,985,870)	(1,447,248)	(2,075,000)	(2,875,000)	2,425,000
Beginning Balance: Cash & MM	27,186,505	22,775,874	27,288,109	31,171,882	32,015,382	31,919,401	30,750,789	28,838,017	26,852,144	25,404,894	23,329,894	20,454,894
Ending cash & MM	**22,775,874**	**27,288,109**	**31,171,882**	**32,015,382**	**31,919,401**	**30,750,789**	**28,838,017**	**26,852,144**	**25,404,894**	**23,329,894**	**20,454,894**	**22,879,894**
Future Commitments												
Renewable Incentives	15,000,000	16,800,000	14,900,000	13,400,000	12,300,000	12,000,000	12,000,000	11,300,000	13,700,000	12,900,000	13,400,000	12,100,000
Efficiency Incentives	67,200,000	65,600,000	70,700,000	65,900,000	59,200,000	54,800,000	77,100,000	77,100,000	78,600,000	70,000,000	68,400,000	60,300,000
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	87,200,000	87,400,000	90,600,000	84,300,000	76,500,000	71,800,000	94,100,000	93,400,000	97,300,000	87,900,000	86,800,000	77,400,000

(1) Included in "Ending cash & MM" above

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 2016 - December 2017

	2017 Projected Amounts											
	January	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**
Cash In:												
Public purpose and Incr funding	19,000,000	18,100,000	14,900,000	15,700,000	12,900,000	12,300,000	13,300,000	14,000,000	13,200,000	13,500,000	13,300,000	16,100,000
Trsfr from maturing investments	12,500,000											
Investment Income	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000
From Other Sources												
Total cash in	31,525,000	18,125,000	14,925,000	15,725,000	12,925,000	12,325,000	13,325,000	14,025,000	13,225,000	13,525,000	13,325,000	16,125,000
Cash Out:	(32,300,000)	(10,500,000)	(11,400,000)	(11,200,000)	(13,300,000)	(14,700,000)	(12,200,000)	(12,800,000)	(14,200,000)	(13,100,000)	(15,700,000)	(18,500,000)
Trsfr to investments												
Net cash flow for the month	(775,000)	7,625,000	3,525,000	4,525,000	(375,000)	(2,375,000)	1,125,000	1,225,000	(975,000)	425,000	(2,375,000)	(2,375,000)
Beginning Balance: Cash & MM	22,880,000	22,105,000	29,730,000	33,255,000	37,780,000	37,405,000	35,030,000	36,155,000	37,380,000	36,405,000	36,830,000	34,455,000
Ending cash & MM	**22,105,000**	**29,730,000**	**33,255,000**	**37,780,000**	**37,405,000**	**35,030,000**	**36,155,000**	**37,380,000**	**36,405,000**	**36,830,000**	**34,455,000**	**32,080,000**
Future Commitments												
Renewable Incentives	11,800,000	12,100,000	12,300,000	12,700,000	12,900,000	13,400,000	13,800,000	13,800,000	13,800,000	13,800,000	13,800,000	13,800,000
Efficiency Incentives	62,500,000	59,600,000	58,100,000	59,400,000	68,600,000	70,200,000	71,000,000	73,100,000	87,200,000	87,200,000	87,200,000	87,200,000
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	79,300,000	76,700,000	75,400,000	77,100,000	86,500,000	88,600,000	89,800,000	91,900,000	106,000,000	106,000,000	106,000,000	106,000,000

(1) Included in "Ending cash & MM" above

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 Budget Comparison
For the Nine Months Ending Setpember 30, 2016
(Unaudited)

	September				YTD			
	Actual	**Budget**	**Budget Variance**	**Variance %**	**Actual**	**Budget**	**Budget Variance**	**Variance %**
REVENUES								
Public Purpose Funds-PGE	2,768,091	3,165,987	(397,897)	-13%	27,503,553	28,263,001	(759,449)	-3%
Public Purpose Funds-PacifiCorp	2,318,919	2,112,566	206,353	10%	21,061,146	20,345,438	715,708	4%
Public Purpose Funds-NW Natural	464,874	460,860	4,014	1%	10,944,029	12,070,209	(1,126,180)	-9%
Public Purpose Funds-Cascade	57,172	75,187	(18,015)	-24%	1,232,752	1,337,958	(105,206)	-8%
Public Purpose Funds-Avista	15,600		15,600		109,200		109,200	
Total Public Purpose Funds	**5,624,655**	**5,814,600**	**(189,944)**	**-3%**	**60,850,680**	**62,016,606**	**(1,165,926)**	**-2%**
Incremental Funds - PGE	3,338,024	3,173,445	164,579	5%	31,473,972	31,755,289	(281,317)	-1%
Incremental Funds - PacifiCorp	2,568,939	1,819,004	749,935	41%	18,530,940	19,392,949	(862,008)	-4%
NW Natural - Industrial DSM					2,018,035	2,143,816	(125,781)	-6%
NW Natural - Washington	768,839	870,618	(101,779)	-12%	1,537,679	1,741,236	(203,557)	-12%
Revenue from Investments	37,627	25,000	12,627	51%	452,756	225,000	227,756	101%
TOTAL REVENUE	**12,338,084**	**11,702,667**	**635,417**	**5%**	**114,864,062**	**117,274,895**	**(2,410,833)**	**-2%**
EXPENSES								
Program Subcontracts	4,646,020	4,671,712	25,691	1%	39,416,242	40,692,639	1,276,397	3%
Incentives	11,326,437	7,725,873	(3,600,564)	-47%	63,842,403	57,351,970	(6,490,434)	-11%
Salaries and Related Expenses	1,040,872	1,061,076	20,204	2%	9,016,777	9,584,683	567,906	6%
Professional Services	822,844	789,250	(33,594)	-4%	5,509,110	6,646,138	1,137,028	17%
Supplies	1,625	3,871	2,245	58%	21,819	34,838	13,018	37%
Telephone	5,028	6,267	1,239	20%	45,203	56,400	11,197	20%
Postage and Shipping Expenses	463	1,375	912	66%	7,339	12,375	5,036	41%
Occupancy Expenses	74,358	64,278	(10,081)	-16%	582,968	578,499	(4,470)	-1%
Noncapitalized Equip. & Depr.	112,559	122,719	10,160	8%	931,475	1,064,886	133,411	13%
Call Center	12,725	15,617	2,892	19%	125,457	140,550	15,093	11%
Printing and Publications	470	8,208	7,738	94%	5,121	73,875	68,754	93%
Travel	15,381	21,678	6,296	29%	142,610	156,767	14,157	9%
Conference, Training & Mtng Exp	10,331	26,802	16,471	61%	117,250	207,234	89,983	43%
Interest Expense and Bank Fees		208	208	100%	1,621	1,875	254	14%
Insurance	8,607	9,167	560	6%	76,355	82,500	6,145	7%
Miscellaneous Expenses	15,827	229	(15,598)	-6806%	79,533	2,063	(77,471)	
Dues, Licenses and Fees	6,194	13,109	6,915	53%	77,203	92,702	15,499	17%
TOTAL EXPENSES	**18,099,742**	**14,541,437**	**(3,558,305)**	**-24%**	**119,998,487**	**116,779,992**	**(3,218,495)**	**-3%**
TOTAL REVENUE LESS EXPENSES	**(5,761,658)**	**(2,838,770)**	**(2,922,888)**	**-103%**	**(5,134,425)**	**494,904**	**(5,629,328)**	**-1137%**

Energy Trust of Oregon
Income Statement - Actual and Prior Year Comparison
For the Nine Months Ending September 30, 2016
(Unaudited)

	September				YTD			
	Actual	Actual Prior Year	Prior Year Variance	Variance %	Actual	Actual Prior Year	Prior Year Variance	Variance %
REVENUES								
Public Purpose Funds-PGE	2,768,091	3,267,882	(499,792)	-15%	27,503,553	28,306,675	(803,123)	-3%
Public Purpose Funds-PacifiCorp	2,318,919	2,365,998	(47,079)	-2%	21,061,146	20,704,588	356,558	2%
Public Purpose Funds-NW Natural	464,874	403,070	61,804	15%	10,944,029	10,969,207	(25,178)	0%
Public Purpose Funds-Cascade	57,172	31,232	25,940	83%	1,232,752	995,458	237,294	24%
Public Purpose Funds-Avista	15,600		15,600		109,200		109,200	
Total Public Purpose Funds	**5,624,655**	**6,068,183**	**(443,527)**	**-7%**	**60,850,680**	**60,975,928**	**(125,249)**	**0%**
Incremental Funds - PGE	3,338,024	3,645,930	(307,906)	-8%	31,473,972	32,479,941	(1,005,969)	-3%
Incremental Funds - PacifiCorp	2,568,939	1,790,921	778,018	43%	18,530,940	16,278,810	2,252,130	14%
NW Natural - Industrial DSM					2,018,035	2,052,288	(34,253)	-2%
NW Natural - Washington	768,839				1,537,679	678,392	859,287	127%
Contributions						1,050	(1,050)	-100%
Revenue from Investments	37,627	93,193	(55,566)	-60%	452,756	463,812	(11,057)	-2%
TOTAL REVENUE	**12,338,084**	**11,598,226**	**(28,981)**	**0%**	**114,864,062**	**112,930,222**	**1,933,839**	**2%**
EXPENSES								
Program Subcontracts	4,646,020	4,180,889	(465,132)	-11%	39,416,242	37,593,105	(1,823,137)	-5%
Incentives	11,326,437	6,102,107	(5,224,330)	-86%	63,842,403	50,596,993	(13,245,410)	-26%
Salaries and Related Expenses	1,040,872	1,004,415	(36,457)	-4%	9,016,777	8,002,073	(1,014,703)	-13%
Professional Services	822,844	442,332	(380,512)	-86%	5,509,110	4,778,311	(730,798)	-15%
Supplies	1,625	2,217	592	27%	21,819	25,806	3,987	15%
Telephone	5,028	4,956	(72)	-1%	45,203	43,968	(1,234)	-3%
Postage and Shipping Expenses	463	64	(399)	-623%	7,339	9,656	2,317	24%
Occupancy Expenses	74,358	52,403	(21,955)	-42%	582,968	482,346	(100,622)	-21%
Noncapitalized Equip. & Depr.	112,559	114,220	1,661	1%	931,475	903,332	(28,143)	-3%
Call Center	12,725	12,136	(589)	-5%	125,457	112,856	(12,602)	-11%
Printing and Publications	470	614	144	24%	5,121	52,506	47,385	90%
Travel	15,381	18,719	3,338	18%	142,610	115,296	(27,314)	-24%
Conference, Training & Mtng Exp	10,331	12,838	2,507	20%	117,250	114,199	(3,051)	-3%
Interest Expense and Bank Fees			-		1,621	1,774	153	9%
Insurance	8,607	8,486	(121)	-1%	76,355	78,404	2,049	3%
Miscellaneous Expenses	15,827	228	(15,599)		79,533	453	(79,080)	
Dues, Licenses and Fees	6,194	4,503	(1,691)	-38%	77,203	80,514	3,310	4%
TOTAL EXPENSES	**18,099,742**	**11,961,128**	**(6,138,614)**	**-51%**	**119,998,487**	**102,991,592**	**(17,006,894)**	**-17%**
TOTAL REVENUE LESS EXPENSES	**(5,761,658)**	**(362,902)**	**(6,167,595)**	**-1700%**	**(5,134,425)**	**9,938,630**	**(15,073,055)**	**-152%**

Energy Trust of Oregon
Statement of Functional Expenses
For the Nine Months Ending September 30, 2016
(Unaudited)

	Energy Efficiency	Renewable Energy	Total Program Expenses	Management & General	Communications & Customer Service	Total Admin Expenses	Avista Development	Total	Budget	Variance	% Var
Program Expenses											
Incentives	53,455,569	10,386,834	63,842,403					63,842,403	57,351,970	$ (6,490,433)	-11%
Program Management & Delivery	39,103,747	311,570	39,415,317				925	39,416,242	40,692,639	$ 1,276,397	3%
Payroll and Related Expenses	2,564,970	773,849	3,338,819	1,717,631	978,891	2,696,522	19,469	6,054,809	6,418,846	364,037	6%
Outsourced Services	3,457,684	724,983	4,182,667	277,554	680,449	958,002		5,140,670	6,331,513	1,190,843	19%
Planning and Evaluation	1,732,077	57,574	1,789,651	1,280		1,280		1,790,930	1,905,146	114,216	6%
Customer Service Management	404,691	97,070	501,761					501,761	376,976	(124,785)	-33%
Trade Allies Network	208,188	14,169	222,357					222,357	268,990	46,633	17%
Total Program Expenses	**100,926,925**	**12,366,050**	**113,292,975**	**1,996,464**	**1,659,340**	**3,655,804**	**20,394**	**116,969,173**	**113,346,079**	**(3,623,092)**	**-3%**
Program Support Costs											
Supplies	5,168	1,781	6,949	5,968	2,773	8,741		15,690	25,480	9,790	38%
Postage and Shipping Expenses	1,749	603	2,352	2,228	883	3,112		5,464	7,936	2,472	31%
Telephone	2,136	737	2,873	1,146	802	1,949		4,822	12,936	8,114	63%
Printing and Publications	1,519	65	1,584	3,174	70	3,245		4,828	71,084	66,256	93%
Occupancy Expenses	175,099	60,400	235,500	93,976	65,763	159,739		395,239	394,904	(335)	0%
Insurance	22,934	7,911	30,845	12,309	8,613	20,922		51,767	56,317	4,550	8%
Equipment	6,078	40,050	46,129	3,262	2,283	5,545		51,674	105,541	53,867	51%
Travel	39,418	15,545	54,962	28,054	35,144	63,197		118,160	125,567	7,407	6%
Meetings, Trainings & Conferences	27,049	9,982	37,031	35,529	12,382	47,911		84,942	160,434	75,492	47%
Interest Expense and Bank Fees				1,621		1,621		1,621	1,875	254	14%
Depreciation & Amortization	39,479	13,618	53,098	21,189	14,828	36,016		89,114	89,447	333	0%
Dues, Licenses and Fees	42,230	9,910	52,140	7,762	8,631	16,394		68,533	69,062	529	1%
Miscellaneous Expenses	66,564	170	66,734	265	12,005	12,270		79,004	1,408	(77,596)	-5511%
IT Services	1,361,646	179,623	1,541,269	306,330	210,856	517,186		2,058,455	2,311,922	253,467	11%
Total Program Support Costs	**1,791,070**	**340,396**	**2,131,465**	**522,814**	**375,035**	**897,849**	**0**	**3,029,314**	**3,433,913**	**404,599**	**12%**
TOTAL EXPENSES	**102,717,995**	**12,706,446**	**115,424,440**	**2,519,278**	**2,034,375**	**4,553,651**	**20,394**	**119,998,487**	**116,779,992**	**(3,218,494)**	**-3%**

OPUC Measure vs. 8% **5.9%**

ENERGY TRUST OF OREGON
Year to Date by Program/Service Territory
For the Nine Months Ending September 30, 2016
Unaudited

	ENERGY EFFICIENCY									
	PGE	PacifiCorp	Total	NWN Industrial	NW Natural	Cascade	Avista	Oregon Total	NWN WA	ETO Total
REVENUES										
Public Purpose Funding	21,337,352	16,422,226	37,759,578	-	10,944,029	1,232,752	58,800	49,995,159	-	49,995,159
Incremental Funding	31,473,972	18,530,940	50,004,912	2,018,035				52,022,947	1,537,679	53,560,626
Contributions										
Revenue from Investments										
TOTAL PROGRAM REVENUE	**52,811,324**	**34,953,166**	**87,764,490**	**2,018,035**	**10,944,029**	**1,232,752**	**58,800**	**102,018,106**	**1,537,679**	**103,555,785**
EXPENSES										
Program Management (Note 3)	2,216,123	1,435,367	3,651,493	139,225	428,925	58,914	687	4,279,242	71,826	4,351,068
Program Delivery	18,172,766	11,822,780	29,995,547	477,852	3,305,817	460,834	4805	34,244,856	355,348	34,600,204
Incentives	27,915,042	17,430,725	45,345,768	1,047,237	5,895,996	664,213	7955	52,961,166	494,403	53,455,569
Program Eval & Planning Svcs.	1,747,948	1,167,572	2,915,520	51,116	305,165	34,575	317	3,306,692	54,463	3,361,155
Program Marketing/Outreach	1,908,012	1,248,273	3,156,285	20,314	566,399	47,970	652	3,791,619	33,691	3,825,310
Program Legal Services	0	0	0	0	0	0	0	0	0	0
Program Quality Assurance	12,436	6,141	18,577	0	4,425	452	13	23,468	0	23,468
Outsourced Services	318,249	192,168	510,419	7,403	164,585	9,068	174	691,647	5,625	697,272
Trade Allies & Cust. Svc. Mgmt.	282,851	192,631	475,480	3,779	105,451	8,031	154	592,895	19,983	612,878
IT Services	651,440	448,991	1,100,432	14,829	198,013	16,851	237	1,330,361	31,285	1,361,646
Other Program Expenses - all	215,674	149,406	365,079	7,589	33,387	4,276	49	410,382	19,042	429,424
TOTAL PROGRAM EXPENSES	**53,440,541**	**34,094,054**	**87,534,600**	**1,769,344**	**11,008,163**	**1,305,184**	**15,043**	**101,632,328**	**1,085,666**	**102,717,995**
ADMINISTRATIVE COSTS										
Management & General (Notes 1&2)	1,166,403	744,143	1,910,547	38,618	240,267	28,486	328	2,218,248	23,696	2,241,944
Communications & Customer Svc (Notes 1&2)	941,898	600,914	1,542,812	31,185	194,021	23,005	265	1,791,285	19,135	1,810,420
Total Administrative Costs	**2,108,301**	**1,345,057**	**3,453,359**	**69,803**	**434,288**	**51,491**	**593**	**4,009,533**	**42,831**	**4,052,364**
TOTAL PROG & ADMIN EXPENSES	**55,548,842**	**35,439,111**	**90,987,959**	**1,839,147**	**11,442,451**	**1,356,675**	**15,636**	**105,641,861**	**1,128,497**	**106,770,358**
TOTAL REVENUE LESS EXPENSES	**(2,737,518)**	**(485,945)**	**(3,223,469)**	**178,888**	**(498,422)**	**(123,923)**	**43,164**	**(3,623,755)**	**409,182**	**(3,214,573)**
NET ASSETS - RESERVES										
Cumulative Carryover at 12/31/15	23,006,283	7,481,737	30,488,020	1,032,752	6,430,003	229,935		38,180,711	257,872	38,438,582
Change in net assets this year	(2,737,518)	(485,945)	(3,223,469)	178,888	(498,422)	(123,923)	43,164	(3,623,755)	409,182	(3,214,573)
Ending Net Assets - Reserves	**20,268,765**	**6,995,792**	**27,264,551**	**1,211,640**	**5,931,581**	**106,012**	**43,164**	**34,556,956**	**667,054**	**35,224,009**
Ending Reserve by Category										
Program Reserves (Efficiency and Renewables)	20,268,765	6,995,792	27,264,551	1,211,640	5,931,581	106,012	43,164	34,556,956	667,054	35,224,009
Operational Contingency Pool										
Emergency Contingency Pool										
TOTAL NET ASSETS CUMULATIVE	20,268,765	6,995,792	27,264,551	1,211,640	5,931,581	106,012	43,164	34,556,956	667,054	35,224,009

ENERGY TRUST OF OREGON
Year to Date by Program/Service Territory
For the Nine Months Ending September 30, 2016
Unaudited

	RENEWABLE ENERGY					TOTAL			
	PGE	PacifiCorp	Total	Avista Development	Other	All Programs	Approved budget	Change	% Change
REVENUES									
Public Purpose Funding	6,166,201	4,638,920	10,805,120	50,400	0	60,850,680	62,016,606	($1,165,926)	-2%
Incremental Funding						53,560,626	55,033,290	(1,472,664)	-3%
Contributions						0		0	
Revenue from Investments					452,756	452,756	225,000	227,756	101%
TOTAL PROGRAM REVENUE	**6,166,201**	**4,638,920**	**10,805,120**	**50,400**	**452,756**	**114,864,063**	**117,274,895**	**(2,410,832)**	**-2%**
EXPENSES									
Program Management (Note 3)	442,200	331,650	773,849	20,394		5,145,311	5,735,517	590,206	10%
Program Delivery	185,267	126,304	311,570	-		34,911,774	35,600,667	688,893	2%
Incentives	6,298,045	4,088,789	10,386,834	-		63,842,403	57,351,970	(6,490,433)	-11%
Program Eval & Planning Svcs.	66,026	46,000	112,025	-		3,473,180	3,732,164	258,984	7%
Program Marketing/Outreach	98,669	70,520	169,188	-		3,994,498	4,536,808	542,310	12%
Program Legal Services	4,203	2,682	6,885	-		6,885	0		
Program Quality Assurance	0	507	507	-		23,975	33,333	9,358	
Outsourced Services	132,710	361,240	493,950	-		1,191,222	1,667,306	476,084	29%
Trade Allies & Cust. Svc. Mgmt.	67,834	43,405	111,239	-		724,117	638,466	(85,651)	-13%
IT Services	103,410	76,213	179,623	-		1,541,269	1,773,550	232,281	13%
Other Program Expenses - all	88,535	72,238	160,773	-		590,197	658,361	68,164	10%
TOTAL PROGRAM EXPENSES	**7,486,899**	**5,219,548**	**12,706,446**	**20,394**	**-**	**115,444,831**	**111,728,142**	**(3,716,689)**	**-3%**
ADMINISTRATIVE COSTS									
Management & General (Notes 1&2)	163,410	113,922	277,334	-		2,519,278	2,673,316	154,038	6%
Communications & Customer Svc (Notes 1&2)	131,958	91,996	223,953	-		2,034,375	2,378,540	344,165	14%
Total Administrative Costs	**295,368**	**205,918**	**501,287**	**-**		**4,553,651**	**5,051,856**	**498,205**	**10%**
TOTAL PROG & ADMIN EXPENSES	**7,782,267**	**5,425,466**	**13,207,730**	**20,394**		**119,998,487**	**116,779,998**	**(3,218,494)**	**-3%**
TOTAL REVENUE LESS EXPENSES	**(1,616,066)**	**(786,546)**	**(2,402,610)**	**30,006**	**452,756**	**(5,134,425)**	**494,896**	**(5,629,320)**	**-1137%**
NET ASSETS - RESERVES									
Cumulative Carryover at 12/31/15	10,144,625	10,910,203	21,054,828		8,739,885	68,233,295	65,564,916	2,668,379	4%
Change in net assets this year	(1,616,066)	(786,546)	(2,402,610)	30,006	452,756	(5,134,425)	494,896	(5,629,321)	-1137%
Ending Net Assets - Reserves	**8,528,559**	**10,123,657**	**18,652,218**	**30,006**	**9,192,641**	**63,098,871**	**66,059,812**	**(2,960,941)**	**-4%**
Ending Reserve by Category									
Program Reserves (Efficiency and Renewables)	8,528,559	10,123,657	18,652,218	30,006		53,906,233			
Operational Contingency Pool					4,192,641	4,192,641			
Emergency Contingency Pool					5,000,000	5,000,000			
TOTAL NET ASSETS CUMULATIVE	8,528,559	10,123,657	18,652,218	30,006	9,192,641	63,098,871	66,059,812	(2,960,941)	-4%

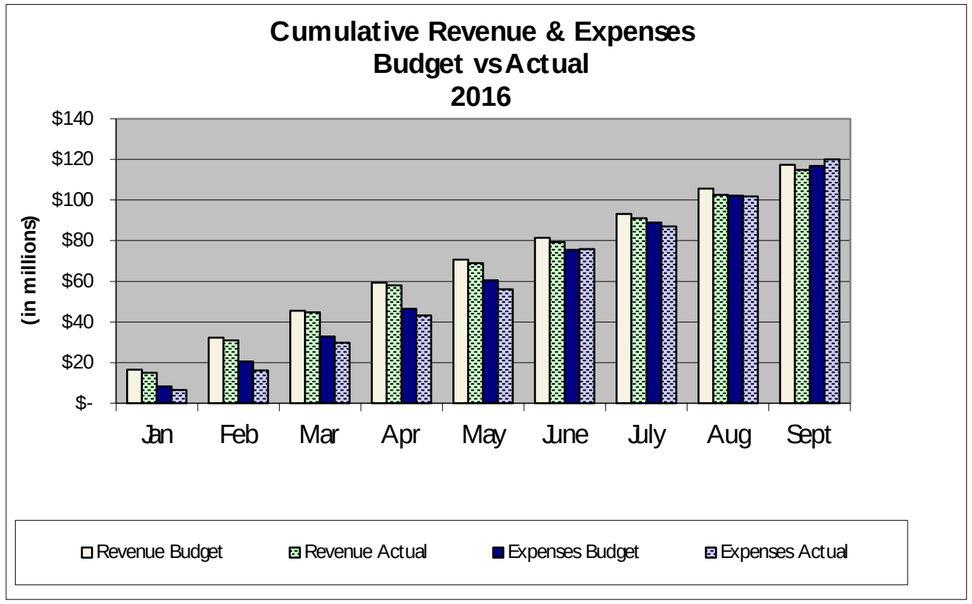
Energy Trust of Oregon
Program Expense by Service Territory
For the Nine Months Ending September 30, 2016
(Unaudited)

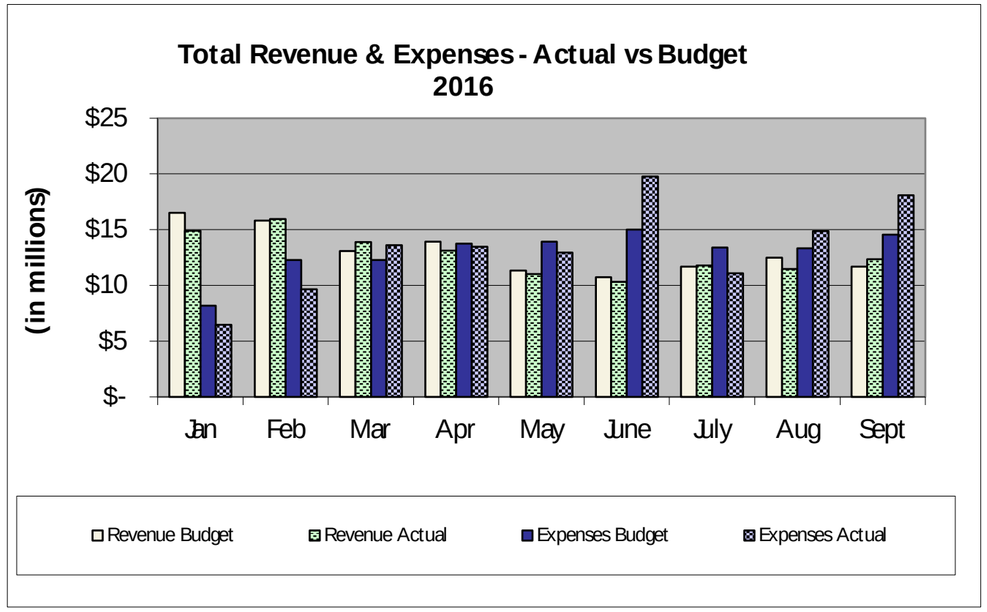
	PGE	Pacific Power	Subtotal Elec.	NWN Industrial	NW Natural Gas	Cascade	Avista	Subtotal Gas	Oregon Total	NWN WA	ETO Total	YTD Budget	Variance	% Var
Energy Efficiency														
Commercial														
Existing Buildings	19,343,038	12,132,396	31,475,434	916,824	2,266,889	395,107	-	3,578,821	35,054,255	268,791	35,323,046	31,688,752	(3,634,294)	-11%
New Buildings	6,468,584	3,304,740	9,773,324	19,239	1,060,743	209,614	1,822	1,291,418	11,064,742		11,064,742	11,502,595	437,853	4%
NEEA	1,047,835	728,157	1,775,992		145,262	15,552		160,815	1,936,806	16,356	1,953,162	1,982,330	29,168	1%
Total Commercial	**26,859,457**	**16,165,293**	**43,024,750**	**936,063**	**3,472,895**	**620,274**	**1,822**	**5,031,054**	**48,055,803**	**285,147**	**48,340,950**	**45,173,677**	**(3,167,273)**	**-7%**
Industrial														
Production Efficiency	10,034,331	7,198,058	17,232,389	903,084	295,153	152,019		1,350,255	18,582,644		18,582,644	19,057,109	474,465	2%
NEEA	148,933	103,495	252,428						252,428		252,428	306,282	53,854	18%
Total Industrial	**10,183,264**	**7,301,553**	**17,484,817**	**903,084**	**295,153**	**152,019**	**-**	**1,350,255**	**18,835,072**	**-**	**18,835,072**	**19,363,391**	**528,319**	**3%**
Residential														
Existing Homes	5,422,924	5,103,111	10,526,035	-	3,287,407	134,163	1,990	3,423,560	13,949,595	261,540	14,211,135	14,309,572	98,437	1%
New Homes/Products	11,051,496	5,457,298	16,508,794	-	3,916,730	399,872	11,824	4,328,426	20,837,220	528,858	21,366,078	20,228,744	(1,137,334)	-6%
NEEA	2,031,700	1,411,860	3,443,560		470,267	50,347		520,613	3,964,173	52,951	4,017,124	3,443,568	(573,556)	-17%
Total Residential	**18,506,119**	**11,972,269**	**30,478,389**	**-**	**7,674,403**	**584,382**	**13,814**	**8,272,600**	**38,750,988**	**843,349**	**39,594,337**	**37,981,884**	**(1,612,453)**	**-4%**
Energy Efficiency Costs	**55,548,842**	**35,439,111**	**90,987,959**	**1,839,147**	**11,442,451**	**1,356,675**	**15,636**	**14,653,909**	**105,641,864**	**1,128,497**	**106,770,358**	**102,518,952**	**(4,251,407)**	**-4%**
Renewables														
Solar Electric (Photovoltaic)	5,874,728	3,747,746	9,622,474						9,622,474		9,622,474	9,666,913	44,439	0%
Other Renewable	1,907,538	1,677,720	3,585,258						3,585,258		3,585,258	4,594,126	1,008,868	22%
Renewables Costs	**7,782,267**	**5,425,466**	**13,207,730**	**-**	**-**	**-**	**-**	**-**	**13,207,732**	**-**	**13,207,732**	**14,261,039**	**1,053,307**	**7%**
Program Cost Total	**63,331,105**	**40,864,581**	**104,195,687**	**1,839,147**	**11,442,451**	**1,356,675**	**15,636**	**14,653,909**	**118,849,596**	**1,128,497**	**119,978,091**	**116,779,991**	**(3,198,100)**	**-3%**
Avista Development							**20,394**	**20,394**	**20,394**		**20,394**		**(20,394)**	
Cost Grand Total	**63,331,105**	**40,864,581**	**104,195,687**	**1,839,147**	**11,442,451**	**1,356,675**	**36,030**	**14,674,303**	**118,869,990**	**1,128,497**	**119,998,487**	**116,779,993**	**(3,218,493)**	**-3%**

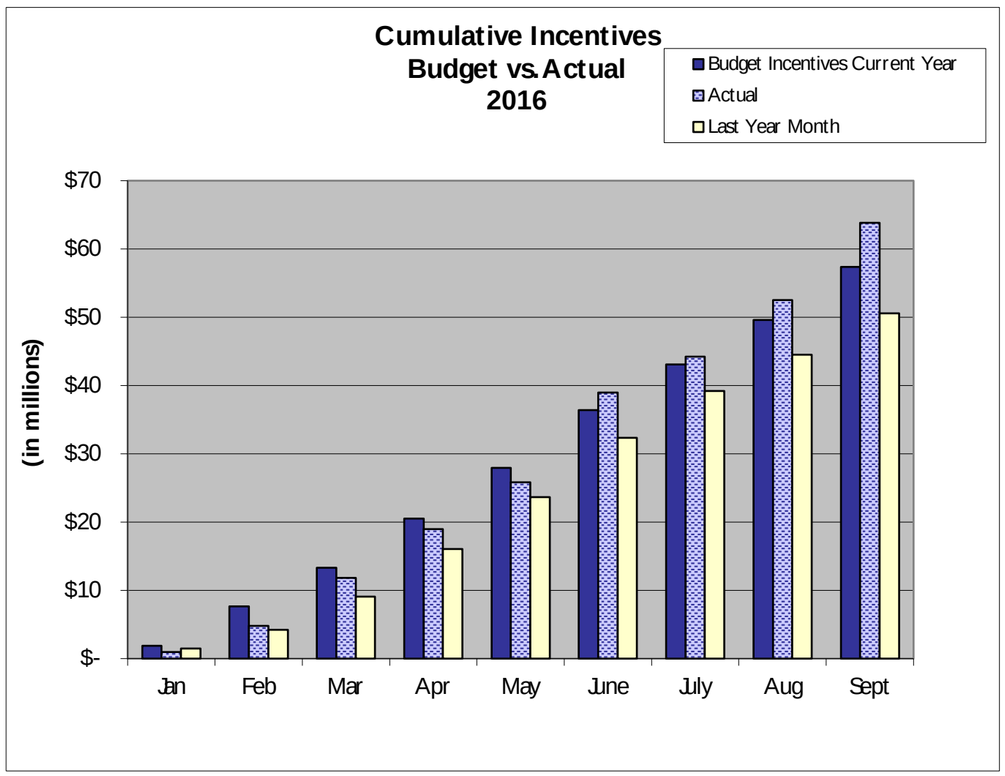
Energy Trust of Oregon
Administrative Expenses
For the Nine Months Ending September 30, 2016
(Unaudited)

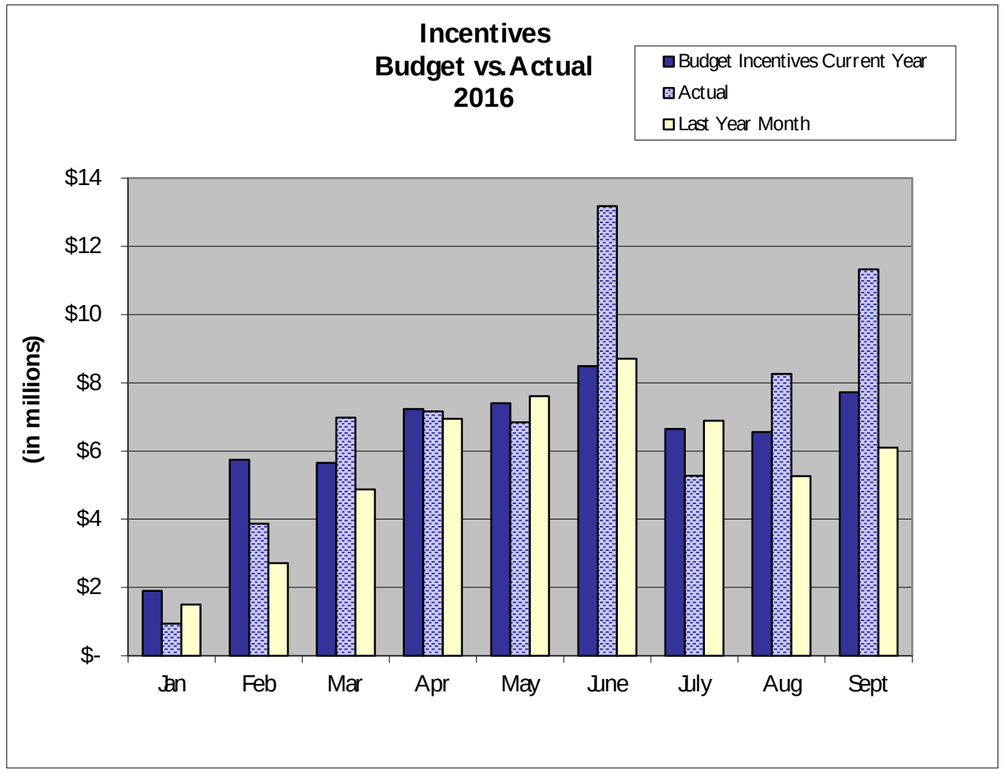
	MANAGEMENT & GENERAL						COMMUNICATIONS & CUSTOMER SERVICE					
	QUARTER			YTD			QUARTER			YTD		
	ACTUAL	BUDGET	REMAINING	ACTUAL	BUDGET	VARIANCE	ACTUAL	BUDGET	REMAINING	ACTUAL	BUDGET	VARIANCE
EXPENSES												
Outsourced Services	$93,616	$60,375	($33,241)	$275,464	$315,125	$39,661	$300,560	$338,500	$37,940	$680,449	$831,875	$151,426
Legal Services		2,500	2,500	2,090	7,500	5,410						
Salaries and Related Expenses	578,793	571,160	(7,633)	1,717,631	1,724,479	6,848	311,599	387,338	75,739	978,891	1,162,014	183,123
Supplies	1,423	1,338	(85)	3,197	4,013	815	150	250	100	834	750	(84)
Postage and Shipping Expenses	167		(167)	1,290		(1,290)				227		(227)
Printing and Publications	1,163	1,125	(38)	3,074	3,375	301		550	550		1,650	1,650
Travel	9,270	11,987	2,717	28,054	35,962	7,909	13,108	11,250	(1,858)	35,144	33,750	(1,393)
Conference, Training & Mtngs	12,647	34,610	21,963	35,529	99,180	63,651	2,820	4,000	1,180	12,382	12,000	(382)
Interest Expense and Bank Fees		625	625	1,621	1,875	254						
Miscellaneous Expenses							11,738		(11,738)	11,820		(11,820)
Dues, Licenses and Fees	360	2,175	1,815	7,762	7,705	(57)	1,602	4,000	2,398	8,631	12,000	3,369
Shared Allocation (Note 1)	50,942	51,167	225	135,958	153,502	17,545	34,533	35,123	590	95,141	105,368	10,228
IT Service Allocation (Note 2)	104,159	108,511	4,352	306,330	319,238	12,909	71,696	74,485	2,789	210,856	219,134	8,277
Planning & Eval	414	448	33	1,280	1,359	79						
TOTAL EXPENSES	**852,954**	**846,021**	**(6,933)**	**2,519,278**	**2,673,313**	**154,036**	**747,804**	**855,496**	**107,691**	**2,034,375**	**2,378,541**	**344,167**

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


Cumulative Revenue & Expenses
Budget vs Actual
2016
(in millions)
$140
$120
$100
$80
$60
$40
$20
$-
Jan
Feb
Mar
Apr
May
June
July
Aug
Sept
Revenue Budget
Revenue Actual
Expenses Budget
Expenses Actual


Total Revenue & Expenses - Actual vs Budget
2016
(in millions)
$25
$20
$15
$10
$5
$-
Jan
Feb
Mar
Apr
May
June
July
Aug
Sept
Revenue Budget
Revenue Actual
Expenses Budget
Expenses Actual


Cumulative Incentives
Budget vs. Actual
2016
Budget Incentives Current Year
Actual
Last Year Month
(in millions)
$70
$60
$50
$40
$30
$20
$10
$-
Jan
Feb
Mar
Apr
May
June
July
Aug
Sept


Incentives
Budget vs. Actual
2016
Budget Incentives Current Year
Actual
Last Year Month
(in millions)
$14
$12
$10
$8
$6
$4
$2
$-
Jan
Feb
Mar
Apr
May
June
July
Aug
Sept

CONTRACTOR	Description	City	EST COST	Actual TTD	Remaining	Start	End
Administration							
		Administration Total:	**12,815,302**	**3,692,523**	**9,122,779**		
Communications							
		Communications Total:	**3,819,066**	**2,946,670**	**872,396**		
Energy Efficiency							
Northwest Energy Efficiency Alliance	Regional EE Initiative Agmt	Portland	33,662,505	13,199,505	20,463,000	1/1/2015	7/1/2020
ICF Resources, LLC	2016 BE PMC	Fairfax	10,592,349	7,064,471	3,527,878	1/1/2016	12/31/2016
CLEAResult Consulting Inc	2016 HES PMC	Austin	6,634,665	4,213,990	2,420,675	1/1/2016	12/31/2016
Northwest Energy Efficiency Alliance	Regional Gas EE Initiative	Portland	6,200,354	1,153,058	5,047,296	1/1/2015	7/1/2020
CLEAResult Consulting Inc	2016 NBE PMC	Austin	5,878,253	4,363,473	1,514,780	1/1/2016	12/31/2016
Lockheed Martin Corporation	2016 MF PMC	Grand Prairie	4,496,935	3,147,996	1,348,939	1/1/2016	12/31/2018
Ecova Inc	2016 Products PMC	Spokane	3,756,714	2,374,462	1,382,252	1/1/2016	12/31/2016
Energy 350 Inc	PDC - PE 2016	Portland	3,148,000	2,113,970	1,034,030	1/1/2016	12/31/2016
CLEAResult Consulting Inc	2016 NH PMC	Austin	2,868,582	1,975,725	892,857	1/1/2016	12/31/2016
Intel Corporation	EE Project Incentive Agmt	Hillsboro	2,400,000	0	2,400,000	11/13/2015	12/31/2019
Portland General Electric	PDC - PE 2016	Portland	2,153,000	1,630,623	522,377	1/1/2016	12/31/2016
Northwest Power & Conservation Council	RTF Funding Agreement		1,825,000	647,560	1,177,440	2/25/2015	12/31/2019
Cascade Energy, Inc.	PDC - PE 2016 Small Industrial	Walla Walla	1,699,518	1,228,448	471,070	1/1/2016	12/31/2016
RHT Energy Inc.	PDC - PE 2016	Medford	1,690,000	1,171,784	518,216	1/1/2016	12/31/2016
Evergreen Consulting Group, LLC	PE Lighting PDC 2016	Tigard	1,396,500	975,947	420,553	1/1/2016	12/31/2016
CLEAResult Consulting Inc	PDC - SEM 2016	Austin	1,356,564	547,598	808,966	1/1/2016	12/31/2016
HST&V, LLC	PDC - SEM 2016	Portland	1,185,354	925,557	259,797	1/1/2016	12/31/2016
Clean Energy Works, Inc.	EE Incentive & Services Agmt	Portland	492,570	402,010	90,560	7/1/2014	12/31/2016
Cascade Energy, Inc.	SEM Curriculum	Walla Walla	464,080	421,360	42,721	5/1/2014	12/31/2016
SBW Consulting, Inc.	PE Program Impact Evaluation	Bellevue	450,000	100,483	349,517	5/1/2016	4/30/2017
ADM Associates, Inc.	EB 2013/2014 Impact Evaluation	Seattle	422,000	410,008	11,992	1/1/2016	12/31/2016
EnerNoc, Inc.	Commercial SEM curriculum	Boston	360,101	342,760	17,341	6/27/2014	12/31/2016
Michaels Energy, Inc.	New Buildings '14 Impact Evalu	La Crosse	325,000	114,364	210,636	5/23/2016	3/31/2017
Craft3	SWR Loan Origination/Loss Fund	Portland	305,000	226,219	78,781	6/1/2014	12/31/2016
Craft3	Loan Agreement	Portland	300,000	100,000	200,000	6/1/2014	6/20/2025
CLEAResult Consulting Inc	2016 HES WA PMC	Austin	289,600	197,573	92,027	1/1/2016	12/31/2016
EnergySavvy Inc.	Optix Engage Online Audit Tool	Seattle	273,600	36,667	236,933	6/1/2016	5/31/2018
Pivotal Energy Solutions LLC	License Agreement	Gilbert	270,500	93,361	177,139	3/1/2014	12/31/2017

Alternative Energy Systems Consulting, Inc.	PE Mobile App Scoping Tool	Carlsbad	229,830	70,595	159,235	6/1/2016	5/31/2017
ICF Resources, LLC	2016 BE NWN WA PMC	Fairfax	200,724	134,187	66,537	1/1/2016	12/31/2016
Balanced Energy Solutions LLC	New Homes QA Inspections	Portland	174,000	51,385	122,615	4/27/2015	12/31/2016
ICF Resources, LLC	2016 BE DSM PMC	Fairfax	129,019	60,139	68,880	1/1/2016	12/31/2016
Illume Advising, LLC	Existing Homes Process Eval	Verona	90,400	90,397	3	2/20/2016	11/30/2016
1000 Broadway Building L.P.	Pay-for-Performance Pilot	Portland	88,125	29,375	58,750	10/17/2014	11/1/2018
CLEAResult Consulting Inc	Professional Services/Trans	Austin	70,613	59,735	10,878	10/15/2014	10/15/2017
Research Into Action, Inc.	Multifamily Process Evaluation	Portland	68,242	68,236	6	3/18/2016	10/31/2016
The Cadmus Group Inc.	Solar PV Impact Evalution	Watertown	67,730	60,952	6,778	10/26/2015	11/30/2016
Hitachi Consulting Corporation	SOW #19 Program Design Support	Dallas	62,500	44,000	18,500	7/31/2016	10/31/2016
Abt SRBI Inc.	Fast Feedback Surveys 2016	New York	62,200	0	62,200	7/8/2016	4/15/2017
Apex Analytics LLC	Nest Seasonal Savings Eval	Boulder	56,000	3,713	52,288	8/29/2016	12/31/2017
The Cadmus Group Inc.	Existing Homes Pilot Eval	Watertown	53,000	36,808	16,192	2/18/2016	12/31/2017
MetaResource Group	Intel DX1 Mod 1&2 Megaproject	Portland	45,000	22,540	22,460	4/1/2015	5/1/2017
Consortium for Energy Efficiency	Program Performance Benchmark		40,379	0	40,379	9/23/2016	12/31/2017
Portland General Electric	2016 EE Workshop Sponsorship	Portland	40,000	40,000	0	1/1/2016	12/31/2016
KEMA Incorporated	Billing Analysis Review	Oakland	35,000	2,146	32,855	3/15/2015	12/31/2016
WegoWise Inc	benchmarking license 2015	Boston	35,000	24,284	10,716	6/15/2014	12/31/2016
The Cadmus Group Inc.	Air Conditioning Measures	Watertown	32,950	0	32,950	8/22/2016	8/22/2018
Northwest Energy Efficiency Council	Tool Lending Lbry Sponsorship	Seattle	30,500	0	30,500	9/21/2016	12/31/2017
Portland State University	Research Plan Development		29,945	28,745	1,200	2/1/2016	9/30/2016
Abt SRBI Inc.	NH Gas Fireplace Survey 16-17	New York	25,697	0	25,697	4/12/2016	7/31/2017
Energy Center of Wisconsin	Billing Analysis Review	Madison	25,000	1,330	23,670	3/15/2015	12/31/2016
Sheepscot Creative LLC	SEM Videos	Portland	24,500	20,000	4,500	2/12/2016	11/30/2016
Collaborative Efficiency, LLC	EECLP Utility Outreach	Spokane	20,000	9,944	10,056	6/1/2016	12/31/2016
Ecotope, Inc.	NB VRF Pilot Evaluation	Seattle	20,000	9,540	10,460	1/1/2016	5/31/2017
MetaResource Group	PMC Perf Comp Review	Portland	20,000	19,950	50	2/23/2016	9/30/2016
Michaels Energy, Inc.	NB '11-'12 Impact Evaluation	La Crosse	20,000	0	20,000	7/1/2016	3/31/2017
Consortium for Energy Efficiency	Membership Dues - 2016		19,392	19,392	0	1/1/2016	12/31/2016
Northwest Food Processors Association	NW Industrial EE Summit 2016	Portland	18,710	18,710	0	1/1/2016	12/31/2016
Clark Public Utilities	Living Wise Kits Coop Agmt	Vancouver	15,000	0	15,000	11/1/2015	12/31/2016
Portland General Electric	Workshop Payment Agreement	Portland	15,000	0	15,000	3/18/2016	12/31/2016
Energy 350 Inc	Professional Services	Portland	14,920	14,920	0	12/10/2014	12/10/2016
EES Consulting, Inc	Professional Services Agmt	Kirkland	14,800	0	14,800	10/1/2016	9/30/2018
Bridgetown Printing Company	January 2016 Bill Insert	Portland	14,677	14,573	104	1/1/2016	12/31/2016

Flink Energy Consulting	Smart Grid Modeling	Portland	12,120	9,000	3,120	7/12/2016	7/30/2017
BASE zero LLC	Quality Assurance Services	Bend	11,625	8,038	3,588	3/1/2016	12/31/2016
Earth Advantage, Inc.	2016 Sponsorship	Portland	10,250	10,250	0	3/1/2016	2/28/2017
American Council for and Energy Efficient Economy	Intelligent Eff. Baseline		10,000	10,000	0	1/1/2016	12/31/2016
American Council for and Energy Efficient Economy	Smart Buildings		10,000	10,000	0	1/1/2016	12/31/2016
American Council for and Energy Efficient Economy	Small Business EE		10,000	10,000	0	1/1/2016	12/31/2016
Research Into Action, Inc.	Professional Services	Portland	9,590	9,570	20	9/1/2014	8/31/2017
Evergreen Economics	NH Gas Fireplace Survey	Portland	9,020	1,875	7,145	4/12/2016	7/31/2017
City of Portland Bureau of Planning & Sustainability	Sponsorship - 2016	Portland	8,000	8,000	0	1/1/2016	12/31/2016
Northwest Environmental Business Council	Future Energy Conference 2016	Portland	7,450	3,950	3,500	1/1/2016	12/31/2016
FMYI, INC	Subscription Agreement	Portland	5,150	5,150	0	4/25/2016	3/1/2017
Social Enterprises Inc.	GoGreen Sponsorship - 2016	Portland	5,000	5,000	0	4/22/2016	12/31/2016
	Energy Efficiency Total:		**96,913,802**	**50,225,401**	**46,688,401**		

Joint Programs

Portland State University	Technology Forecasting		153,808	126,990	26,818	11/7/2011	12/31/2016
E Source Companies LLC	E Source Service Agreement	Boulder	93,750	93,750	0	2/1/2014	1/31/2017
The Cadmus Group Inc.	Evaluation Consultant	Watertown	90,305	75,713	14,592	6/20/2013	12/31/2016
CoStar Realty Information Inc	Property Data	Baltimore	40,820	34,203	6,617	6/1/2011	5/31/2017
Research Into Action, Inc.	EH Attic Air Sealing Pilot Eva	Portland	30,000	30,000	0	10/8/2014	9/30/2016
D&R International LTD	Better Data Project	Silver Spring	14,250	14,250	0	6/30/2016	12/31/2016
Navigant Consulting Inc	Resource Assessment Updates	Boulder	10,600	0	10,600	8/26/2016	8/26/2018
	Joint Programs Total:		**433,533**	**374,906**	**58,627**		

Renewable Energy

Clean Water Services	Project Funding Agreement		3,000,000	1,013,106	1,986,894	11/25/2014	11/25/2039
JC-Biomethane LLC	Biogas Plant Project Funding	Eugene	2,000,000	1,500,000	500,000	10/18/2012	10/18/2032
Steel Bridge Solar, LLC	Project Funding Agreement	Seattle	2,000,000	1,000,000	1,000,000	3/27/2015	12/15/2040
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	750,000	250,000	10/25/2012	10/25/2027
Three Sisters Irrigation District	TSID Hydro	Sisters	1,000,000	900,000	100,000	4/25/2012	9/30/2032
Farmers Irrigation District	FID - Plant 2 Hydro	Hood River	900,000	450,000	450,000	4/1/2014	4/1/2034
Klamath Falls Solar 2 LLC	PV Project Funding Agreement	San Mateo	850,000	0	850,000	7/11/2016	7/10/2041
Farmers Conservation Alliance	Irrigation Collaboration Initi	Hood River	633,000	573,358	59,642	1/2/2015	12/31/2016
Old Mill Solar, LLC	Project Funding Agmt Bly, OR	Lake Oswego	490,000	0	490,000	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

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
Clean Power Research, LLC	PowerClerk License	Napa	383,068	380,398	2,670	7/1/2014	6/30/2017
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
Henley KBG, LLC	Henley Proj Dev Assistance	Reno	150,000	43,683	106,318	4/10/2014	12/31/2016
City of Astoria	Bear Creek Funding Agreement	Astoria	143,000	143,000	0	3/24/2014	3/24/2034
Klamath Basin Geopower Inc	Poe Valley Proj Dev Assistance	Reno	112,874	63,000	49,874	4/10/2014	12/31/2016
BSA Enterprises Inc	Solar Verifier Services	Sisters	100,000	11,658	88,342	8/1/2016	7/31/2018
Gary Higbee DBA WindStream Solar	Solar Verifier Services	Eugene	100,000	11,450	88,550	8/1/2016	7/31/2018
Luxurious Plumbing and Heating, Inc.	Solar Verifier Services	West Linn	100,000	18,410	81,590	8/1/2016	7/31/2018
RHT Energy Inc.	Verifier Services Agmt - Solar	Medford	100,000	13,178	86,823	8/1/2016	7/31/2018
Solar Oregon	2015 Outreach Agreement	Portland	72,800	53,300	19,500	1/1/2015	12/31/2016
Kendrick Business Services LLC	Solar TA Business Consulting	Albany	64,200	51,260	12,940	10/8/2015	12/31/2016
SPS of Oregon Inc	Project Funding Agreement	Wallowa	60,000	488	59,513	10/15/2015	10/31/2036
State of Oregon Dept of Geology & Mineral Industries	Lidar Data	Portland	40,000	40,000	0	11/7/2014	12/1/2016
University of Oregon	UO SRML Contribution - 2016	Eugene	25,000	25,000	0	3/9/2016	3/8/2017
Wallowa Resources Community Solutions, Inc.	Renewables Field Outreach		24,999	1,725	23,274	2/1/2016	1/30/2018
Robert Migliori	42kW wind energy system	Newberg	24,125	22,352	1,773	4/11/2007	1/31/2024
Oregon Solar Energy Industries Association	Solar Technical Training Class	Portland	13,500	3,000	10,500	12/10/2015	12/31/2016
Warren Griffin	Griffin Wind Project	Salem	13,150	9,255	3,895	10/1/2005	10/1/2020
Oregon Solar Energy Industries Association	Sponsorship 2016	Portland	7,500	7,500	0	1/1/2016	12/31/2016
Magneto Advertising, LLC	Irrigation Infographic	Portland	5,950	5,950	0	7/6/2016	12/31/2016
Clean Energy States Alliance	2016 CESA ITAC Sponsorship		5,000	5,000	0	1/1/2016	12/31/2016
Bonneville Environmental Foundation	REC/WRC Purchase 2016	Portland	2,430	0	2,430	1/1/2016	12/31/2016
		Renewable Energy Total:	**17,459,328**	**10,816,324**	**6,643,004**		
		Grand Total:	**131,441,031**	**68,055,823**	**63,385,208**		

Financial Glossary

(for internal use) - updated May 31, 2016

Administrative Costs

Costs that, by nonprofit accounting standards, have general objectives which enable an organization's programs to function. The organization's programs in turn provide direct services to the organization's constituents and fulfill the mission of the organization (i.e. management and general and general communication and outreach expenses).

I. **Management and General**
- Includes governance/board activities, interest/financing costs, accounting, payroll, human resources, general legal support, and other general organizational management costs.
- Receives an allocated share of indirect costs.

II. **General Communications and Outreach**
- Expenditures of a general nature, conveying the nonprofit mission of the organization and general public awareness.
- Receives an allocated share of indirect costs.

Allocation
- A way of grouping costs together and applying them to a program as one pool based upon an allocation base that most closely represents the activity driver of the costs in the pool.
- Used as an alternative to charging programs on an invoice-by-invoice basis for accounting efficiency purposes.
- An example would be accumulating all of the costs associated with customer management (call center operations, Energy Trust customer service personnel, complaint tracking, etc.). The accumulated costs are then spread to the programs that benefited by using the ratio of calls into the call center by program (i.e. the allocation base).

Allocation Cost Pools
- Employee benefits and taxes.
- Office operations. Includes rent, telephone, utilities, supplies, etc.
- Information Technology (IT) services.
- Planning and evaluation general costs.
- Customer service and trade ally support costs.
- General communications and outreach costs.
- Management and general costs.
- Shared costs for electric utilities.
- Shared costs for gas utilities.
- Shared costs for all utilities.

Auditor's Opinion
- An accountant's or auditor's opinion is a report by an independent CPA presented to the board of directors describing the scope of the examination of the organization's books, and certifying that the financial statements meet the AICPA (American Institute of Certified Public Accountants) requirements of GAAP (generally accepted accounting principles).

- Depending on the audit findings, the opinion can be unmodified or modified regarding specific items. Energy Trust strives for and has achieved in all its years an unmodified opinion.
- An unmodified opinion indicates agreement by the auditors that the financial statements present an accurate assessment of the organization's financial results.
- The OPUC Grant Agreement requires an unmodified opinion regarding Energy Trust's financial statements.
- Failure to follow generally accepted accounting principles (GAAP) can result in a qualified opinion.

Board-approved Annual Budget

- Funds approved by the board for *expenditures* during the budget year (subject to board approved program funding caps and associated policy) for the stated functions.
- Funds approved for *capital* asset expenditures.
- Approval of the general allocation of funds including commitments and cash outlays.
- Approval of expenditures is based on assumed revenues from utilities as forecasted in their annual projections of public purpose collections and/or contracted revenues.

Reserves

- In any one year, the amount by which revenues exceed expenses for that year in a designated category that will be added to the cumulative balance and brought forward for expenditure to the next budget year.
- In any one year, if expenditures exceed revenues, the negative difference is applied against the cumulative carryover balance.
- Does not equal the cash on hand due to noncash expense items such as depreciation.
- Tracked by major utility funder and at high level program area--by EE vs RE, not tracked by program.

Committed Funds

- Represents funds obligated to identified efficiency program participants in the form of signed applications or agreements and tracked in the project forecasting system**.**
- If the project is not demonstrably proceeding within agreed upon time frame, committed funds return to incentive pool. Reapplication would then be required.
- Funds are expensed when the project is completed.
- Funds may be held in the operating cash account, or in escrow accounts.

Contract obligations

- A signed contract for goods or services that creates a legal obligation.
- Reported in the monthly Contract Status Summary Report.

Cost-Effectiveness Calculation

- Programs and measures are evaluated for cost-effectiveness.
- The cost of program savings must be lower than the cost to produce the energy from both a utility and societal perspective.
- Expressed as a ratio of energy savings cost divided by the presumed avoided utility and societal cost of energy.
- Program cost-effectiveness evaluation is "fully allocated," (i.e. includes all of the program costs plus a portion of Energy Trust administrative costs).

Dedicated Funds

- Represents funds obligated to identified renewable program participants in the form of signed applications or agreements and tracked in the project forecasting system.

- May include commitments, escrows, contracts, board designations, master agreements.
- Methodology utilized to develop renewable energy activity-based budgets amounts.

Direct Program Costs

- Can be directly linked to and reflect a causal relationship to one individual program/project; or can easily be allocated to two or more programs based upon usage, cause, or benefit.

Direct Program Evaluation & Planning Services

- Evaluation services for a specific program rather than for a group of programs.
- Costs incurred in evaluating programs and projects and included in determining total program funding caps.
- Planning services for a specific program rather than for a group of programs.
- Costs incurred in planning programs and projects and are included in determining program funding expenditures and caps.
- Evaluation and planning services attributable to a number of programs are recorded in a cost pool and are subsequently allocated to individual programs.

Escrowed Program (Incentive) Funds

- Cash deposited into a separate bank account that will be paid out pursuant to a contractual obligation requiring a certain event or result to occur. Funds can be returned to Energy Trust if such event or result does not occur. Therefore, the funds are still "owned" by Energy Trust and will remain on the balance sheet.
- The funds are within the control of the bank in accordance with the terms of the escrow agreement.
- When the event or result occurs, the funds are considered "earned" and are transferred out of the escrow account ("paid out") and then are reflected as an expense on the income statement for the current period.

Expenditures/Expenses

- Amounts for which there is an obligation for payment of goods and/or services that have been received or earned within the month or year.

Project Tracking Projects Forecasting

Module developed in Project Tracking system (PT) to provide information about the timing of future incentive payments, with the following definitions**:**

- Estimated-Project data may be inaccurate or incomplete. Rough estimate of energy savings, incentives and completion date by project and by service territory.
- Proposed-Project that has received a written incentive offer but no agreement or application has been signed. Energy savings, incentives and completion date to be documented by programs using this phase. For Renewable projects-project that has received Board approval.
- Accepted-Used for renewable energy projects in second round of application; projects that have reached a stage where approval process can begin.
- Committed-Project that has a signed agreement or application reserving incentive dollars until project completion. Energy savings/generations, incentives and completion date by project and by service territory must be documented in project records and in PT. If project not demonstrably proceeding within agreed upon time frame, committed funds return to incentive pool. Reapplication would then be required.
- Dedicated-Renewable project that has been committed, has a signed agreement, and if required, has been approved by the board of directors.

Incentives

I. **Residential Incentives**

- Incentives paid to a residential program participant (party responsible for payment for utility service in particular dwelling unit) exclusively for energy efficiency and renewable energy measures in the homes or apartments of such residential customers.

II. **Business Incentives**

- Incentives paid to a participant other than a residential program participant as defined above following the installation of an energy efficiency or renewable energy measure.
- Above market cost for a particular renewable energy project.

III. **Service Incentives**

- Incentives paid to an installation contractor which serves as a reduction in the final cost to the participant for the installation of an energy efficiency or renewable energy measure.
- Payment for services delivered to participants by contractors such as home reviews and technical analysis studies.
- End-user training, enhancing participant technical knowledge or energy efficiency practices proficiency such as Strategic Energy Management programs, where some level of tracking of particular sites and participants is part of the program design.
- Lighting, hot water, and energy control devices through retailer buy down, on line fulfillment, and direct installation.

Indirect Costs

- Shared costs that are “allocated” for accounting purposes rather than assigning individual charges to programs.
- Allocated to all programs and administration functions based on a standard basis such as hours worked, square footage, customer phone calls, etc.
- Examples include rent/facilities, supplies, computer equipment and support, and depreciation.

IT Support Services

- Information technology costs incurred as a result of supporting all programs.
- Includes energy savings and incentive tracking software, data tracking support of PMCs and for the program evaluation functions.
- Includes technical architecture design and physical infrastructure.
- Receives an allocation of indirect shared costs.
- Total costs subsequently allocated to programs and administrative units.

Outsourced Services

- Miscellaneous professional services contracted to third parties rather than performed by internal staff.
- Can be incurred for program or administrative reasons and will be identified as such.

Program Costs

- Expenditures made to fulfill the purposes or mission for which the organization exists and are authorized through the program approval process.
- Includes program management, incentives, program staff salaries, planning, evaluation, quality assurance, program-specific marketing and other costs incurred solely for program purposes.
- Can be direct or indirect (i.e. allocated based on program usage.)

Program Delivery Expense

- This will include all PMC labor and direct costs associated with: incentive processing, program coordination, program support, trade ally communications, and program delivery contractors.
- Includes contract payments to NEEA for market transformation efforts.
- Includes performance compensation incentives paid to program management contractors under contract agreement if certain incentive goals are met.
- Includes professional services for items such as solar inspections, anemometer maintenance and general renewable energy consulting.

Program Legal Services

- External legal expenditures and internal legal services utilized in the development of a program-specific contract.

Program Management Expense

- PMC billings associated with program contract oversight, program support, staff management, etc.
- ETO program management staff salaries, taxes and benefits.

Program Marketing/Outreach

- PMC labor and direct costs associated with marketing/outreach/awareness efforts to communicate program opportunities and benefits to rate payers/program participants.
- Awareness campaigns and outreach efforts designed to reach participants of individual programs.
- Co-op advertising with trade allies and vendors to promote a particular program benefit to the public.

Program Quality Assurance

- Independent in-house or outsourced services for the quality assurance efforts of a particular program (distinguished from program quality control).

Program Reserves

- Negotiated with utilities annually, with a goal of providing a cushion of approximately 5% above funds needed to fulfill annual budgeted costs. Management may access up to 50% of annual program reserve without prior board approval (resolution 633, 2012).

Program Support Costs

- Source of information is contained in statement of functional expense report.
- Portion of costs in OPUC performance measure for program administration and support costs.
    - Includes expenses incurred directly by the program.
    - Includes allocation of shared and indirect costs incurred in the following categories: supplies; postage and shipping; telephone; printing and publications; occupancy expenses; insurance; equipment; travel; business meetings; conferences and training; depreciation and amortization; dues, licenses,

subscriptions and fees; miscellaneous expense; and an allocation of information technology department cost.

Project Specific Costs (for Renewable Energy)

- Expenses directly related to identified projects or identified customers to assist them in constructing or operating renewable projects. Includes services to prospective as well as current customers.
- Must involve direct contact with the project or customer, individually or in groups, and provide a service the customer would otherwise incur at their own expense.
- Does not include general program costs to reach a broad (unidentified) audience such as websites, advertising, program development, or program management.
- Project-Specific costs may be in the categories of; Incentives, Staff salaries, Program delivery, Legal services, Public relations, Creative services, Professional services, Travel, Business meetings, Telephone, or Escrow account bank fees.

Savings Types

- **Working Savings/Generation:** the estimate of savings/generation that is used for data entry by program personnel as they approve individual projects. They are based on deemed savings/generation for prescriptive measures, and engineering calculations for custom measures. They do not incorporate any evaluation or transmission and distribution factors.
- **Reportable Savings/Generation:** the estimate of savings/generation that will be used for public reporting of Energy Trust results. This includes transmission and distribution factors, evaluation factors, and any other corrections required to the original working values. These values are updated annually, and are subject to revision each year during the "true-up" as a result of new information or identified errors.
- **Contract Savings**: the estimate of savings that will be used to compare against annual contract goals. These savings figures are generally the same as the reportable savings at the time that the contract year started. For purposes of adjusting working savings to arrive at this number, a single adjustment percentage (a SRAF, as defined below) is agreed to at the beginning of the contract year and is applied to all program measures. This is based on the sum of the adjustments between working and reportable numbers in the forecast developed for the program year.
- **Savings Realization Adjustment Factors (SRAF):** are savings realization adjustment factors applied to electric and gas working savings measures in order to reflect more accurate savings information through the benefit of evaluation and other studies. These factors are determined by the Energy Trust and used for annual contract amendments. The factors are determined based on the best available information from:
  - Program evaluations and/or other research that account for free riders, spill-over effects and measure impacts to date; and
  - Published transmission and distribution line loss information resulting from electric measure savings.

Total Program and Admin Expenses (line item on income statement)

- Used only for cost effectiveness calculations, levelized cost calculations and in management reports used to track funds spent/remaining by service territory.
- Includes all costs of the organization--direct, indirect, and an allocation of administration costs to programs.
- Should not be used for external financial reporting (not GAAP).

Total Program Expenses (line item on income statement)

- All indirect costs have been allocated to program costs with the exception of administration (management and general costs and communications & outreach).
- Per the requirements of Generally Accepted Accounting Principles (GAAP) for nonprofits, administrative costs should not be allocated to programs.
- There is no causal relationship—costs would not go away if the program did not exist.

Trade Ally Programs & Customer Service Management

- Costs associated with Energy Trust sponsorship of training and development of a trade ally network for a variety of programs.
- Trade Ally costs are tracked and allocated to programs based on the number of allies associated with that program.
- Costs in support of assisting customers which benefit all Energy Trust programs such as call center operations, customer service manager, complaint handling, etc.
- Customer service costs are tracked and allocated based on # of calls into the call center per month.

True Up

- True-up is a once-a-year process where we take everything we've learned about how much energy programs actually save or generate, and update our reports of historic performance and our software tools for forecasting and analyzing future savings.
- Information incorporated includes improved engineering models of savings (new data factor), anticipated results of future evaluations based on what prior evaluations of similar programs have shown (anticipated evaluation factor), and results from actual evaluations of the program and the year of activity in question (evaluation factor).
- Results are incorporated in the Annual Report (for the year just past) and the True-up Report (for prior years).
- Sometimes the best data on program savings or generation is not available for 2-3 years, especially for market transformation programs. So for some programs, the savings are updated through the annual true-up 2 or 3 times

Board Decision

Cascade Natural Gas Funding Temporary Adjustment Using Contingency Reserves Account Organization Pool

November 2, 2016

Summary

Use Energy Trust contingency reserves account organization pool to provide for a shortfall in revenue for Cascade Natural Gas (CNG).

Background

- In 2006, CNG agreed to collect a specified public purpose charge from its ratepayers as part of a decoupling mechanism approved by the Oregon Public Utility Commission (OPUC), and entered into a contract with Energy Trust to provide energy efficiency programs.
- On February 1, 2016, CNG modified its Schedule 31 Public Purpose Charge (PPC) to collect the PPC from not only residential and small commercial customers but all core customers' schedules including large commercial and industrial customers. Energy Trust started receiving PPC funding for 2016 in early spring 2016.
- Energy Trust and CNG work together to determine annual budgets for funding and savings acquisition based on forecasted revenues and integrated resource planning. In 2016, CNG revenues are coming in at less than forecast for reasons described below, and Energy Trust and CNG propose to work together to ensure continued savings acquisition.
- In 2013, Energy Trust's board of directors approved a revision to its Using Reserve Accounts Policy, to establish two distinct reserve accounts, the Contingency Reserves Account and the Efficiency Program Reserves Account. The "Contingency Reserves Account" is divided into two pools, an emergency contingency pool and an organization pool. Pursuant to the revised Using Reserve Accounts Policy, the Efficiency Program Reserves Account is to be set on an individual utility basis as part of the annual funding negotiations.
- The 2013 Using Reserve Accounts Policy revision also requires, among other things, Energy Trust staff to obtain prior board approval before utilizing the Contingency Reserves Account organization pool. Under the policy, the organization pool may be used "to respond to unusual circumstances, such as a shortfall in program reserves . . . and other unanticipated organization needs consistent with our mission."

Discussion

- In February 2016, the OPUC approved CNG's PPC for all of its core customers.
- Energy Trust's 2016 budget for CNG was approved at $2.58 million; the budget assumed revenues at $2.1 million, with the aforementioned PPC filling in the $480,000 deficit.

- Because of the timing of the PPC tariff and because of a purchase gas adjustment tariff reduction of 14% instituted by CNG in early fall 2016, there is a shortfall in PPC for Energy Trust, and reserves in the Efficiency Program reserves Account for CNG have been fully tapped.
- Energy Trust Quarter 4 expenses and revenue forecast shows program expenditures at $2.3 million, or 92% of budget.
- Energy Trust is on track to hit 113% of its goal if funded to the 2016 year-end forecast of $2.3 million. CNG supports Energy Trust efforts to continue to hit the 113% of goal.
- In staff's judgment, interrupting service to CNG customers in light of the shortfall will have a negative impact on the momentum built in CNG territory.
- Based on current estimates, an additional $150,000 is needed to fund 2016 CNG customer demand in 2016. Energy Trust seeks authority to draw up to $200,000 from the organization pool of the Contingency Reserves Account to maintain momentum toward achieving the forecasted CNG savings, plus additional possible funding if actual demand is greater than forecasted and to begin to replenish program reserves. The Energy Trust organization pool has sufficient funds to temporarily cover the total CNG shortfall and up to $200,000 to augment revenues for 2016 and to begin to replenish CNG program reserves in 2017.
- CNG has indicated that it will replenish the organization pool account by December 31, 2017, through a tariff adjustment.
- This replenishment process will commence on or before January 1, 2017 via a tariff filing by CNG amending the amount collected through its PPC tariff throughout the year of 2017.

Recommendation

Authorize the transfer of up to $200,000 from the Energy Trust Contingency Reserves Account organization pool to the CNG operations account to be used for program implementation in 2016 and reserves replenishment in 2017, with the understanding that CNG will fully replenish the organization pool no later than December 31, 2017.

RESOLUTION 786
CASCADE NATURAL GAS FUNDING TEMPORARY ADJUSTMENT USING CONTINGENCY RESERVES ACCOUNT ORGANIZATION POOL

WHEREAS:

1. **The recent Energy Trust Quarter 4 expenses and revenue forecast shows CNG program expenditures to come in at $2.3 million or 92% of budget.**
2. **Revenue projections for 2016 show Energy Trust will receive approximately $192,000 less than anticipated at year-end, due in part to timing of the rate filing, and a 14% purchase gas adjustment tariff reduction, which has resulted in CNG under-collecting funds for energy efficiency programs, causing a shortfall in the 2016 Energy Trust operating budget and program reserves for CNG.**

3. **Energy Trust is on track to hit 113% of its goal if funded to the budgeted level, staff predicts any cessation of activity will have a negative impact on the momentum built in CNG territory, and CNG supports Energy Trust's continued efforts to hit 113% of goal.**
4. **Energy Trust's Contingency Reserves Account organization pool of approximately $4.6 million is adequate to temporarily fund the shortfall.**
5. **CNG has committed to repay fully any amount taken on its behalf from the Energy Trust organization pool not later than December 31, 2017.**
6. **Energy Trust's Using Reserve Accounts Policy requires prior board approval before utilizing the Contingency Reserves Account organization pool. Energy Trust staff recommends utilizing the organization pool for CNG because of a shortfall in CNG program reserves to cover continued efforts towards CNG savings goals in 2016.**

It is therefore RESOLVED that:

1. **Given the under-collection of CNG funds for energy efficiency programs, for reasons described above, and since CNG program reserves have been fully utilized, Energy Trust staff has demonstrated that the conditions for use of the Energy Trust Contingency Reserves Account organization pool have been met to continue current momentum in CNG energy efficiency program delivery through 2016.**
2. **The Executive Director is authorized to transfer up to $200,000 of Contingency Reserves Account organization pool funds to the CNG operations account to be used for program implementation for CNG ratepayers in 2016 and for reserve replenishment in 2017.**
3. **This transfer is authorized with the express understanding that CNG will repay fully the funds transfer not later than December 31, 2017.**

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

Tab 5

Policy Committee Meeting

October 6, 2016, 3:30–5:00 p.m.

Attending by phone
Ken Canon, Alan Meyer, John Reynolds

Attending at Energy Trust offices
Roger Hamilton, Michael Colgrove, Fred Gordon, Steve Lacey, Debbie Menashe, Mariet Steenkamp, Peter West, Jed Jorgensen, Dave Moldal

Policies for Review

There were no policies up for regular review. Staff presented information to the board related to the Energy Trust "REC" policy. Specifically, staff presented information regarding thermal renewable energy certificates (RECs) (also known as T-RECs), a new category of RECs under the Oregon Coal to Clean bill and currently undergoing an ODOE rulemaking process, and the annual update on REC values as required under Energy Trust's current REC policy.

Update on Thermal RECs ODOE Rulemaking Process

Dave Moldal described Thermal RECs and the current process underway. Section 16 of Senate Bill (SB) 1547 creates a new category of RECs for generation of thermal energy as a byproduct of electricity generated in a biomass generation facility. T-RECS are the environmental attributes resulting from the generation of electricity using biomass and also from the generation of thermal energy for a "secondary purpose." To quantify the production of T-RECs, the legislature equated 3,412,000 BTUs to one megawatt-hour of generation (i.e. one REC).

Under the statute, ODOE was tasked with rulemaking on T-RECs, and ODOE is engaged in a rulemaking process at this time to more fully define this category of RECs and to identify the conditions under which T-RECs are RPS-eligible. Final rules on T-RECs are expected by the end of November.

Committee members asked questions regarding other jurisdictions and T-RECs, and Dave responded that although there has been some discussion in other states, Oregon's process is more developed and reflects an effort to bring the timber industry into the discussions on the benefits of biomass generation projects.

Preview of Annual REC Value and Policy Review

In 2015, following months of review regarding the current renewable energy certificate (REC) market and in coordination with Energy Trust's Renewable Advisory Council (the RAC), the OPUC and PGE and Pacific Power, this committee recommended, and the full board approved a set of changes to Energy Trust's REC policy. Among those changes was the addition of a requirement that the Energy Trust staff report annually to the RAC and to the board on the market value of RECs. This annual review permits the board to consider whether the cost and effort of registering RECs in WREGIS is disproportionate to their value and to recommend action accordingly.

Staff presented current information on REC value which has not changed significantly since last year. Various market reports, including Bloomberg, argue that the voluntary REC market, which is the market for RECs generated by project supported by Energy Trust funding, is flat and the RPS (utility-scale) driven supply precludes long-term upside in the voluntary REC market.

For these reasons, staff recommends no change to the current practice: (1) For Other Renewable projects, Energy Trust would continue to take contractual title to project RECs, but require WREGIS registration only when the project owner or the utility are willing to pay for WREGIS registration, and (2) for Solar Program, Energy Trust would continue to take contractual title to project RECs, but only require WREGIS registration if a cost-effective solution to WREGIS registration is available. Based on the continued low value of RECs, committee members agree with staff's recommendation and recommends presentation to the RAC and full board at their next meetings.

Mike alerted the board that he would like to have further discussions with the committee in future months regarding the policy's impact on project development and to explore the committee's interest in options around the REC policy going forward. Staff will begin to surface the issue with RAC and then schedule time on a future Policy Committee agenda for this discussion.

Program and Organization Contingency Reserves

Staff provided information on projected program reserve levels for 2017. Preliminary utility funding models, with program reserves at levels consistent with program reserve targets, could result in potentially significant tariff adjustments with increases in 2017 and decreases in later years for both PGE and PAC.

The OPUC, utilities and Energy Trust agree that a "whipsaw" effect on tariff adjustments should be avoided if possible. This objective is challenging when maintaining target program reserves on an annual basis. Staff presented information to committee members regarding current program reserve levels and present proposals to avoid or mitigate significant tariff adjustments.

In order to for a more informed discussion among committee members, members requested a special Policy Committee meeting for further discussion on this topic. Committee members asked that Dan Enloe, as chair of the Finance Committee, be included. Staff will arrange a meeting time in advance of scheduled utility meetings scheduled during the week of October 17th.

Brief Updates

Mike Colgrove reported that an offer for the position of executive assistant has been extended to and accepted by Corey Kehoe. Corey will be starting with Energy Trust on October 24, 2016. Committee members expressed great appreciation for Elizabeth Fox's assistance during this period of transition.

Adjourn

The meeting adjourned before 5:00 p.m. The next meeting of the Policy Committee is scheduled for November 17, 2016.

Tab 6

Strategic Planning Committee Meeting

October 18, 2016, 2:30 p.m.

Attending by teleconference
Mark Kendall, Steve Bloom, Susan Brodahl, Ken Canon, Lindsey Hardy, John Reynolds

Attending at Energy Trust offices
Michael Colgrove, Hannah Cruz, Debbie Menashe, John Volkman

Initial Planning for May 2017 Retreat
Mark reported that, based on feedback from board members and the committee after the 2016 retreat, staff has again secured the MercyCorps headquarters space for the May 2017 retreat. Committee members supported this location. Debbie reported that staff will identify a more spacious location for the board's dinner on May 18, the night between the two days of the retreat. Committee members expressed concern about the size of the dinner location and the noise level at the 2016 dinner. Staff will look for better options and report back to the committee with an expectation that dinner arrangements will be finalized by March 2017. Committee members also asked staff to consider ways in which the retreat agenda discussion topics could be continued into the dinner event. Staff will consider this in agenda planning.

Committee members discussed the possibility of considering a changed structure for future retreats in order to foster more time for focused interaction among board members. Committee members also discussed the possibility of holding the retreat outside of Portland in future years, recognizing some additional cost involved. Mike expressed his support for holding some events outside of Portland. Committee members expressed interest in further discussion of different locations for future retreats.

The committee confirmed that the Strategic Plan Summary and Implementation Dashboard tool, developed by staff and the committee over the course of last year, should be used again for a reporting outline for the 2017 retreat. Staff will continue to update the tool in preparation for the 2017 retreat.

The committee discussed agenda topics and ideas for possible speakers for the retreat. The following ideas emerged:

- Update and discussion on pertinent issues that come out, or will have surfaced, in the 2017 state legislative session
- Information and possible speakers from other organizations engaged in energy efficiency acquisition and how they have approached declining resource potential and the resulting organizational changes
- Updates on the Energy Trust Diversity Initiative
    - How the work on the initiative informs Energy Trust work
    - Reporting on results
    - Information on the initiative's approach at the board level
    - How the Diversity Initiative is relevant to the type of changes Energy Trust and other like organizations expect to experience as the current energy efficiency acquisition model changes
- 2026 public purpose charge sunset implications
- What is Energy Trust's role in an environment more focused on decarbonization and how such a role relates to the organization's mission
- Update and continued discussion from the last retreat on whether Energy Trust should pursue different sources of funding
- Electric vehicles and the intersection of transportation and Energy Trust
- Schedule time for more unstructured and productive discussion among board members

- Energy Trust's role in education

Mark asked committee members to email additional ideas to him or to Debbie by December 1, and Mark will work with staff to pull together a draft agenda that incorporates suggested topics. Based on those topics, Mark will work with staff to identify topics that might be more appropriate for a less formal and less structured discussion.

Preliminary Thoughts and Guidance from the Committee on Looking Ahead to the Next Strategic Plan Cycle

The committee discussed how it is important in the beginning of a strategic planning process to look back at things that emerged from the last strategic plan and evaluate how well they were accomplished. Good strategic planning means that if a change is made, an organization should look back to see if the change accomplished what was intended and then learn from what actually did occur.

Mike suggested that in thinking ahead to the next plan, staff should propose pilots or test approaches related to some of the large strategic issues that are anticipated for the next plan. Staff can identify some possible test approaches at the 2017 retreat, aim to implement them in 2018, and then have information derived from those tests to inform the next strategic plan development in 2019.

Committee members also asked staff to consider Energy Trust's role in education on an ongoing basis and in coordination with other organizations like Sustainable NW.

Mark closed the meeting by noting that there may be some changes in committee membership to manage the numbers on the committee to avoid a quorum.

Debbie advised the committee that she would work with Mark and the internal strategic planning team to put together a very rough draft retreat agenda for the committee's review at its next meeting.

The meeting adjourned at 3:45 p.m.

The next meeting of the Strategic Planning Committee is scheduled for February 7, 2017, at 3:00 p.m.

Tab 7

Glossary of Terms Related to Energy Trust of Oregon's Work

Glossary provided to the Energy Trust Board of Directors for general use. Definitions and acronyms are compiled from a variety of resources. Energy Trust policies on topics related to any definitions listed below should be referenced for the most current and comprehensive information. Last updated July 2015.

Above-Market Costs of New Renewable Energy Resources
The portion of the net present value cost of producing power (including fixed and operating costs, delivery, overhead and profit) from a new renewable energy resource that exceeds the market value of an equivalent quantity and distribution (across peak and off-peak periods and seasonally) of power from a nondifferentiated source, with the same term of contract. Energy Trust board policy specifies the methodology for calculating above-market costs. *Reference the Board Cost-Effectiveness Policy and General Methodology*

Aggregate
Combining retail electricity consumers into a buying group for the purchase of electricity and related services. "Aggregator" is an entity that aggregates.

Air Sealing (Infiltration Control)
Conservation measures, such as caulking, efficient windows and weatherstripping, which reduce the amount of cold air entering or warm air escaping a building.

Ampere (Amp)
The unit of measure that tells how much electricity flows through a conductor. It is like using cubic feet per second to measure the flow of water. For example, a 1,200 watt, 120-volt hair dryer pulls 10 amperes of electric current (watts divided by volts).

Anaerobic Digestion
A biochemical process by which organic matter is decomposed by bacteria in the absence of oxygen, producing methane and other byproducts.

Average Megawatt (aMW)
One megawatt of capacity produced continuously over a period of one year. 1 aMW equals 1 megawatt multiplied by the 8,760 hours in a year. 1 aMW equals 8,760 MWh or 8,760,000 kWh.

Avoided Cost
(Regulatory) The amount of money that an electric utility would need to spend for the next increment of electric generation they would need to either produce or purchase if not for the reduction in demand due to energy-efficiency savings or the energy that a co-generator or small-power producer provides. Federal law establishes broad guidelines for determining how much a qualifying facility (QF) gets paid for power sold to the utility.

Base Load
The minimum amount of electric power delivered or required over a given period of time at a steady rate.

Benefit/Cost Ratios
By law, Oregon public purpose funds may be invested only in cost-effective energy-efficiency measures—that is, efficiency measures must cost less than acquiring the energy from conventional sources, unless exempted by the OPUC.

Energy Trust calculates benefit/cost ratios (BCR) on a prospective and retrospective basis. Looking forward, all prescriptive measures and custom projects must have a total resource cost test BCR > 1.0 unless the OPUC has approved an exception. As required in the OPUC grant agreement, Energy Trust reports annually how cost-effective programs were by comparing total costs to benefits, which also need to exceed 1.0.

Biomass
Solid organic wastes from wood, forest or field residues which can be heated to produce energy to power an electric generator.

Biomass Gas
A medium Btu gas containing methane and carbon dioxide, resulting from the action of microorganisms on organic materials such as a landfill.

Blower Door
Home Performance test conducted by a contractor (or energy auditor) to evaluate a home's air tightness. During this test a powerful fan mounts into the frame of an exterior door and pulls air out of the house to lower the inside air pressure. While the fan operates, the contractor can determine the house's air infiltration rate and better identify specific leaks around the house.

British Thermal Unit (Btu)
The standard measure of heat energy. The quantity of heat required to raise the temperature of 1 pound of liquid water by 1 degree Fahrenheit at the temperature at which water has its greatest density (approximately 39 degrees Fahrenheit).

Cogeneration (Combined Heat and Power, CHP)
The sequential production of electricity and useful thermal energy, often by the recovery of reject heat from an electric generating plant for use in industrial processes, space or water heating applications. Conversely, may occur by using reject heat from industrial processes to power an electricity generator. *Reference the Board Combined Heat and Power Policy*

Compact Fluorescent Light Bulbs (CFL)
CFLs combine the efficiency of fluorescent lighting with the convenience of a standard incandescent bulb. There are many styles of compact fluorescent, including exit light fixtures and floodlights (lamps containing reflectors). CFLs are designed for residential uses; they are also used in table lamps, wall sconces, and hall and ceiling fixtures of hotels, motels, hospitals and other types of commercial buildings with residential-type applications.

Conservation
While not specifically defined in the law or OPUC rules on direct access regulation, "conservation" is defined in the OPUC rule 860-027-0310(1)(a) as follows: Conservation means any reduction in electric power or natural gas consumption as the result of increases in efficiency of energy use, production or distribution. Conservation also includes cost-effective fuel switching.

Although fuel switching is part of the definition, this aspect of the rule has not been operationalized as of March 2013.

Cost Effective
Not specifically defined in SB 1149. The OPUC has a definition which refers to a definition from ORS 469.631 (4) stating that an energy resource, facility or conservation measure during its life cycle results in delivered power costs to the ultimate consumer no greater than the comparable incremental cost of the least-cost alternative new energy resource, facility or conservation measure. Cost comparison under this definition shall include but not be limited to: (a) cost escalations and future availability of fuels; (b) waste disposal and decommissioning cost; (c) transmission and distribution costs; (d) geographic, climatic and other differences in the state; and (e) environmental impact. ORS 757.612 (4) (SB 1149) exempts utilities from the requirements of ORS 469.631 to 469.645 when the public purpose charge is implemented.

By law, Oregon public purpose funds may be invested only in cost-effective energy-efficiency measures—that is, efficiency measures must cost less than acquiring the energy from conventional sources, unless exempted by the OPUC. *Reference the Board Cost-Effectiveness Policy and General Methodology*

Cumulative Savings
Sum of the total annual energy savings over a certain time frame while accounting for measure savings "lives." (For example, if a measure is installed for each of two years, the cumulative savings would be the sum of the measure installed in the first year, plus the incremental savings from the savings installed in the second year plus the savings in the second year from the measure installed in the first year.)

Decoupling
A rate provision which reduces or eliminates the degree to which utility profits are driven by the volume of electricity or gas sold. Decoupling is thought by its proponents to reduce utility disincentives to support efficiency. There are many specific variants employed in different states and with different utilities.

Direct Access
The ability of a retail electricity consumer to purchase electricity and certain ancillary services from an entity other than the distribution utility.

Economizer Air
A ducting arrangement and automatic control system that allows a heating, ventilation and air conditioning (HVAC) system to supply up to 100 percent outside air to satisfy cooling demands, even if additional mechanical cooling is required.

Energy Management System (EMS)
A system designed to monitor and control building equipment. An EMS can often be used to monitor energy use in a facility, track the performance of various building systems and control the operations of equipment.

ENERGY STAR®
ENERGY STAR is a joint Environmental Protection Agency and Department of Energy program that encourages energy conservation by improving the energy efficiency of a wide range of consumer and commercial products, enhancing energy efficiency in buildings and promoting energy management planning for businesses and other organizations.

Energy Use Intensity (EUI)
A metric that describes a building's energy use relative to its size. It is the total annual energy consumption (kBtu) divided by the total floor space of the building. EUI varies significantly by building type and by the efficiency of the building.

Enthalpy
Enthalpy is the useful energy or total heat content of a fluid. Ideally, the total enthalpy of a substance is the amount of useful work that substance can do. Enthalpy is used in fluid dynamics and thermodynamics when calculating properties of fluids as they change temperature, pressure and phase (e.g. liquid to liquid-vapor mixture). In HVAC, refrigeration and power cycle processes, enthalpy is used extensively in calculating properties of the refrigerant or working fluid. Additionally, in HVAC applications, enthalpy is used in calculations relating to humidity. An enthalpy economizer is a piece of HVAC equipment that modulates the amount of outdoor air entering into a ventilation system based on outdoor temperature and humidity.

Environmental Protection Agency (EPA)
Founded in 1970, this independent agency was designed to "protect human health and safeguard the natural environment." It regulates a variety of different types of emissions, including greenhouse gases emitted in energy use. It runs several national end-use programs, like ENERGY STAR, SmartWay, Smart Growth programs and green communities programs.

Evaluation
After-the-fact analysis of the effectiveness and results of programs. *Process and Market Evaluations* study the markets to be addressed and the effectiveness of the program strategy, design and implementation. They are used primarily to improve programs. *Impact evaluations* use post-installation data to improve estimates of energy savings and renewable energy generated.

Feed-in Tariff
A renewable energy policy that typically offers a guarantee of payments to project owners for the total amount of renewable electricity they produce, access to the grid and stable, long-term contracts. In Oregon, the pilot program was called the Volumetric Incentive Rate program and each investor-owned utility in the state ran separate programs. Solar systems receiving a feed-in tariff rate were not eligible for Energy Trust incentives or a state tax credit.

Footcandle
A unit of illuminance on a surface that is one foot from a uniform point source of light of one candle and is equal to one lumen per square foot

Free Rider
This evaluation term describes energy efficiency program participants who would have taken the recommended actions on their own, even if the program did not exist. Process evaluations include participant survey questions, which lead to the quantification of the level of free rider impacts on programs that is applied as a discounting factor to Energy Trust reported results.

Geothermal
Useful energy derived from the natural heat of the earth as manifested by hot rocks, hot water, hot brines or steam.

Green Tags (Renewable Energy Certificates or RECs)
See the Renewable Energy Certificates entry.

Gross Savings
Savings that are unadjusted for evaluation factors of free riders, spillover and savings realization rates. Energy Trust reports all savings in net terms, not gross terms, unless otherwise stated in the publication.

Heat Pump
An HVAC system that works as a two-way air conditioner, moving heat outside in the summer and reusing heat from the cold outdoors with an electrical system in the winter. Most systems use forced warm-air delivery systems to move heated air throughout the house.

Heating, Ventilation and Air Conditioning (HVAC)
Mechanical systems that provide thermal comfort and air quality in an indoor space. They are often grouped together because they are generally interconnected. HVAC systems include central air conditioners, heat pumps, furnaces, boilers, rooftop units, chillers and packaged systems.

Hydroelectric Power (Hydropower)
The generation of electricity using falling water to turn turbo-electric generators.

Incremental Annual Savings
Energy savings in one year corresponding to the energy-efficiency measures implemented in that same year.

Incremental Cost
The difference in cost relative to a base case, including equipment and labor cost.

Instant-savings Measure (ISM)
Inexpensive energy-efficiency products installed at no charge, such as CFLs, low-flow showerheads and high-performance faucet aerators. Predominately used by the Existing Homes program and multifamily track to provide homeowners and renters with easy-to-install, energy-saving products.

Integrated Resources Planning (Least-Cost Planning)
A power-planning strategy that takes into account all available and reliable resources to meet current and future loads. This strategy is employed by each of the utilities served by Energy Trust, and for the region's electric system by the Northwest Power and Conservation Council. The term "least-cost" refers to all costs, including capital, labor, fuel, maintenance, decommissioning, known environmental impacts and difficult to quantify ramifications of selecting one resource over another.

Interconnection
For all distributed generation—solar, wind, CHP, fuel cells, etc.—interconnection with the local electric grid provides back-up power and an opportunity to participate in net-metering and sell-back schemes when they are available. It's important to most distributed generation projects to be interconnected with the grid, but adding small generators at spots along an electric grid can produce a number of safety concerns and other operational issues for a utility. Utilities, then, generally work with their state-level regulatory bodies to develop interconnection standards that clearly delineate the manner in which distributed generation systems may be interconnected.

Joule
A unit of work or energy equal to the amount of work done when the point of application of force of 1 newton is displaced 1 meter in the direction of the force. It takes 1,055 joules to equal a Btu. It takes about 1 million joules to make a pot of coffee.

Kilowatt
One thousand (1,000) watts. A unit of measure of the amount of electricity needed to operate given equipment.

Large Customers (with reference to SB 838)
Customers using more than 1 aMW of electricity a year are not required to pay electric conservation charges under SB 838. Additionally, Energy Trust may not provide them with services funded under SB 838 provisions.

Least Cost
The term “least-cost” refers to all costs, including capital, labor, fuel, maintenance, decommissioning, known environmental impacts and difficult to quantify ramifications of selecting one resource over another.

Levelized Cost
The level of payment necessary each year to recover the total investment and interest payments (at a specified interest rate) over the life of the measure.

Local Energy Conservation
Conservation measures, projects or programs that are installed or implemented within the service territory of an electric company.

Low-income Weatherization
Repairs, weatherization and installation of energy-efficient appliances and fixtures for low-income residences for the purpose of enhancing energy efficiency. In Oregon, SB 1149 directs a portion of public purpose funds to Oregon Housing and Community Services to serve low-income customers. Energy Trust coordinates with low-income agencies and refers eligible customers.

Lumen
A measure of the amount of light available from a light source equivalent to the light emitted by one candle.

Lumens/Watt
A measure of the efficacy of a light fixture; the number of lumens output per watt of power consumed.

Market Transformation
Lasting structural or behavioral change in the marketplace and/or changes to energy codes and equipment standards that increases the adoption of energy-efficient technologies and practices. Market transformation is defined in the Oregon Administrative Rules.

Megawatt
The electrical unit of power that equals one million watts (1,000 kW).

Megawatt Hour
One thousand kilowatt hours, or an amount of electrical energy that would power approximately one typical PGE or Pacific Power household for one month. (Based on an average of 11,300 kWh consumed per household per year.)

Methane
A light hydrocarbon that is the main component of natural gas and marsh gas. It is the product of the anaerobic decomposition of organic matter, enteric fermentation in animals and a greenhouse gas.

Monitoring, Targeting and Reporting (MT&R)
A systematic approach to measure and track energy consumption data by establishing a baseline in order to establish reduction targets, identify opportunities for energy savings and report results.

Municipal Solid Waste
Refuse offering the potential for energy recovery. Technically, residential, institutional and commercial discards. Does not include combustible wood by-products included in the term “mill residue.”

Net Metering
An electricity policy for consumers who own (generally small) renewable energy facilities (such as wind, solar power or home fuel cells). "Net," in this context, is used in the sense of meaning "what remains after deductions.” In this case, the deduction of any energy outflows from metered energy inflows. Under net metering, a system owner receives retail credit for at least a portion of the electricity they generate.

Net-to-Gross
Net-to-gross ratios are important in determining the actual energy savings attributable to a particular program, as distinct from energy efficiency occurring naturally (in the absence of a program). The net-to-gross ratio equals the net program load impact divided by the gross program load impact. This factor is applied to gross program savings to determine the program's net impact.

Net Savings
Savings that are adjusted for evaluation factors of free riders, spillover and savings realization rates. Energy Trust reports all savings in net terms, not gross terms, unless otherwise stated in the publication.

Nondifferentiated Source (Undifferentiated Source)
Power available from the wholesale market or delivered to retail customers.

Non-energy Benefit (NEB)
The additional benefits created by an energy-efficiency or renewable energy project beyond the energy savings or production of the project. Non-energy benefits often include water and sewer savings (e.g. clothes washers, dishwashers), improved comfort (e.g. air sealing, windows), sound deadening (e.g. insulation, windows), property value increase (e.g. windows, solar electric), improved health and productivity and enhanced brand.

Oregon Public Utility Commission (OPUC)
Energy Trust operates under a grant agreement with the OPUC and reports quarterly and annually to the state agency. Reports include quarterly presentations to the commission and an annual update on progress to OPUC minimum annual performance measures.

Path to Net Zero (PTNZ)
The Path to Net Zero pilot was launched in 2009 by the New Buildings program to provide increased design, technical assistance, construction, and measurement and reporting incentives to commercial building projects that aimed to achieve exceptional energy performance. The offer demonstrates that a wide range of buildings can achieve aggressive energy goals using currently available construction methods and technology, as well as by testing innovative design strategies.

Photovoltaic
Direct conversion of sunlight to electric energy through the effects of solar radiation on semi-conductor materials. Photovoltaic systems are one type of solar system eligible for Energy Trust incentives.

Program Management Contractor (PMC)
Company Energy Trust contracts with to deliver and implement a program or major program track. PMCs keeps costs low for utility customers, draw from existing expertise and skills in the market, and allow Energy Trust to remain flexible and nimble as the market changes. PMC contracts are competitively selected, reviewed by a committee with internal staff and external representatives, and approved by the board.

Program Delivery Contractor (PDC)
Company Energy Trust contracts with to implement a specific program track. PDCs keeps costs low for utility customers, draw from existing expertise and skills in the market, and allow Energy Trust to remain flexible and nimble as the market changes. PDC contracts are competitively selected, reviewed by a committee with internal staff and external representatives, and approved by the board.

Public Purpose Charge
Established in SB 1149, the public purpose charge is a 3 percent charge from PGE and Pacific Power Oregon customers. Three fund administrators distribute the ratepayer dollars: Energy Trust of Oregon for energy efficiency, market transformation and renewable energy programs; the Oregon Department of Energy for energy efficiency in schools; and Oregon Housing and Community Services for low-income weatherization and housing assistance. Energy Trust is funded through the public purpose charge (SB 1149), supplemental funding (SB 838) and contracts with two gas utilities.

Public Utility Commissions
State agencies that regulate, among others, investor-owned utilities operating in the state with a protected monopoly to supply power in assigned service territories.

Public Utility Regulatory Act of 1978 (PURPA)
Federal legislation that requires utilities to purchase electricity from qualified independent power producers at a price that reflects what the utilities would have to pay for the construction of new generating resources. The Act was designed to encourage the development of small-scale cogeneration and renewable resources.

Qualifying Facility (QF)
A power production facility that generates its own power using cogeneration, biomass waste, geothermal energy, or renewable resources, such as solar and wind. Under PURPA, a utility is required to purchase power from a QF at a price equal to that which the utility would otherwise pay to another source, or equivalent to the cost if it were to build its own power plant.

Renewable Energy Certificates (RECs or Green Tags)
A Renewable Energy Certificate is a tradable commodity that represents the contractual rights to claim the environmental attributes of a certain quantity of renewable electricity. The environmental attributes include the reductions in emissions of pollutants and greenhouse gases that result from the delivery of the renewably-generated electricity to the grid.

Here's how emission reductions occur: When a renewable energy system generate electricity, the grid operators allow that electricity to flow into the grid because it is less expensive to operate, once it has been built, than generators that burn fossil fuels. But the electricity grid cannot have more electricity flowing into it than is flowing out to electricity users, so the grid operators have to turn down other generators to compensate. They generally turn down those that burn fossil fuels. By forcing the fossil fuel generators to generate less electricity, the renewable energy system causes them to generate fewer emissions of pollutants and greenhouse gases. These reductions in emissions are the primary component of RECs.

RECs were developed as a separate commodity by the energy industry to boost construction of new wind, solar, landfill gas and other renewable energy power plants. RECs allow owners of these power plants to receive the full value of the environmental benefits their plants generate. They also allow consumers to create the same environmental benefits as buying green electricity, or to neutralize the pollution from their consumption of fossil fuels.

RECs are bought and sold every day in the electricity market. They are measured in units, like electricity. Each kilowatt hour of electricity that a renewable energy system produces also creates a one-kilowatt hour REC. *Reference the Board Renewable Energy Certificate Policy*

Renewable Energy Resources
a) Electricity-generation facilities fueled by wind, waste, solar or geothermal power or by low-emission nontoxic biomass based on solid organic fuels from wood, forest and field residues
b) Dedicated energy crops available on a renewable basis
c) Landfill gas and digester gas
d) Hydroelectric facilities located outside protected areas as defined by federal law in effect on July 23, 1999

Renewable Portfolio Standard
A legislative requirement, including in Oregon, for utilities to meet specified percentages of their electric load with renewable resources by specified dates, or a similar requirement. May be referred to as Renewable Energy Standard.

Retrofit
A retrofit involves the installation of new, usually more efficient equipment into an existing building or process prior to the existing equipment's failure or end of its economic life. In buildings, retrofits may involve either structural enhancements to increase strength, or replacing major equipment central to the building's functions, such as HVAC or water heating systems. In

industrial applications, retrofits involve the replacement of functioning equipment with new equipment.

Roof-top Units (RTU)
Packaged heating, ventilating and air conditioning unit that generally provides air conditioning and ventilating services for zones in low-rise buildings. Roof-top units often include a heating section, either resistance electric, heat pump or non-condensing gas (the latter are called “gas-paks”). Roof-top units are the most prevalent comfort conditioning systems for smaller commercial buildings. Generally small (<10 ton) commodity products, but very sophisticated high-efficiency versions are available, as are units larger than 50 tons.

R-Value
A unit of thermal resistance used for comparing insulating values of different material. It is basically a measure of the effectiveness of insulation in stopping heat flow. The higher the R-Value number for a material the greater its insulating properties and the slower the heat flow through it. The specific value needed to insulate a home depends on climate, type of heating system and other factors.

SB 1149
Oregon legislation enacted in 1999 allowing for the creation of a third party, nonprofit organization to receive approximately 74 percent of a 3 percent utility surcharge (public purpose charge) and deliver energy-efficiency and renewable energy programs to the funding Oregon ratepayers of Portland General Electric and Pacific Power. Energy Trust was approved by the OPUC to deliver the services. The rest of the surcharge is distributed to school districts through the Oregon Department of Energy and to low-income customers through Oregon Housing and Community Services. SB 1149 is one stream of funding for Energy Trust, which is also funded through SB 838 to deliver achievable energy efficiency above the 3 percent and identified in utility integrated resource planning processes, and individual contracts with NW Natural and Cascade Natural Gas to deliver natural gas efficiency programs.

SB 838
SB 838, enacted in 2007, augmented Energy Trust’s mission in many ways. It provided a vehicle for additional electric efficiency funding for customers under 1 aMW in load by allowing PGE and Pacific Power to fund cost-effective energy efficiency above the 3 percent, and restructured the renewable energy role to focus on renewable energy systems that are 20 MW or less in size. SB 838 is also the legislation creating the state’s Renewable Portfolio Standard and extended Energy Trust’s sunset year from 2012 to 2026.

SB 838 is often categorized as supplemental funding in Energy Trust budget documents.

Sectors
For energy planning purposes, the economy is divided into four sectors: residential, commercial, industrial and irrigation. At Energy Trust, programs are divided into four sectors: residential, commercial (including multifamily), industrial (including irrigation) and renewable energy.

Self-Directing Consumers
A retail electricity consumer that has used more than one aMW of electricity at any one site in the prior calendar year or an aluminum plant that averages more than 100 aMW of electricity use in the prior calendar year, that has received final certification from the Oregon Department of Energy for expenditures for new energy conservation or new renewable energy resources and that has notified the electric company that it will pay the public purpose charge, net of

credits, directly to the electric company in accordance with the terms of the electric company's tariff regarding public purpose credits.

Solar Power
Using energy from the sun to make electricity through the use of photovoltaic cells.

Solar Thermal
The process of concentrating sunlight on a relatively small area to create the high temperatures needed to vaporize water or other fluids to drive a turbine for generation of electric power.

Spillover
Additional measures that were implemented by the program participant for which the participant did not receive an incentive. They undertook the project on their own, influenced by prior program participation.

Strategic Energy Management (SEM)
A program offering for both commercial and industrial customers: commercial Strategic Energy Management and industrial Strategic Energy Management. Through SEM, customers engage with Energy Trust for a year or more in a systematic and ongoing approach to lowering energy usage. Energy Trust helps customers track and monitor energy use and performance, identify and implement no-cost and low-cost operations and maintenance changes, develop an energy management plan and more. SEM creates culture change around energy, training employees at all levels that energy use can be tracked, reduced and managed.

Therm
One hundred thousand (100,000) British thermal units (1 therm = 100,000 Btu).

Total Resource Cost Test
The OPUC has used the total resource cost (TRC) test as the primary basis for determining conservation cost-effectiveness as determined in Order No. 94-590 (docket UM 551). SB 1149 allows the "self-directing consumers" to use a simple payback of one to 10 years as the cost-effectiveness criterion. This test is central to how Energy Trust delivers on its mission. This test is the main test that determines whether Energy Trust can offer an incentive for a project. It also reflects the region's approach to long-term energy planning by prioritizing investment in low-cost energy resources. *Reference the Board Cost-Effectiveness Policy and General Methodology*

Tidal Energy
Energy captured from tidal movements of water.

Trade Ally Contractor (Trade Ally)
Energy Trust trade allies are valued ambassadors in the field. The network of independent contractors andother allied professionals helps homeowners, businesses, public and nonprofit entities, developers and others complete energy-efficiency and renewable energy projects across Oregon and in southwest Washington. Quite often, trade allies are the first, last and only Energy Trust representative a customer will see.

Trade Ally Network
Energy Trust statewide network of trained contractors and other allied businesses.

Utility Cost Test
This test is used to indicate the incentive amount for a project. It helps Energy Trust determine whether providing an incentive is cost effective for the utility system. *Reference the Board Cost-Effectiveness Policy and General Methodology*

U-Value (U-Factor)
A measure of how well heat is transferred by the entire window—the frame, sash and glass—either into or out of the building. U-Value is the opposite of R-Value. The lower the U-Value number, the better the window will keep heat inside a home on a cold day.

Wave Energy
Energy captured by the cyclical movement of waves in the ocean or large bodies of water.

Watt
A unit of measure of electric power at a point in time, as capacity or demand. One watt of power maintained over time is equal to one joule per second.

Wind Power
Harnessing the energy stored in wind via turbines, which then convert the energy into electricity. Mechanical power of wind can also be used directly.

Weatherization
The activity of making a building (generally a residential structure) more energy efficient by reducing air infiltration, improving insulation and taking other actions to reduce the energy consumption required to heat or cool the building. In practice, “weatherization programs” may also include other measures to reduce energy used for water heating, lighting and other end uses.

Acronyms Related to Energy Trust of Oregon's Work

AAMA	American Architectural Manufacturers Association	Trade group for window, door manufacturers
A/C	Air Conditioning	
ACEEE	American Council for an Energy-Efficient Economy	Environmental Advocacy, Researcher
AEE	Association of Energy Engineers	
AEO	Annual Energy Outlook	
AESP	Association of Energy Services Professionals	Energy services and energy efficiency trade organization
AFUE	Annual Fuel Utilization Efficiency	The measure of seasonal or annual efficiency of a furnace or boiler
AIA	American Institute of Architects	Trade organization
AOC	Association of Oregon Counties	
aMW	Average Megawatt	A way to equally distribute annual energy over all the hours in one year; there are 8,760 hours in a year
AOI	Associated Oregon Industries	
APEM	Association of Professional Energy Managers	
ARI	Air-Conditioning and Refrigeration Institute	AC trade association
ASE	Alliance to Save Energy	Environmental advocacy organization
ASERTTI	Association of State Energy Research and Technology Transfer Institutions, Inc.	
ASHRAE	American Society of Heating, Refrigeration, and Air Conditioning Engineers	Technical (engineers) association
ASME	American Society of Mechanical Engineers	Professional organization
BACT	Best Achievable Control Technology	
BCR	Benefit/Cost ratio	See definition in text
BEF	Bonneville Environmental Foundation	Nonprofit that funds renewable energy projects
BETC	Business Energy Tax Credit	Former Oregon tax credit
BOC	Building Operator Certification	Trains and certifies building operators
BOMA	Building Owners and Managers Association	
BPA	Bonneville Power Administration	Federal power authority
BPS	Bureau of Planning and Sustainability	City of Portland government agency
CAC	Conservation Advisory Council	Energy Trust advisory council to the board
CCS	Communications and Customer Service	A group within Energy Trust
CCCT	Combined Cycle Combustion Turbine	
CEE	Consortium for Energy Efficiency	National energy efficiency group
CEW	Clean Energy Works	
CFL	Compact Fluorescent Light bulb	
CHP	Combined Heat and Power	
CNG	Cascade Natural Gas	Investor-owned utility
ConAug	Conservation Augmentation Program	BPA program

CHT	Coefficient of Heat Transmission (U-Value)	A value that describes the ability of a material to conduct heat. The number of Btu that flow through 1 square foot of material, in one hour. It is the reciprocal of the R-Value (U-Value = 1/R-Value.
COU	Consumer-Owned Utility	
COP	Coefficient of Performance	The ratio of heat output to electrical energy input for a heat pump
CR	CLEAResult	Program Management Contractor for Existing Homes, New Homes and New Buildings
CRM	Customer Relationship Management system	Energy Trust's system to capture information on program participants and non-participants that have communicated with us
CT	Combustion Turbine	
CUB	Citizens' Utility Board of Oregon	Public interest group
Cx	Commissioning	
DG	Distributed Generation	
DSI	Direct Service Industries	Direct Access customers to BPA
DOE	Department of Energy	Federal agency
DSM	Demand Side Management	
EA	Environmental Assessment	
EA	Earth Advantage	
EASA	Electrical Apparatus Service Association	Trade association
ECM	Electrically Commutation Motor	Also known as a variable-speed blower motor, can vary the blower speed in accordance with the needs of the system
EE	Energy Efficiency	
EER	Energy Efficiency Ratio	The cooling capacity of the unit (in Btu/hour) divided by its electrical input (in watts) at standard peak rating conditions
EF	Energy Factor	An efficiency ratio of the energy supplied in heated water divided by the energy input to the water heater
EIA	Energy Information Administration	
EMS	Energy Management System	See definition in text
EPA	Environmental Protection Agency	Federal agency
EPRI	Electric Power Resource Institute	Utility organization
EPS™	Energy Performance Score	Energy Trust rating that assesses a newly built or existing home's energy use, carbon impact and estimated monthly utility costs

EQIP	Environmental Quality Incentive Program	
EREN	Energy Efficiency and Renewable Energy Network	DOE program
ESS	Energy Services Supplier	
EUI	Energy Use Intensity	See definition in text
EWEB	Eugene Water & Electric Board	Utility organization
FCEC	Fair and Clean Energy Coalition	Environmental advocacy organization
FEMP	Federal Energy Management Program	
FERC	Federal Energy Regulatory Commission	Federal regulator
GHG	Greenhouse gas	
GP	Great Plains	Energy Trust's financial tracking system
HBA	Home Builders Association	
HER	Home Energy Review	Online review of a residential customer's home
HSPF	Heating Season Performance Factor	
HVAC	Heating, Ventilation and Air Conditioning	
IBEW	International Brotherhood of Electrical Workers	
ICNU	Industrial Customers of Northwest Utilities	Trade interest group
ICF	ICF International	Existing Buildings Program Management Contractor
IEEE	Institute of Electrical and Electronic Engineers	Professional association
IESNA	Illuminating Engineering Society of America	
IOU	Investor-Owned Utility	
IRP	Integrated Resource Plan	
ISIP	Integrated Solution Implementation Project	
ISM	Instant-Savings Measure	See definition in text
ITC	Investment Tax Credit	Federal
kW	Kilowatt	
kWh	Kilowatt Hours	8,760,000 kWh = 1 aMW
LBL	Lawrence Berkeley Laboratory	
LED	Lighting Emitting Diode	Solid state lighting technology
LEED	Leadership in Energy & Environmental Design	Building rating system from the U.S. Green Building Council
LIHEAP	Low Income Housing Energy Assistance Program	
LIWA	Low Income Weatherization Assistance	
LM	Lockheed Martin	Existing Multifamily Program Management Contractor
LOC	League of Oregon Cities	Local government organization
MEEA	Midwest Energy Efficiency Alliance	Midwest Market Transformation organization, Alliance counterpart
MT&R	Monitoring, Targeting and Reporting	See definition in text
MW	Megawatt	Unit of electric power equal to one thousand kilowatts

MWh	Megawatt Hour	Unit of electric energy, which is equivalent to one megawatt of power used for one hour
NAHB	National Association of Home Builders	Trade association
NCBC	National Conference on Building Commissioning	
NEB	Non-Energy Benefit	See definition in text
NEEA	Northwest Energy Efficiency Alliance	
NEEC	Northwest Energy Efficiency Council	Trade organization
NEEI	Northwest Energy Education Institute	Training organization
NEEP	Northeast Energy Efficiency Partnership	Northwest market transformation organization
NEMA	National Electrical Manufacturer's Association	Trade organization
NERC	North American Electricity Reliability Council	
NFRC	National Fenestration Rating Council	
NRC	National Regulatory Council	Federal regulator
NRCS	Natural Resources Conservation Service	
NRDC	Natural Resources Defense Council	
NREL	National Renewable Energy Lab	
NRTA	Northwest Regional Transmission Authority	
NWEC	Northwest Energy Coalition	Environmental advocacy organization
NWBOA	Northwest Building Operators Association	Trade organization
NWFPA	Northwest Food Processors Association	Trade organization
NWN	NW Natural	Investor-owned utility
NWPPA	Northwest Public Power Association	Trade organization
NWPCC	Northwest Power and Conservation Council	Regional energy planning organization, "the council"
NYSERDA	New York State Energy Research & Development Authority	New York energy efficiency and renewable energy organization funded by a systems benefit charge
OBA	Oregon Business Association	Business lobby group
OEFSC	Oregon Energy Facility Siting Council	Authority to site energy facilities in Oregon
ODOE	Oregon Department of Energy	Oregon state energy agency and one of three public purpose charge administrators
OHCS	Oregon Housing and Community Services	One of three public purpose charge administrator
OPUC	Oregon Public Utility Commission	
OPUDA	Oregon Public Utility District Association	Utility trade organization
OPEC	Organization of Petroleum Exporting Countries	
ORECA	Oregon Rural Electric Cooperative Association	Utility trade organization
OSEIA	Solar Energy Industries Association of Oregon	Volunteer nonprofit organization dedicated to education/promotion
P&E	Planning and Evaluation	A group within Energy Trust
PAC	Pacific Power	

PDC	Program Delivery Contractor	Company contracted with Energy Trust to identify and deliver industrial and agricultural services, and commercial Strategic Energy Management services, to Energy Trust customers
PECI	Portland Energy Conservation, Inc.	Portland nonprofit; former Energy Trust PMC
PGE	Portland General Electric	Investor-owned utility
PG&E	Pacific Gas & Electric	California investor-owned utility
PMC	Program Management Contractor	Company contracted with Energy Trust to deliver a program
PNUCC	Pacific Northwest Utilities Conference Committee	
PPC	Public Power Council	National trade group
PPL	Pacific Power	Formerly Pacific Power and Light
PSE	Puget Sound Energy	Investor-owned utility
PT	Project Tracking	Energy Trust's database that tracks details on customer projects
PTC	Production Tax Credit	Federal incentive that provides financial support for the first 10 years of a renewable energy facility's operation
PTCS	Performance Tested Comfort Systems	Promotes the efficiency of air-systems in residential homes
PTNZ	Path to Net Zero	See definition in text
PUC	Public Utility Commission	
PUD	Public Utility District	
PURPA	Public Utility Regulatory Policies Act	See definition in text
QF	Qualifying Facility	
RAC	Renewable Energy Advisory Council	Energy Trust advisory council to the board
RE	Renewable Energy	
REIT	Real Estate Investment Trust	
RETC	Residential Energy Tax Credit	Oregon tax credit
RFI	Request for Information	
RFP	Request for Proposal	
RFQ	Request for Qualification	
RNW	Renewable Northwest	Renewable energy advocacy group
RSES	Refrigeration Service Engineers Society	Trade association
RTF	Regional Technical Forum	BPA funded research group
RTU	Rooftop HVAC Unit Tune Up	Rooftop HVAC unit tune up
SCCT	Single Cycle Combustion Turbine	
SCL	Seattle City Light	Public utility
SEED	State Energy Efficient Design	Established in 1991, requires all state facilities to exceed the Oregon Energy Code by 20 percent or more

SEER	Seasonal Energy Efficiency Ratio	A measure of cooling efficiency for air conditioners; the higher the SEER, the more energy efficient the unit
SIS	Scientific Irrigation Scheduling	Agricultural information program
SNOPUD	Snohomish Public Utility District	Washington State PUD
SEIA	Solar Energy Industries Association	Volunteer nonprofit organization dedicated to education/promotion
SWEEP	Southwest Energy Efficiency Partnership	Southwest market transformation group
T&D	Transmission & Distribution	
TRC	Total Resource Cost	See definition in text
U-Value		The reciprocal of R-Value; the lower the number, the greater the heat transfer resistance (insulating) characteristics of the material
USGBC	U.S. Green Building Council	Sustainability advocacy organization responsible for LEED
VFD	Variable Frequency Drive	An electronic control to adjust motion
WUTC	Washington Utilities and Transportation Commission	
Wx	Weatherization	
W	Watt	