Energy Trust Board of Directors Meeting

February 24, 2016

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141st Board Meeting—Annual Meeting

Wednesday, February 24, 2016
421 SW Oak Street, Suite 300
Portland, Oregon

	Agenda	Tab	Purpose
12:15pm	**Training: board responsibilities and legal obligations** (Penny Serrurier)		
1:15pm	**Break**		
1:25pm	**141st 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.* • December 11 Board meeting minutes • Amend Policy on Self-Direct Incentives—R769	**1**	Action
1:30pm	**President's Report** (Debbie Kitchin) • Committee Assignments—R765.....		Action
1:45pm	**Nominating Committee** (John Reynolds) ..... • Election to new terms of office—R766 • Election of officers—R767	**2**	Action
1:55pm	**Committee Reports** • Audit Committee (Ken Canon) • Executive Director Transition Committee (Ken Canon) • Evaluation Committee (Alan Meyer) ..... • Finance Committee (Dan Enloe) ..... ♦ Office space lease negotiations—R768 ..... • Policy Committee (Roger Hamilton) ..... • Strategic Planning Committee (Mark Kendall).....	 **3** **4** **4** **5** **6**	 Info Info Action Info Info
2:30pm	**Break**		
2:40pm	**Staff Report** ..... • Highlights (Margie Harris) ♦ Preliminary year-end results • 2016 Legislation update (Jay Ward & Hannah Cruz)	**7**	Info
3:40pm	**Adjourn**		

The next meeting of the Energy Trust Board of Directors will be held
Wednesday, April 6, 2016 at 12:15pm
at Energy Trust of Oregon, 421 SW Oak Street, Suite 300, Portland

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Tab 1

Board Meeting Minutes—140th Meeting

December 11, 2015

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

Board members absent: John Savage (OPUC *ex officio*)

Staff attending: Margie Harris, Ana Morel, Debbie Menashe, Amber Cole, Fred Gordon, Steve Lacey, Peter West, Courtney Wilton, Hannah Cruz, John Volkman, Jed Jorgensen, Betsy Kauffman, Thad Roth, Jessica Iplikci, Mike Bailey, Mia Hart, Sue Fletcher, Oliver Kesting, Karen Chase, Dave Moldal, Dave McClelland, Marshall Johnson, Dan Rubado, Erika Kocielek, Susan Badger Jones

Others attending: Jim Abrahamson (Cascade Natural Gas), Don Jones, Jr. (PacifiCorp), Anne Snyder-Grassman (Portland General Electric), Elaine Prause (Oregon Public Utility Commission), John Charles (Cascade Policy Institute), Ed Wales, Dick Wandersheid (Bonneville Environmental Foundation), BJ Moghadam (NEEA), Bob Stull (CLEAResult), Greg Stiles (Ecova), Julie Davies O'Shea (Farmers Conservation Alliance)

Business Meeting

Debbie Kitchin called the meeting to order at 12:15 p.m. Reminder that consent agenda items can be changed to regular agenda items at any time.

General Public Comments

There were no public comments.

Consent Agenda

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

MOTION: Approve consent agenda

Consent agenda includes:

1) November 4 Board meeting minutes
2) Suspend WREGIS Registration Requirements for Certain Classes of Renewable Energy Certificates—R762

RESOLUTION 762
SUSPEND WREGIS REGISTRATION REQUIREMENTS FOR
CERTAIN CLASSES OF RENEWABLE ENERGY CERTIFICATES

WHEREAS:

1. **At its meeting on November 4, 2015, the board of directors of Energy Trust approved a set of changes to Energy Trust's Renewable Energy Certificate (REC) Policy.**
2. **Among the policy changes approved was the addition of an annual board and Renewable Advisory Council (RAC) review of the market and other value of RECs as compared to the cost and effort of WREGIS registration.**
3. **WREGIS is the Western Renewable Energy Generation Information System (WREGIS). WREGIS tracks renewable energy generation through registering RECs representing such**

generation. Only WREGIS-registered RECs are eligible to count towards Oregon's Renewable Portfolio Standard requirements.

4. **Under the revised policy, if the relative cost and effort of registering RECs is prohibitive for certain categories of RECs, the board may authorize staff to take contractual title to RECs, but suspend efforts to register such RECs in WREGIS until such time as WREGIS registration is cost effective.**
5. **The revised REC policy also calls for Energy Trust staff to confer with Portland General Electric, Pacific Power, and the Oregon Public Utility Commission (OPUC) to determine the market and other values of RECs in order to make a determination of value relative to the cost and effort of WREGIS registration.**
6. **Energy Trust staff has conferred with utilities and OPUC staff regarding market value of RECs. Based on these discussions and market research undertaken by Bonneville Environmental Foundation in early 2015, Energy Trust staff has concluded that the market value of RECs is small relative to the cost and effort of WREGIS registration for two classes of RECs: (1) RECs generated through Energy Trust's standard solar program projects and (2) RECs generated through Energy Trust's Other Renewables program custom projects where neither the project owner nor the relevant utility are willing to take responsibility for registering RECs in WREGIS. For both of these categories of RECs, WREGIS registration costs far outweigh the market and other value of the RECs involved.**

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

1. **Suspends requirements for WREGIS registration of RECs generated in the following categories of renewable energy projects for which Energy Trust incentives are paid:**
   a. **RECs generated through Energy Trust's standard solar program projects; and**
   b. **RECs generated through Other Renewables program custom projects where neither the project owner nor the relevant utility are willing to take responsibility for registering RECs in WREGIS.**
2. **Requires Energy Trust staff to continue to take contractual title to the categories of RECs identified in this resolution and to review the relative market and other value of such RECs in not more than one year from the date of this resolution to determine whether the cost and effort of WREGIS registration continues to be prohibitive and to provide an annual update on such values to the board consistent with Energy Trust's board-adopted REC policy.**

Moved by: Dan Enloe — Seconded by: Roger Hamilton
Vote: In favor: 13 — Abstained: 0
Opposed: 0

President's Report

Debbie announced that the February 2016 board meeting will include a resolution assigning committee membership for the year. Board members are to follow up with Debbie on whether they would like to change their current committee assignments, and committee chairs are to notify Debbie if they need any particular skills or strengths added to their committees. Unless she hears otherwise, Debbie will propose the 2016 committee assignments to be the same as 2015.

Debbie provided the board with a Board Governance Basics handout. The Energy Trust board exercises good governance through regular review of policies, the adoption of a governance structure and a committee structure. Debbie encouraged the board to consider whether there are other governance issues to address or learnings to apply from their experiences on other boards. She noted board governance is an important part of the process.

The board discussed adding the Conservation Advisory Council and Renewable Energy Advisory Council rosters to the Board Committee Assignments resolution for February 2016.

Warren Cook joined the meeting at 12:22 p.m.

Final Proposed 2016 Annual Budget & 2016-2017 Action Plan

Margie Harris, Peter West, Courtney Wilton

Prior to the budget presentation, Margie announced Energy Trust was just informed it was recognized by the Association of Energy Service Professionals for the Path to Net Zero initiative. The New Buildings program initiative received an award for outstanding achievement in non-residential program design and achievement.

Responding to the board, Jessica said Path to Net Zero has attracted a lot of different customer types and building types, even those well outside the Portland metro area. Participation is not necessarily concentrated in the public sector. Portland Community College is a public sector example.

Margie summarized the final proposed 2016 annual budget and 2016-2017 action plan. Since the November board presentation, staff sought and carefully listened to a variety of stakeholders who commented on the draft budget. She reviewed comments received, which were largely positive. Changes made from the draft budget for the final proposed budget were called out to the board.

Outreach activities were reviewed, and included individual meetings with the utilities, OPUC, the Oregon Department of Energy, Conservation Advisory Council, Renewable Energy Advisory Council, stakeholders and the public. The traditional formal presentation to the executive leadership of each of the four utilities was offered as either a November or February presentation. Pacific Power elected to receive the presentation in November; the rest will receive presentations early next year with a focus on completed year-end activity and board-approved 2016 activity. The outreach component to development of the budget remains an important facet of how Energy Trust completes its budget every year, and maintains transparency in the process.

Staff appreciates the valuable and insightful comments received. The board packet includes staff responses to comments received and includes copies of all comments submitted. Overall, staff heard support for the draft budget and action plan. Most of the comments were specific to strategies provided in the action plans. Comments from the utilities included acknowledgement of good exchange through the budget process, requests for information-sharing when programs or measures specific to their customers will be changing, and requests for continued engagement beyond the budget process. The board noted utilities have consistently valued advance notice, coordination and ongoing information sharing.

The OPUC staff comments on the draft budget and action plan were highlighted. The OPUC commissioners supported the budget and agreed with the staff comments. The OPUC requested Energy Trust, in future years, clarify and make more visible the underlying assumptions used in developing the budget, including reserve requirements assumptions and avoided cost changes.

Staff explained that planning assumptions are examined periodically, and if changed, are clarified on an annual basis in official reports to the OPUC. These changes can be referenced in future budget presentations as well, so they are made more visible to stakeholders. Examples of planning assumptions include changes related to avoided costs and if legislation changes how Energy Trust conducts its work.

Margie reviewed the OPUC comments on drawing down reserves. She sees the comments in line with ongoing efforts to bring reserves down to target levels, providing sufficient minimum reserves. The board commented reserve updates and financial information are provided in quarterly reports, and asked what

more the OPUC is asking for. Margie said the comment is aimed at ensuring Energy Trust has the right reserve amount for each utility. Energy Trust was still in discussion with the utilities on the target reserve amounts for 2016 at the time of the OPUC formal hearing on the draft budget and action plan. The exact percentages with each utility are now known.

With the 2015 year-end forecast and planned 2016 savings and generation, Energy Trust is projected to be at approximately 40 percent of the five-year strategic plan goals by the end of 2016.

Margie clarified the increase in revenues between the draft and final proposed budget is $6.4 million, not $5.6 million originally provided to the board on slide 11 of the mailed packet. The increase was made to bring the Pacific Power reserve target to 3 percent.

Energy Trust was able to achieve the reserve reduction goals in two years instead of three. This year, reserves will be reduced by $22 million and will be $34.4 million by the end of next year. The total draw down is about $57 million. Energy Trust has individually tailored reserves for each utility based on what is in the project pipeline and on the horizon. The reserve policy underscores the importance that Energy Trust work together with the utilities. The board requested slide 12 include the year 2014.

Margie reviewed anticipated rate adjustments by utility in the coming year. It is important to note this process depends on what each utility provides to the OPUC and is dependent on what the OPUC accepts in terms of any rate adjustment. Actual percentages will be available when that process completes in the spring. This is a best estimate at this time.

Margie and Peter clarified the Cascade Natural Gas public purpose charge percentage is larger than NW Natural's because the overall revenue base is smaller and a full suite of programs for customers is desired by Cascade Natural Gas.

In summary, the final proposed budget and action plan provide a sustained high level of savings acquisition, low levelized costs and solid renewable energy generation dominated by solar.

In follow-up to a board question from November, Energy Trust will operate under some cost-effectiveness waivers in 2016. Specifically in the Existing Homes program. These waivers represent less than 2 percent of all Energy Trust gas savings and 1.3 percent of electric savings.

Margie reviewed the 2017 budget projection, which is required by the grant agreement and will be adjusted when the 2017 budget is developed next fall.

The board asked how confident staff is in the completion of the 2016 gas mega project and 2017 electric mega project. Peter said the gas mega project is under construction now and staff will know in Q2 the expected date of completion.

The board asked if there was any remaining public comment on the budget and there was none.

The board thanked the staff for the development of the budget, and OPUC, utilities and stakeholders who took time to review and provide comments. The board commented on the successful reserve draw down strategy, and noted that staff needs to stay in close connection with utilities throughout the year to ensure the reserves are adequate if demand for services is greater than anticipated. Margie agreed.

RESOLUTION 761
ADOPT 2016 BUDGET, 2017 PROJECTION AND 2016-2017 ACTION PLAN

BE IT RESOLVED That Energy Trust of Oregon, Inc. Board of Directors approves the Energy Trust 2016 Budget, 2017 Projection and 2016-2017 Action Plan as presented in the board packet.

Moved by: Dan Enloe Seconded by: Eddie Sherman
Vote: In favor: 13 Abstained: 0
Opposed: 0

The board took a break from 1:10 to 1:20 p.m.

Energy Programs

Amend Farmers Conservation Alliance Contract, Jed Jorgensen

Jed introduced Julie Davies O'Shea, executive director of Farmers Conservation Alliance (FCA). Jed is asking the board to authorize an amendment to an existing contract with FCA. The amendment would raise the contract amount over $500,000, requiring board review and approval. The contract authorizes FCA to support Energy Trust efforts to bring irrigation district hydropower projects to market.

FCA is a 501(c)(3) nonprofit based in Hood River and specializes in developing resource solutions for rural communities. FCA excels at developing relationships with the agriculture community. These relationships boosted Energy Trust's success with those customer types.

Irrigation hydropower one of two main sources of generation for the Other Renewables program; the second resource is biopower. Irrigation hydropower projects produce generation opportunities as well as numerous other non-energy benefits. The work Energy Trust is doing with FCA is the most effective tool to move irrigation hydropower projects forward.

Jed clarified Energy Trust renewable energy programs are authorized under SB 1149 to lower the above-market costs of new renewable energy resources. The OPUC and the Renewable Energy Advisory Council approve of Energy Trust's project development assistance as an approach to lowering above-market costs; this support early in the development of the projects brings more opportunities further along to construction and ultimately generation. Project development assistance activities have been reported in Energy Trust's quarterly reports over the past two years and will continue to be reported.

Irrigation hydropower is a significant opportunity and has been developed so far by a small number of sophisticated irrigation districts. Irrigation modernization through piping open canals provides tremendous benefits like water conservation, improved drought resilience, energy savings, energy generation, reduced operations and maintenance costs, and reduced energy costs. These benefits can attract external funders and the districts need support to do so. For Energy Trust to see more irrigation hydropower within a reasonable timeframe, it is necessary to approach it within the framework of irrigation modernization. Doing so goes beyond staff's current skillset and external relationships.

Jed reviewed the current FCA contract and four main deliverables for FCA. He clarified district outreach is across the state, and projects may not be in Energy Trust territory but are large enough that they can wheel power to a funding utility. The additional budget in the contract will support the program in building a stakeholder and collaboration network, and creating templates and guides for irrigation districts.

FCA's contract performance so far has been exemplary. FCA's goal was to enroll four irrigation districts in project development assistance and 12 are currently enrolled with another one expected to enroll by year-end. There is also a significant amount of outside funds going into these planning processes. Part of the success of FCA is the irrigation modernization initiative was launched in the midst of one of the worst droughts in decades. This issue has received a lot of attention at local, state and federal levels. Energy Trust's interest in irrigation modernization to capture energy benefits is aligned with irrigation districts' significant interest in water conservation.

Jed reviewed a recent project example at Three Sisters Irrigation District. The board asked what percentage of load savings and generation the project represents for the district. Jed will provide the information in follow-up.

The board noted the water source of Three Sisters Irrigation District is surface water, not ground water. In an extreme drought, the district will need to use ground water, adding electricity usage and removing electric savings from now needing to pump water.

Jed confirmed no Klamath Basin districts have indicated interest in working with Energy Trust so far.

The board discussed the benefits of these projects. It was noted some strategies may have intellectual property value. Jed clarified the intention is to have the findings be open for use by districts across the West. How it is shared and how others participate is still being discussed internally. The board commented Energy Trust has a strong negotiation position.

The board asked whether these projects will be more difficult to permit in future and whether the changes in the Army Corps of Engineers will impact them as well. Jed said most of these projects have Bureau of Reclamation background, not Army Corps of Engineers. All projects have permitting and it is about what land the water crosses. Every situation is unique and Energy Trust works with each project individually.

The board discussed funding partners that have been and could be part of projects moving forward. The board supported staff looking for synergies with other external funding sources.

RESOLUTION 763
AMEND FARMERS CONSERVATION ALLIANCE CONTRACT

WHEREAS:

1. **In January 2015, Energy Trust chose Farmers Conservation Alliance ("FCA") to perform stakeholder engagement services for irrigation system optimization projects following a competitive process.**
2. **The contract awarded to FCA authorized funding for less than $500,000, thereby within the Energy Trust executive director's signing authority. The term of the contract extends through December 31, 2016.**
3. **FCA's stakeholder engagement efforts have been successful in interest and pipeline development. Results have exceeded expectation. Energy Trust wishes to expand the scope of the FCA agreement to provide funding for continuation of these stakeholder engagement and pipeline development efforts.**
4. **To accomplish these efforts, Energy Trust proposes to authorize additional funding for the contract for amounts consistent with the board-approved 2016 budget and action plan, an amount above the $500,000 limit of the executive director's signing authority.**
5. **If approved by the board, staff would expect to enter into a contract amendment to add $104,000 to the FCA stakeholder engagement contract for additional outreach services and development of more guides and process tools, bringing the total amount authorized under the contract to $525,000. If necessary and substantiated for continued successful pipeline development, staff would enter into further possible amendments later in 2016 to provide for additional contract funding in amounts consistent with the 2016 board approved budget and action plan.**

It is therefore RESOLVED:
That the Board of Directors of Energy Trust of Oregon, Inc., hereby authorizes the executive director or her designee to sign amendments to the current FCA contract for stakeholder

engagement services to authorize expenditures above $500,000 and in amounts consistent with the board's annual 2016 budget and action plan.

Moved by: John Reynolds Seconded by: Alan Meyer
Vote: In favor: 13 Abstained: 0
Opposed: 0

Committee Reports

Evaluation Committee, Alan Meyer

The board packet includes the staff memo and report on a pilot that looked at combining attic insulation and air sealing in gas-heated homes. The committee also reviewed an Oregon gas hearth market transformation study.

Public comment

John Charles, Cascade Policy Institute, provided public comment that Energy Trust stop providing support for gas hearths. He noted he recently purchased a propane hearth insert with an intermittent pilot ignition system. He indicated he did not receive an Energy Trust incentive because it is fueled by propane, will apply for the Oregon state tax credit and would have purchased the model without either incentive, if available, or tax credit. He highlighted portions of the Energy Trust of Oregon Gas Hearth Market Transformation Study supplied by Evergreen Economics that he said are indications of uncertainty behind the consultant's determination of market transformation savings. He noted Energy Trust's influence on the market will get even more uncertain with the addition of an Oregon state tax credit and if federal standards require intermittent pilot ignition systems. Mr. Charles agreed there is some level of consumers' changing their behavior when there is an Energy Trust incentive but argued it is not evidence of full market transformation. He questioned whether the activity would have happened in the end with no intervention and no incentives.

The board noted some of the questions posed by Mr. Charles were also discussed by the Evaluation Committee. Even though the market may be moving to intermittent pilot ignition systems and high-efficiency gas hearth units, Energy Trust can impact the speed at which the market moves and claim those savings. With any new technology, the challenge is to increase demand and lower costs, a part of the technology development Energy Trust can influence. When the technology has matured, there is an opportunity to go the regulators and say the technology is ready for a standard.

Staff replied the intention with market transformation studies is to understand magnitude and direction. Eventually the market will be fully transformed with market forces and a federal standard. However, Energy Trust is seeing opportunity areas now where hearths that are being sold and the distribution chain has very few intermittent pilot ignition models. The strategy is to capture some hearth purchases and savings. Sometimes standards take a while to advance and an opportunity exists between now and when standards improve for Energy Trust to influence purchases of higher-efficiency equipment.

The committee report-out continued. The last report the committee reviewed at its most recent meeting was about the well-received energy sales professional training.

Executive Director Transition Committee, Ken Canon

The committee continues to meet monthly, and is preparing to post the announcement for the Executive Director position opening. The committee has prepared an opportunity announcement, position description, application form and instructions, and will finalize the documents at its next meeting on Monday, December 14. There will be a dedicated web page for prospective candidates. The committee is also continuing its outreach to key stakeholders. The application period will open January 11 and close February 22, 2016, and the committee is asking each candidate to supply a cover letter, resume and application form. Once applications are received, committee members will screen all applications.

Finance Committee, Dan Enloe
Existing Buildings, Production Efficiency and Solar programs are ahead of schedule and budget on spending. The month of November was a little under budget and December is very active so far.

Energy Trust's Chief Financial Officer, Courtney Wilton will be retiring soon. An opportunity announcement has been posted and qualified applications have already been received. The board is thankful for Courtney's contributions to the organization, including leading Energy Trust to earn unqualified audit reports, driving down reserves and doubling the amount of money Energy Trust is making on investments. The board thanked Courtney for his efforts at Energy Trust. For hiring his replacement, the board will be involved to a greater degree than usual for a staff hiring given Margie's upcoming retirement and transition. Margie welcomed input from the board, and is looking for a board member to serve on the interview panel. Margie noted Julia Harper from NEEA is also on the interview panel.

At the committee meeting today, it was discussed that Energy Trust is investigating some facility improvements at its leased space. Margie and staff will have a resolution for the board's consideration in the near future.

Policy Committee, Roger Hamilton
The committee reported having reviewed the Farmers Conservation Alliance contract extension proposal and the Renewable Energy Certificate policy implementation proposal, both approved by the board today. The committee postponed discussion on a waste-to-heat proposal and requested additional information on the project. The proposal will be reviewed at the next Policy Committee meeting, and if it moves forward, the project will require board approval. The committee also approved appointment of two members to the Renewable Energy Advisory Council, and received an update on the large customer funding limitations issue, which stakeholders have indicated they may try to address with a legislative proposal during the upcoming legislative session.

Strategic Planning Committee, Mark Kendall
The committee recently completed defining metrics for tracking progress on emerging efficiency resources, formerly called emerging technology, in the 2015-2019 Strategic Plan.

Staff Report

Highlights, Margie Harris
Margie highlighted recently completed customer projects, including LED lighting upgrades at the Portland Arlene Schnitzer Concert Hall, a 2-megawatt solar electric system installed on the rooftop of the Oregon Convention Center, and a 10-kilowatt solar electric system at the Rogue Valley International-Medford Airport. An Energy Trust sponsorship with Sustainable Northwest resulted in two day-long "Making Energy Work for Rural Oregon" workshops in Talent and Hood River. Both led to media coverage and ongoing collaboration and planning around energy opportunities with each city. Two more workshops will be held in 2016 in Klamath County and Douglas County.

Margie reported that Roger Hamilton received the prestigious Headwaters Award from the Northwest Energy Coalition. Roger has been working to advance clean and affordable energy in Oregon and the Northwest throughout his career. Roger said these kinds of things are always team efforts, and he has been blessed with being associated with some brilliant people.

Courtney Wilton is retiring early next year as Energy Trust's chief financial officer. Courtney started in August 2013 and Energy Trust has benefitted greatly from his contributions, insights, perspectives, speed and dry humor. Each Finance Team member had a story of gratitude for his role, style of management and opportunity to develop their skillsets by working with him. Courtney will stay in his role

through January and will help screen resumes. He has also agreed to return in March to help with the transition to the new CFO.

Margie reviewed potential legislative proposals in the February legislative session, potential ballot measures and expected changes in the federal Investment Tax Credit that could potentially impact Energy Trust funding or program offers. The board asked whether the proposed bill to shift the energy efficiency portion of the public purpose charge to the OPUC regulatory process would change the relationship of funding to Energy Trust and whether the governor's office is part of the discussions. Margie replied the bill allows the OPUC to select a third party to implement the investments and, to her knowledge, Governor Brown's new energy policy advisor is aware of the proposed legislation.

Margie ended her report with an update on the Northwest Power and Conservation Council's draft Seventh Power Plan, which is closing in on its deadline for public comment. Energy Trust will be providing comments on the plan, as was done in the past.

Clean Power Plan Update, John Volkman & Debbie Menashe
Energy Trust staff is working on providing comments on the Clean Energy Incentive Program and other components of the federal Clean Power Plan still open for comment.

John Volkman noted the Clean Power Plan is a significant policy nationwide and staff is still determining whether it will affect Energy Trust. More will be known in September 2016. John provided background and history leading up to the plan, Oregon's emissions compliance obligations under the plan, and issues Oregon is assessing related to the type of goal the state will choose and whether the state will trade with other states. The board discussed the plan and decisions before Oregon and other states to comply with the law, including how such decisions may impact Energy Trust.

Adjourn

The meeting adjourned at 3:35 p.m.

The next regular meeting of the Energy Trust Board of Directors will be held Wednesday, February 24, 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

Board Decision
Amend Policy on Eligibility of Self-Direct Businesses for Energy Trust Incentives

February 24, 2016

Summary

Amend the board's policy on eligibility of self-direct businesses for Energy Trust incentives.

Background

- All PGE and Pacific Power customers in Oregon must pay a basic, three-percent public-purpose charge except those who use more than one average megawatt per year.
- These energy users may direct their own energy efficiency or renewable energy investments, and deduct the cost from the public-purpose charge on their monthly utility bills. This is called the "self-direction" program, and it is administered by the Oregon Department of Energy (ODOE).
- The question this poses for Energy Trust is whether self-directors should be able to work with Energy Trust programs, and if so, should they get the same Energy Trust incentives as those paying full public-purpose charges?
- In October, 2002, Energy Trust developed a policy on this question:
    - No incentives are allowed for a measure for which self-direction credit is used;
    - For other measures, self-directors get full incentives if they agree to pay into the public-purpose fund for three years; if they do not agree, they get only a 50% incentive; the policy is applied separately to efficiency and renewable energy.
    - Self-directors also get full incentives for unitary HVAC and motor replacement measures; and
    - No more than $1.5 million can be paid for efficiency projects for self-directors.
- The board's decision to allow a 50% incentive for those who continue to self-direct balanced several factors: On the one hand, energy users who must pay full public-purpose charges should not be asked to subsidize self-directors. On the other hand, offering a 50% incentive would likely save much more energy than would the self-direct program, and the savings would be low cost (half price). Low-cost energy savings benefit the entire power system and its users.
- Applying the policy to prescriptive measures such as unitary HVAC and small motors would impose a lot of complexity on a large volume of measures involving small dollar amounts.

Discussion

- Since 2010, the number of energy efficiency self-directors has fallen. There were approximately 170 sites qualified for self-direction in 2015 and only 13 actually self-directed, all industrial sites. In 2016, only 11 sites are expected to self-direct. Most large energy users voluntarily choose to participate fully in Energy Trust programs. We are told by national organizations that this pattern is unique to Oregon, and ACEEE is in the midst of researching the phenomenon.
- There has been little if any customer self-direct investment in renewable energy projects. We are not privy to information about how much self-direction is done through the purchase of RECs, but we believe there is a significant amount.

- The decline in the number of sites that self-direct efficiency investment is reflected in declining Energy Trust incentive spending on projects at self-direct sites. The annual spending on self-directors shown below represents about 3% of the total three year industrial sector budget of about $100 million:

  2013: $1,693,656
  2014: $1,193,780
  2015: $317,000

- Staff believes that under the policy, large firms have learned to appreciate Energy Trust energy efficiency services, expertise and incentives, and as a result now choose to participate in Energy Trust programs rather than direct their own investments.
- Still, the policy is in some ways hard for customers to understand and for Energy Trust to administer:
  - The provision allowing full incentives if a firm agrees to pay into the public-purpose fund for three years and otherwise only 50% incentives requires us to put fine-print, including claw-back provisions, in most industrial and commercial program forms. Where the fine print doesn't apply, it can confuse customers and compromise implementation of projects at the 5000+ participating businesses that do not self-direct.
  - ODOE runs the self-direct program and Energy Trust does not. Energy Trust receives a list of sites that ODOE has certified as eligible to self-direct, but we cannot see whether a site has earned or is using self-direct credits without multiple conversations with customers, ODOE and utilities.
  - The $1.5 million cap on self-direct incentives assumes we can predict how much money will go to self-directors, whereas in reality we do not know this until after the end of a year, when we manually develop a cross-program total. Only then can we tell if the threshold has been crossed.
  - The cap has had very little application. We have almost never approached the $1.5 million threshold.
  - Tabulating self-direct incentives across all Energy Trust programs takes quite a bit of work.
- Staff proposes several changes (see Attachment), some of which are editorial and three of which are substantive:
- <u>Allow less than a 50% incentive to firms that use self-direct credits at a site (section 1.B, second bullet)</u>: While staff thinks the thrust of this provision -- allowing full incentives if a firm agrees to pay into the public-purpose fund for three years and otherwise only 50% incentives – is sound, our funding for large customers is under increasing pressure. Allowing flexibility to reduce incentives to firms using self-direct credits at a site would help us manage finite incentive funds
- <u>Update measures that are exempted from the policy's limitations (section 1.C)</u>:
  - Exempt prescriptive measures categorically: When the policy was developed, we tried to create an exemption for prescriptive measures, i.e., measures for which incentives are prescribed and rebated after purchase rather than individually calculated and pre-approved before commitment, as is done in Custom or Lighting tracks. Self-direct limitations on incentives for prescriptive measures would burden a large volume of transactions involving small dollar amounts. When the policy was developed, unitary HVAC and motor replacement were the only such measures in the industrial sector. Since then, many more prescriptive measures have been developed. Rather than

listing these measures in the policy, staff proposes a category of such measures: non-lighting prescriptive measures (lighting incentives are less straightforward).

- Exempt incentives paid to retailers, distributors, manufacturers, etc., for efficient equipment or efficiency services ("mid-stream and upstream" incentives). While the Industrial Program doesn't plan to offer many of these incentives, the Commercial programs offers them actively. Self-direct fine print confuses mid-stream actors and customers, and can defeat participation.
- Increase the dollar threshold for small-dollar measures from $3,000 to $5,000: This category primarily affects studies, for which under this policy Energy Trust pays half the cost. Study costs average $6k in commercial and $8k in industrial. Increasing the threshold to $5,000 would allow most studies to avoid a common bottleneck affecting studies at all sites.

- Eliminate the $1.5 million cap on incentives for self-directors across all Energy Trust programs (section 2):
  - It is infeasible to use the $1.5 million cap to manage incentive commitments because we do not know how much money goes to self-directors until we close our books after the end of a year, long after incentive commitments are made.
  - The $1.5 million cap requires us to develop a cross-program total, which takes considerable manual work.
  - We have almost never even approached the $1.5 million threshold. If this pattern changed, we would bring it to the board's attention.

Recommendation

Amend the policy on eligibility of self-direct businesses for Energy Trust incentives as shown in the Attachment: (1) allow less than 50% incentives at sites that continue to use self-direct credits; (2) replace the policy's list of specific exemptions with categories of exemptions where full incentives are allowed; and (3) remove the $1.5 million cap on incentives for self-directors.

RESOLUTION 769
AMEND POLICY ON SELF-DIRECT INCENTIVES

WHEREAS:

1. **PGE and Pacific Power customers in Oregon are required by law to pay a basic, three-percent charge for investment in energy conservation, market transformation and renewable energy measures, except that those who use more than one average megawatt per year may direct their own investments and deduct the cost from the public-purpose charge on their utility bills. This is called "self-direction," administered by the Oregon Department of Energy (ODOE).**
2. **Energy Trust's policy on self-direction defines circumstances in which self-directors may receive Energy Trust incentives:**
    a. **No incentives are allowed for a measure for which self-direction credit is used.**
    b. **Self-directors get full incentives if they agree not to use self-direct credits at the site for three years; if they do not agree, they get only a 50% incentive.**
    c. **Self-directors get full incentives for unitary HVAC and motor replacement measures.**
    d. **No more than $1.5 million can be paid for efficiency projects for self-directors.**
3. **The policy is functioning well. Most firms eligible to self-direct choose to participate in Energy Trust programs, and as a result, more energy has been saved at low cost.**
4. **At the same time, funding for energy conservation and renewable energy measures for large customers is under increasing pressure. Allowing reduced incentives to firms using self-direct credits at a site could help manage finite incentive funds.**
5. **In addition, the policy can be improved to make it easier for customers and for Energy Trust to administer.**

It is therefore RESOLVED:

The Energy Trust policy on eligibility of self-direct businesses for Energy Trust incentives is amended by: (1) allowing discretion to pay less than 50% incentives at sites that continue to use self-direct credits; (2) replacing the policy's list of specific exemptions with categories of exemptions that allow full incentives for prescriptive and small measures; and (3) removing the $1.5 million cap on incentives for self-directors, as shown in the Attachment.

Moved by: Seconded by:

Vote: In favor: Abstained:

Opposed:

ATTACHMENT: 4.10.000-P Eligibility of Self-Direct Businesses for Energy Trust Incentives

History			
Source	Date	Action/Notes	Next Review Date
Board Decision	May 8, 2001	Approved (R27)	November 28, 2001
Board	November 28, 2001	Reviewed, Revised (R58)	January 30, 2002
Board	January 30, 2002	Reviewed, Revised (R69, R70)	April 3, 2002
Board	April 3, 2002	Reviewed, Revised (R96)	October 30, 2002
Board	October 30, 2002	Reviewed, Revised (R137)	October 2005
Board	May 25, 2006	Reviewed, Revised (R392)	May 2009
Policy Comm/Board	September 2, 2009	Reviewed, no changes	August 2012
Policy Committee	October 23, 2012	Ditto	October 2015
Board	December 12, 2014	Amended (R732)	December 2017
Board	February 24, 2016	Amended (R769)	February 2019

Introduction

Oregon law allows entities that use over one average megawatt of electricity a year at a single site to direct their own electric efficiency and renewable energy projects and deduct the cost from the public purpose charge on their electric bills. In 2002, Energy Trust adopted a policy allowing self-directors a full Energy Trust incentive for the new project only if the self-director agrees not to use self-direct credits at the same site for 36 months. The policy recognizes that self-directors should not have the same access to Energy Trust incentives as electric users who pay the public purpose charge.

Policy

Purpose: Energy Trust generally supports projects only of energy users who pay into the three percent public purpose fund on which Energy Trust programs are based. At the same time, Oregon's self-direction requirement can lead to situations in which an energy user reduces or eliminates its contribution to the public purpose fund by implementing energy efficiency or renewable energy measures certified by the Oregon Department of Energy at a self-direct site. This policy outlines circumstances in which a self-directing energy user nevertheless qualifies for Energy Trust support.

1. Limitations on incentives at sites that are eligible to self-direct:

   A. No incentives for self-directed measures: No Energy Trust incentive will be given for any measure ("measure" includes technical studies and commissioning services) for which self-direction credit is also claimed.

   B. All other measures: However, ~~A~~an energy user that is eligible to self-direct may ~~that~~ seek~~s~~ an Energy Trust incentive for a measure if the energy user~~other than those exempted above:~~
   - ~~must~~ agree~~s~~ not to use any self-direct credits for 36 months at the same ODOE-certified site as the site of the proposed Energy Trust measure, and may receive 100% of the standard Energy Trust incentive for the measure. After 36 months, the energy user may resume using self-direct credits, or
   - if the energy user continues to use any self-direct credits for non-Energy Trust measures at the same site, the energy user ~~will~~ may receive up to 50% of the standard Energy Trust incentive for the measure for which an Energy Trust incentive is sought.

~~B~~C. Measures exempted: As long as it claims no self-direct credit for these measures, an energy user may receive 100% of the standard Energy Trust incentive for the following measures even if the energy user uses self-direct credits for other measures at the same site:

~~– unitary HVAC systems;~~
~~– motor replacement;~~

2. Non-lighting prescriptive measures. These are measures where Energy Trust offers consumers a fixed payment per piece of efficient equipment, per watt, per square foot, or other simple basis. Prescriptive measures are subject to eligibility requirements but involve no site-specific technical analysis. In most situations, customers may apply for prescriptive measures after installation. In some situations, the customer has an option to assign the incentive to a contractor. This exemption does not include prescriptive lighting measures where incentives are calculated and pre-approved in a standardized procedure, or other measures where incentives are based on multi-variable calculations and include pre-approval of incentive offers.

~~2.~~3. Midstream and upstream incentives. These incentives are offered to retailers, distributors, manufacturers or other agents in the supply chain to provide efficient equipment or efficiency services to customers.

~~3.~~4. ~~– measures~~ Measures determined by Energy Trust staff to have modest costs to Energy Trust ($~~3~~5,000 or less per project) and savings, and where application of this policy's requirements would unreasonably interfere with efforts to encourage participation in an Energy Trust program.

~~2. Restrictions on funding for self-directors: No more than $1.5 million/year of Energy Trust funds (combined total) will be paid for efficiency projects to all firms that self-direct. With board approval (in the annual budget process or otherwise), this amount could be adjusted upward if program demand is running behind funding for a sustained period.~~

2~~3~~. Allocation by customer class. Allocation of Energy Trust funds to self-directing end-users will not change the allocation of funds by customer class.

3~~4~~. Repayment requirement: If the energy user accepts a full Energy Trust incentive for a measure and agrees not to use self-direction credits on its electric bill at a site for a 36-month period, Energy Trust staff:

A. Shall require repayment if the self-director begins using credits before the 36 months has ended. If required, recovery will be by the following formula: Refund Amount = 0.5 x A x B, *where* A = total amount of Energy Trust incentives paid and B = 36 minus the number of months elapsed since measure installation or completion, divided by 36. Repayment must be completed within two years of the time the repayment obligation is triggered.

B. May waive repayment for projects whose repayment obligation would be $3,000 or less.

4~~5~~. Energy efficiency and renewable energy measures considered separately: Energy efficiency and renewable energy measures shall be considered separately for the purposes of this policy. That is, during the 36 months after a measure is installed at a site, a self-director may use self-direction credits for a renewable energy project at an ODOE-certified site if it receives Energy Trust incentives for an energy efficiency project at that site, or *vice versa,* with no repayment requirement.

Tab 2

Board Decision
Terms of Office

February 24, 2016

RESOLUTION 766
ELECTING HEATHER BEUSSE EBERHARDT, DEBBIE KITCHIN, ALAN MEYER, AND JOHN REYNOLDS TO NEW TERMS ON THE ENERGY TRUST BOARD OF DIRECTORS

WHEREAS:

1. **The terms of incumbent board members Heather Beusse Eberhardt, Debbie Kitchin, Alan Meyer, and John Reynolds expire in 2016.**
2. **The board nominating committee has recommended that four of these members' terms be renewed.**

It is therefore RESOLVED that the Energy Trust of Oregon, Inc., Board of Directors elects Heather Beusse Eberhardt, Debbie Kitchin, Alan Meyer, and John Reynolds, incumbent board members, to new terms of office that end in 2019.

Moved by: Seconded by:

Vote: In favor: Abstained:

Opposed:

Board Decision
Election of Officers

February 24, 2016

RESOLUTION 767
ELECTING OFFICERS OF
ENERGY TRUST OF OREGON, INC.

WHEREAS:

1. **Officers of the Energy Trust of Oregon, Inc. (other than the Executive Director and Chief Financial Officer) are elected each year by the Board of Directors at the board's annual meeting.**
2. **The Board of Directors nominating committee has nominated the following directors to renew their terms as officers:**
   - **Debbie Kitchin, President**
   - **Ken Canon, Vice President**
   - **Alan Meyer, Secretary**
   - **Dan Enloe, Treasurer**

It is therefore RESOLVED that the Board of Directors hereby elects the following as officers of Energy Trust of Oregon, Inc., for 2016:

- **Debbie Kitchin, President**
- **Ken Canon, Vice President**
- **Alan Meyer, Secretary**
- **Dan Enloe, Treasurer**

Moved by: Seconded by:

Vote: In favor: Abstained:

Opposed:

Tab 3

Evaluation Committee Meeting

December 3, 2015 12:00 pm-3:00 pm

Attendees

Evaluation Committee Members
Alan Meyer, Board Member, Committee Chair
Susan Brodahl, Board Member
Anne Root, Board Member (phone)
Ken Keating, Expert Outside Reviewer
Jennifer Light, Regional Technical Forum Manager, NW Power and Conservation Council

Energy Trust Staff
Steve Lacey, Director of Operations
Fred Gordon, Director of Planning and Evaluation
Phil Degens, Evaluation Manager
Mike Bailey, Engineering Manager, Planning
Sarah Castor, Evaluation Sr. Project Manager
Dan Rubado, Evaluation Project Manager
Erika Kociolek, Evaluation Project Manager
Andy Eiden, Planning & Evaluation Data Analyst
Paul Sklar, Planning Engineer
Jackie Goss, Planning Engineer
Ted Light, Planning Project Manager
Thad Roth, Residential Sector Lead
Sue Fletcher, Sr. Manager, Communications and Customer Service
Spencer Moersfelder, Sr. Program Manager, Commercial
Marshall Johnson, Sr. Program Manager, Residential
Mark Wyman, Program Manager, Residential
Lindsey Diercksen, Program Manager, Industrial
Kate Scott, Program Manager, Commercial
Erin Rowland, Sr. Project Manager, Residential
Susan Jamison, Marketing Manager, Residential

Other Attendees
Lauren Gage, Bonneville Power Administration (phone)
Elaine Prause, Oregon Public Utility Commission
Tracy Scott, Lockheed Martin
Sean Ong, EMI Consulting (phone)

1. 2015 Products Process Evaluation

Presented by Erika Kociolek

Background: Energy Trust did a process evaluation of the Products program to assess the transition to a new Program Management Contractor (PMC) at the beginning of 2015. The evaluation contractor we selected to perform the evaluation was Nexant. The evaluation focused on program operations between August 2014 and April 2015. The evaluation tasks were completed from June to September 2015. Nexant reviewed program documents and a summary of program data. They interviewed program staff, along with manufacturers and retailers.

The Products program has six main components: retail lighting, showerheads, and appliances; Simple Steps (managed by Bonneville Power Administration, BPA); refrigerator recycling; new manufactured homes, kits and giveaways; and pop-up retail.

Multiple entities are involved in delivering the program. Program staff at Ecova (PMC) manage the program. Subcontractors and other entities implement other program components:

- ARCA (refrigerator recycling)
- Bonneville Power Administration and CLEAResult (Simple Steps)
- Earth Advantage (new manufactured homes)
- TechniArt (pop-up retail)

Simple Steps is a regional program managed by BPA for retail lighting and showerheads that is implemented by CLEAResult. Participating store sales are allocated to utilities across the region using the Regional Sales Allocation Tool (RSAT). BPA utilities have the choice to participate in Simple Steps or not. Simple Steps provides branding, collateral, and incentives that align regionally. As a participating "utility", Energy Trust purchased sales of efficient products from Simple Steps in 2014. Alan asked how allocations work between utilities in areas like Salem, where service territories are very close together. Erika answered that the RSAT determines where consumers come from (and the consumers' utility or utilities) for each participating store and allocates sales to utilities accordingly.

There were a lot of changes related to Simple Steps coinciding with the PMC transition. First, the program decided to move away from Simple Steps. This created two types of stores: Energy Trust-"owned" stores, where 50% or more of sales are allocated to Energy Trust, and Simple Steps-"owned" stores, where less than 50% of sales are allocated to Energy Trust. In Energy Trust-owned stores, the Simple Steps branding and collateral have been dropped and replaced with Energy Trust materials, and Energy Trust now has the ability to implement different incentive levels across stores and retailers. Second, starting in 2015, BPA reduced its willingness to buy savings from sales of incented products at Energy Trust-owned stores when the BPA utility (or utilities) with an allocation for that store has chosen not to participate in Simple Steps. What this means is, for Energy Trust-owned stores, Energy Trust is on the hook to pay for all of the incentives on sales of incented products in that store even if BPA will not buy the savings for utilities with an allocation for the store. Energy Trust cannot claim the savings for those sales because they occur outside its service territory.

Marshall noted that BPA has a concept called Momentum Savings that allows BPA utilities to claim savings even if they do not pay for them, which has caused them to be less willing to pay for savings associated with programs like Simple Steps. Alan asked if we claim savings for the sales that we are paying for in those cases where BPA does not pay. Mark answered that we only claim sales that get allocated to Energy Trust's territory based on the RSAT allocations. With BPA's reduced willingness to pay for sales allocated to non-participating utilities in Energy Trust-owned stores, Energy Trust is left to pay for sales when BPA will not. Alan said that this sounds like a problem and that paying for sales outside of Energy Trust territory doesn't seem equitable. Thad said that we now have more control over how we operate within Energy Trust controlled stores. Mark said that determining the sales that BPA will and won't pay emerged as a problem that was discovered while the evaluation was going on. Energy Trust is still working through the complexity of this issue. Thad added that BPA was very responsive during the PMC transition and emergence of this issue. Ken asked how widespread this problem is. Lauren said that BPA has about 25 participating utilities in Oregon that could have allocations at Energy Trust-owned stores. Mark said that it depends on how large the volume is in a given store and how sales get allocated. There are a few utilities for which the assumptions in the RSAT tool may not be accurate, and the program is working to address this.

Other key program changes included a new component, pop-up retail. The vendor, TechniArt, has a mobile kiosk that they take to public events or company events, where people can purchase discounted lighting and showerheads. Refrigerator recycling transitioned vendors, from JACO to ARCA, which was a big change, since this part of the program has a lot of volume and direct interaction with customers. There are new manufacturers and retailers participating in the lighting and showerhead component of program. And finally, an Energy Performance Score (EPS) was developed and launched for the new manufactured homes program, which aligns with the EPS that Energy Trust promotes for new and existing homes.

The timeline of the transition began with a formal Request for Proposals (RFP) process in March 2014. Ecova was selected as the new PMC in July 2014. Transition contracts were put in place with both the former PMC (PECI) and Ecova that covered August to December 2014. This allowed Ecova to be fully up and running by the time they officially started as PMC on January 1, 2015.

Staff Interviews: The primary goals of staff interviews were to assess experiences with the transition, look at current program operations, and solicit ideas for program improvements. Twelve staff from Energy Trust, Ecova, sub-contractors and stakeholders were interviewed. Staff thought that the transition process was smooth overall, despite some staff turnover at Energy Trust. This success was attributed to the transition contracts with both the incoming and outgoing PMCs. Staff also believed that having a launch manager at the PMC and a project manager at Energy Trust who were focused nearly full time on the transition helped resolve issues and was found to be very helpful. Alan asked if this concept of having a transition contract was new. Erika said that Energy Trust has used transition contracts in the past, but that staff said it worked particularly well in this instance. Marshall added that more resources were dedicated to this transition to make sure it went smoothly.

A few challenges were brought up in the staff interviews. As noted before, there have been challenges with Simple Steps. Also, the program made an intentional decision to focus on lighting, showerheads, and fridge recycling during the transition period because of the high volume and large amount of savings. Energy Trust did not want the transition to have a negative impact on these key sources of savings. This led to the underperformance of other program components at the beginning of 2015, which was starting to be addressed at the time of the evaluation.

Staff also identified several opportunities for improvement. They believe the program should continue to focus on serving the non-Portland Metro region. This can be done by working with new retailers and implementing new marketing approaches, such as web-based promotions. Another area for improvement is related to the review process for marketing collateral, which staff found to be lengthy. Staff also mentioned that the program should address online options for retail and expand the program's web-based marketing presence. Finally, staff also wanted to minimize program restrictions, specifically, restrictions related to pop-up retail and the lighting qualified products list (QPL). In some cases, TechniArt was asked not to participate in certain events, which caused some tension.

Retailer and Manufacturer Interviews: The goals of the retailer and manufacturer interviews were to assess experiences with the program transition, identify challenges and opportunities, and gain insight into stocking practices and responses to changing standards and programs. The evaluation included some questions around why there are so few options for low-cost, high efficiency refrigerators in the market, an issue that was identified in last process evaluation.

Nexant interviewed 15 contacts currently participating in the program, including eight retailers (half participate in the lighting and showerheads component and half participate in the appliance component) and seven manufacturers (which were all lighting). These contacts represented a mix of new and continuing participants and local and national companies.

Retailers and manufacturers were highly satisfied with the transition.

Retailers participating in the appliance component on the program were able to provide a limited amount of insight into the lack of low cost, high efficiency refrigerators. One retailer said that manufacturers are trying to push higher margin products, which are the higher price models. In addition, one retailer said that the new Energy Star standards have pushed up production costs and the associated price points of efficient products.

Ideas for driving savings included providing incentives for different types of appliances and adding more models to the qualified products list for clothes washers. They also wanted to see increased point of sale advertising and promotional events, bundled promotions for light bulbs, higher rebates, and more promotional materials for showerheads. They suggested that working with smaller stores and discount stores would help reach rural and underserved customers.

Ken said that there was a California study on products where the evaluators recommended increasing the incentives on low-end fridges because they couldn't get very much product in the stores. This was based on the idea that the low margin of cheaper units needed an additional push to get them stocked and that most of the expensive units were free riders anyways. The incentives would have been reduced on the higher cost units. There was perception that this approach would create an "income-based" program, but purchasing lower price refrigerators is not an income-based decision, it is just an option in the market. The idea ultimately didn't gain traction. Mark said that incentives for new fridges and freezers have been discontinued because the savings are not really there anymore. However, the opportunity is still there for smaller units. To implement something like this, Energy Trust would need to set up new relationships with retailers, which takes time. The program is moving ahead to target specific opportunities.

Some retailers track changes in federal standards and energy efficiency program requirements, although what ultimately impacts their stocking decisions is what is available from manufacturers. Independent stores usually don't track on these changes, but national chains do this at the corporate level.

All of the lighting manufacturers track changes in standards and programs, and respond to try to stay ahead of them.

For retailers, stocking decisions are typically made at the corporate level with some local influence. There was a great deal of variation in how quickly stocking could change in response to standards or programs, anywhere from days to years. Manufacturers reported that there are usually long lead times for changes in response to standards or programs to impact the assortment of products they produce.

Conclusions: The transition went well, despite staff turnover at Energy Trust. Staff found that the transition contracts were very helpful. Having a launch manager at the PMC, and a project manager at Energy Trust focus on the transition were good improvements. Retailers and manufacturers were highly satisfied with the new PMC. There are some remaining challenges in working with the Simple Steps program.

Recommendations: Energy Trust should continue to do transition contracts. There is a need to better document decisions and negotiations, based on coordinating with Simple Steps and BPA.

The program strategy needs to shift to a midstream and upstream model, which the program is on its way to doing. The program should provide more outreach and collateral for showerheads, which was mentioned by retailers. The program should streamline program activities, such as qualified product list changes, marketing review, and approvals for pop-up retail events. There are additional heat pump options for new manufactured homes that should be investigated. The program should continue its regional collaboration on high performance manufactured homes. And the program should add some water heating solutions to its portfolio and get involved with home energy management solutions.

Energy Trust Take: The transition went well. There were some issues with Simple Steps, but those have been largely resolved. The program is diversifying its measure mix by adding clothes washers to appliance recycling in 2016, adding heat pump water heaters and smart thermostats to retail incentives, and continuing to look for other products to add to the portfolio.

Elaine asked if there are other products the program is looking to add. Mark said that there are additional products that retailers carry that have cost-effective savings, but the program hasn't gotten there yet. Marshall noted that there were net savings based on the reduced cost of the service delivery contract, even when considering the transition contract costs. Alan said that regarding the recommendation to increase documentation, if PMCs are not subject to regular re-bids, they might not keep documentation that is ready for the next implementer. Marshall said that the program maintains program implementation manuals to ensure program processes are documented. Mark and Erika clarified that the evaluator's recommendation about documentation is specifically about Simple Steps. The recommendation is related to staff feedback that there was some confusion about what had been done with Simple Steps in the past, which was not well documented, and that information was not fully communicated to the new PMC during the transition. Elaine asked if the savings forecast for 2015 was better than goal. Mark responded that the electric side of the program is forecast above goal, but not the gas side.

2. LED Streetlights Market Assessment

Presented by Dan Rubado

Background: LEDs have been making their way into streetlights across Oregon and the Northwest. Energy Trust wanted to do a study to assess the current status of the market, because there was concern that the shift to LED streetlights is happening so rapidly, that Energy Trust should move away from providing incentives – if the market was transformed.

Energy Trust's Existing Buildings program offers incentives for municipalities and other entities to upgrade to LED streetlights. There are a variety of benefits to switching, including that LEDs last longer, are more efficient, and improve visibility. Incentives are available for cobra head and decorative fixtures.

There are three main categories of customers:

- Municipalities that own and operate their streetlights
- Municipalities with utility-owned and operated streetlights
- Other entities with streetlights

Alan asked if incentives are provided to the utilities. Phil responded that the utilities own and operate the streetlights, and charge a fee to customers. In all cases, the incentives are going to the customers. Dan continued, noting that the rate charged by the utility to customers can depend on the technology installed. There is a difference between the two electric utilities –

Portland General Electric's rates are more favorable to switching to LEDs than Pacific Power's rates.

Study Objectives: The goal of this study was to provide insight into the streetlight market so the program can better influence LED upgrades, understand the state of the market, understand barriers to program participation, identify opportunities to improve adoption of LED streetlights, and assess when Energy Trust's incentives may no longer necessary for LED streetlights.

Methods: Energy Trust hired Research Into Action to conduct they study. Research Into Action conducted interviews with program staff, municipalities, utilities, manufacturers and distributors, and other stakeholders. They also analyzed utility data.

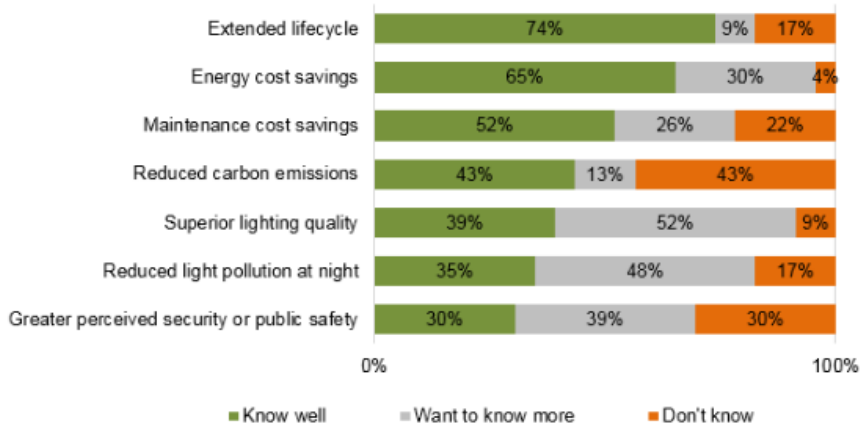
The table below summarizes characteristics of the population of municipalities, compared to which municipalities were interviewed (n = 23), along with characteristics of the municipalities (size, utility, and whether or not the municipalities had previously participated with Energy Trust).

Sampling for municipalities

SIZE OF MUNICIPALITY	PGE				PACIFIC POWER			
	Participant		Non-participant		Participant		Non-participant	
	Sample	Population	Sample	Population	Sample	Population	Sample	Population
Small	1	6	1	3	0	0	9	50
Medium	2	9	1	7	0	0	6	36
Large	2	13	0	2	0	1	1	7
Total	**5**	**28**	**3**	**12**	**0**	**1**	**15**	**93**

Findings: The first questions asked of municipalities focused on their knowledge and awareness of LED streetlights. All 23 respondents were aware of the technology. Large municipalities that received incentives in the past were the most knowledgeable. As shown in the graph below, the majority of municipalities reported that they were knowledgeable about the benefits of LEDs – specifically, extended lifecycle, energy cost savings, and maintenance cost savings. Fewer than half said they wanted to know more or didn't know about benefits such as reduced carbon emissions, superior lighting quality, reduced light pollution, and greater perceived security or public safety.

Municipalities' knowledge about LED benefits

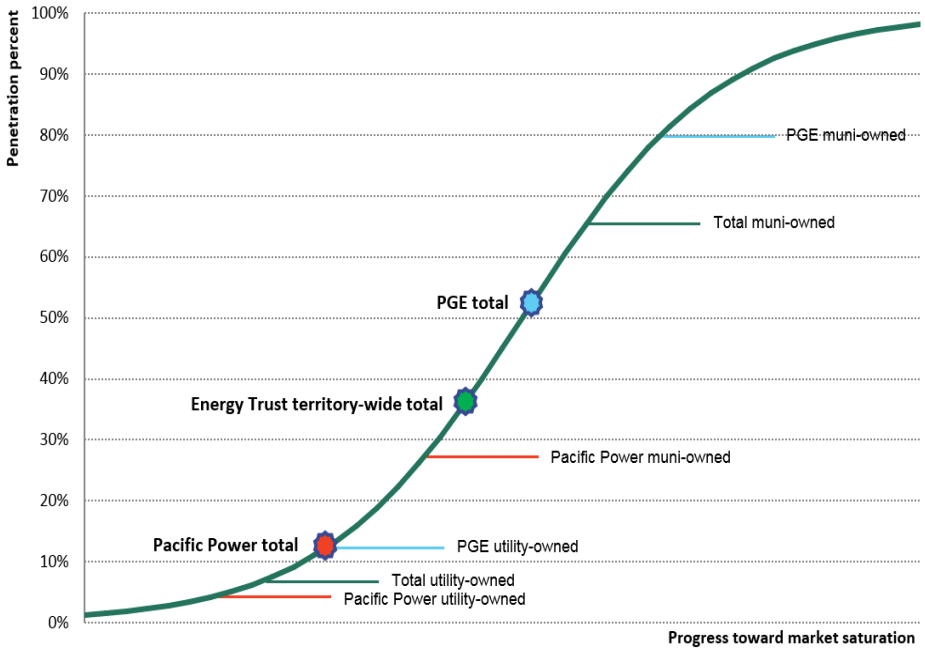


LED streetlights have capabilities such as dimming and flashing different colors in an emergency. When asked, half of municipalities were aware of these advanced control capabilities. None had used these capabilities or had plans to use them. Utility representatives had not adopted advanced controls either, and did not have plans to do so. Based on the interviews with manufacturers and distributors, it appears that most LED streetlights being installed are compatible with controls. However, utility rate structures do not encourage the adoption of advanced controls – there is no break in utility rates for utilizing advanced control features.

Just under three-quarters of municipalities were aware of Energy Trust incentives for streetlights. Six municipalities were not aware, and these were mostly customers of Pacific Power. Municipalities reported that their most common sources of information about incentives were utility staff, Energy Trust program staff, and the League of Oregon cities.

The graph below is a technology adoption curve, showing where the overall market is at, and where different segments of the market are at in relation to one another. To build this curve, Research Into Action took the results of surveys with municipalities, and utility customer information (UCI) data, which contains information about the types of streetlights that different municipalities have installed. To produce this curve, these two sources of information were combined to build an inventory of the percent of each municipality's inventory that is LED versus something else.

Technology adoption curve for LED streetlights

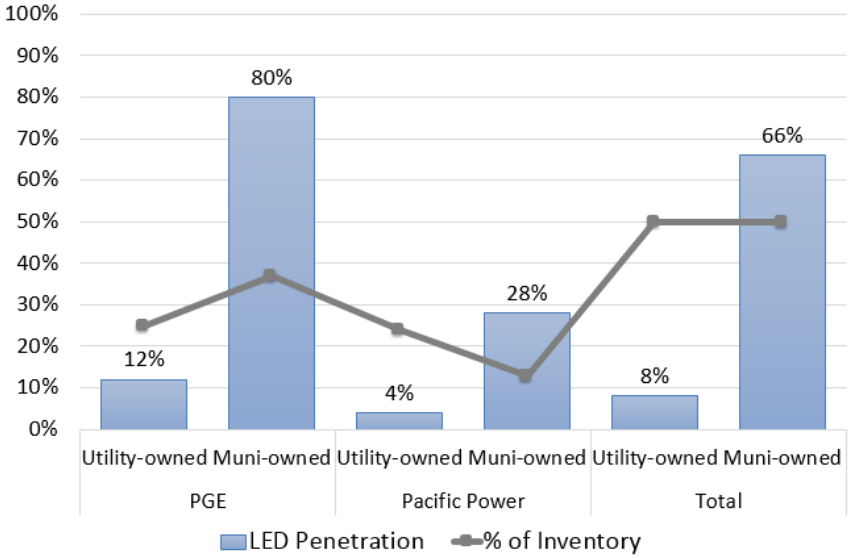


The big green dot in the graph above shows the penetration of LED streetlights in Energy Trust's territory overall – it is 37% currently. There is a big difference in LED streetlight penetration between utility-owned and municipal-owned: overall, the penetration of LED streetlights is 8% for utility-owned and 66% for municipal-owned (green bars in the graph).

There also was a difference between PGE and Pacific Power. The red and blue lines correspond to Pacific Power and PGE, respectively. The municipally-owned streetlights in PGE territory are furthest along the adoption curve, with about 80% of them being LEDs. However, only 12% of utility-owned streetlights in PGE territory are LEDs. 28% of streetlights owned by municipalities in Pacific Power territory are LED, while 4% of utility-owned streetlights in Pacific Power territory are LED.

The chart below shows the same information as above, but includes information about the percentage of streetlights in each category. For example, the two bars on the far right side of the chart show that utility-owned and municipal-owned each represent about half of the total streetlight stock, but that a small amount (only 8%) of utility-owned streetlights are LED. So a big segment of the market is lagging.

LED streetlight penetration



As part of this study, Research Into Action spoke with municipalities and other entities about LED streetlight upgrades that they have already completed and any planned upgrades. Eleven of the 23 respondents have partially or fully converted. Four municipalities have planned and budgeted for LED upgrades within the next year, and 17 reported no future plans for LED upgrades (although they may have done so in the past).

Most municipalities in PGE territory are moving to LEDs. Most Pacific Power municipalities have not made plans to do the same, although a few have made upgrades (most without Energy Trust incentives). Decorative streetlights also appear to be upgraded at about the same rate.

Research Into Action interviewed staff at PGE and Pacific Power about LED streetlights and what activities they are doing to promote upgrades.

If a Pacific Power municipal customer wants to do an upgrade, they must pay the full upgrade cost for both utility-owned and municipality-owned streetlights. There are no plans for utility-wide upgrades. In general, Pacific Power considers the cost of LED streetlight upgrades to be too high and believes the technology has not yet been field-proven, particularly in terms of the extended lifecycle and lower maintenance costs.

Cities served by PGE must pay the full cost to upgrade lights that they own. PGE pays the full cost to upgrade lights they own. The utility rate for LED technology compensates for the upfront installation cost over time. PGE is looking for opportunities to upgrade obsolete lights. They consider LEDs to be cost-effective and reliable.

Neither utility promotes LED upgrades to cities.

Research Into Action spoke with two other utilities outside of Energy Trust's service territory to see what the market is looking like in a different region. Both of the interviewed utilities recently began LED streetlight upgrades. They are planning and budgeting to upgrade 20-50% of their streetlights within the next year. They are targeting lower-wattage streetlights, due to the lower

cost. One of the interviewed utilities reporting taking advantage of the City of Portland's vendor purchase agreement for procuring LEDs, which was extended to all cities in the state of Oregon. Both interviewed utilities reported that BPA's incentives have some influence on their purchasing decisions.

Research Into Action also spoke with distributors and manufacturers. They reported seeing a significant increase in the demand for cobra head and decorative LEDs over the past two years. LED prices are continuing to drop while other technologies have been stable. They reported that some LED luminaires are now cheaper than high pressure sodium. They also reported that conventional streetlight products are beginning to be phased out by manufacturers, and that the remaining demand for high pressure sodium is primarily in replacement parts, indicating that not too many new high pressure sodium fixtures are being installed.

Finally, Research Into Action asked municipal and other stakeholders about the influence of Energy Trust on decision-making related to LED streetlights. Two-thirds said "a strong influence," 22% said "some," and 11% said "no influence." Two of five past participants said the incentives were important for upgrades, and three of five said information from the program was important.

The primary drivers for installing LED streetlights are extended life, energy cost savings, maintenance cost savings, sustainability and environment, and superior lighting quality. The primary barriers are lack of upfront capital, lack of resources to evaluate economics, utility rates that provide little or no cost savings to upgrade, and lack of time and expertise to implement upgrades. The program is well situated to address some of these barriers.

Conclusions: The penetration of LED streetlights has reached about a third of streetlight inventory, and the market has not yet reached a self-sustaining critical mass. Upfront capital costs and doubts about the technology are the major remaining barriers to adoption.

Recommendations: The program should focus efforts on utility-owned streetlights and streetlights in Pacific Power territory. The program should also increase outreach, and provide information on LED streetlight benefits and economics. The program should consider establishing multiple incentive tiers for market segments, and Energy Trust should monitor LED penetration by utility territory, ownership type, and streetlight type. The program could improve collateral to document specific applications, performance, and benefits of LEDs, and negotiate lower prices with manufacturers or distributors for municipalities across Oregon.

Spencer commented that utility rate structures are a hurdle; we found a payback of 10-15 years for a Pacific Power owned and operated system.

Energy Trust Take: There is still opportunity to influence the market, given that there are some segments of the market, such as utility-owned streetlights and streetlights in Pacific Power territory, which are lagging. It seems that utility rates are impeding the market somewhat. The program will continue to provide incentives and target lagging markets, and Energy Trust will continue to monitor the adoption of LED streetlights and determine when to stop supporting them. In the future, there is still an opportunity to support controls for additional savings above what LEDs provide. Spencer commented that the program is encouraging customers installing LED streetlights to consider upgrading to a nine-prong control plug in, so they have the option of installing controls down the road.

3. C&I Lighting Controls Savings and Persistence Study

Presented by Erika Kociolek

Background: This study was conducted to gather empirical data on savings from lighting controls, which are a growing source of savings for Energy Trust commercial and industrial programs. Energy Trust hired a team of evaluators from EMI Consulting and Michaels Energy to conduct the study. The study was completed between January and July 2015. Controls save energy by reducing lighting hours of operation. Currently, savings for lighting controls are assumed to be 25% of controlled lighting energy use, an assumption which came from a 2012 Lawrence Berkeley National Laboratory study. We wanted to verify this estimate by looking at controls incentivized through Energy Trust's programs. Control savings are typically talked about as a reduction factor – Energy Trust currently uses 0.25.

Objectives: The study objectives were to look at what types of controls are being installed and where they are being installed, assess the incidence and types of non-program controls, assess persistence of controls, and determine an overall average reduction factor (RF). Tasks included reviewing Energy Trust's project data and project files for lighting and lighting controls projects, developing research and sampling plans, conducting site visits to inspect projects, performing analysis on the data collected, and summarizing the findings in a report.

Approach: There's more than one way to do this study. One option is doing a pre-post metering study, where the evaluator would do metering before controls were installed and then return after project completion to do post-installation metering. That approach is logistically difficult and expensive, so we took a different approach that is somewhat simpler. EMI suggested sampling a set of lighting-only projects and a set of lighting controls projects and comparing the average lighting hours of use between the two groups to determine the RF.

Sampling: Sampling was done to meet several objectives. We wanted to look at projects from several years ago to assess persistence, but also wanted to look at recent projects to include installations of new types of control technologies. The technology changes quickly and controls from a few years ago may be obsolete now.

The sample contained a mix of projects from 2010, to assess persistence, and from 2013/2014 to look at newer control types. The sample included lighting-only projects, and lighting controls projects. There was a mix of large and small projects, control types, and programs. Overall, the sample contained 162 projects at 160 sites with over 4,000 individual controls. 91% of projects were considered small (< 100,000 kWh savings). The remaining 9% of large projects represented 62% of the savings in the sample.

Sampling for lighting controls study

Year	Size*	Type	Number of Projects in Sample
2010	Small	Lighting controls	21
	Small	Lighting-only	18
	Large	Lighting controls	10
	Large	Lighting-only	7
2013-2014	Small	Lighting controls	42
	Small	Lighting-only	21
	Large	Lighting controls	33
	Large	Lighting-only	10
		Total	162

Most of the projects in the sample came from the Existing Buildings program (including Existing Multifamily), while about one-quarter came from the Production Efficiency program and only four projects came from the New Buildings program.

Findings: The types of lighting controls being installed included occupancy sensors (ceiling- and wall-mounted), fixture-mounted occupancy sensors, daylighting controls, computer-controlled or energy management systems, bi-level controls (where different parts of a room are controlled separately) and timers. Over 90% of controls installed in the sample were occupancy sensors. So, the findings of this study are basically applicable to occupancy sensors.

Most program controls in the sample were installed in warehouse spaces (56%), followed by industrial (18%) and process (5%) spaces. Non-program controls were identified at sites in the sample. 36% of lighting-only projects had at least one non-program control and 10% of control projects had at least one non-program control. 12% of all controls identified were non-program controls part of lighting only projects.

We wanted to know what these non-program controls were and why they did not get incentives. 35% of these were not eligible for incentives due to an existing energy management system that already controlled lighting. 24% were not eligible due to code requirements. In 41% of these cases, the reason could not be determined. Non-program controls were most commonly occupancy sensors and other controls, mirroring types of controls incented by the program. They were most commonly installed in warehouses, offices, storage and restrooms.

Findings - Persistence: Overall, 99% of lighting controls analyzed were operational. There were no significant differences between controls installed in 2010 and those installed in 2013 and 2014. Of the non-operational controls identified, site personnel said: 10% had been removed, 13% were broken, 20% couldn't be determined, and 58% of them were never installed in the first place. This indicates that lighting controls are persisting for at least several years in the vast majority of cases. Alan said that this level of persistence sounds really, really good. Ken said that it was impressive. Ken noted that the quality of the controls has improved over time. As the

technology has improved, the ability to mount them higher, make them less intrusive, and less susceptible to tampering has increased. Ken said that he was surprised the level of persistence was that high, but there are good reasons for it. Phil said that control strategies have changed, so they work better. For example, occupancy detectors often include both motion and infrared sensors so they have two independent mechanisms to determine occupancy. Fred said this was an extensive study and one reason for doing it was that some proponents of performance contracting were questioning whether savings from rebated measures were reliable. We chose to study controls because that is the area where there is the least certainty about savings. The study indicates that they are reliable.

Findings - Reduction Factor: To calculate the average reduction factor for lighting controls, we needed to sort projects into two categories: “lighting-only” and “controls” and then compare the hours of use observed in each. Doing this was not as straightforward as you might think. There are actually six different groups (not two), which are shown in the table below.

The reason there are six groups (not two) is because there are controls and lighting-only projects. Measures that are part of lighting-only projects could either have no controls (group D), or have non-program controls (group B). Control measures that were part of control projects could either be operating (group A1) or not (group C1), and lighting measures that were part of controls projects could have non-program controls (group A2) or no controls (group C2).

Summary of groups for controls and lighting-only

		Controls Projects	Lighting-Only Projects
Controls Measures	Operating Control	A1 (n = 737)	-
	Non-Operating Control	C1 (n = 40)	-
Lighting Measures	Non-Program Control	A2 (n = 9)	B (n = 63)
	No Control	C2 (n = 144)	D (n = 184)

We came up with ten different scenarios describing how these groups can be mixed and matched to determine how you define “controls” and “lighting-only” projects and how comparisons of hours of use could be made. It was not clear which scenario made for the best overall comparison to calculate the average reduction factor for lighting controls. The table below summarizes each of the ten possible scenarios.

Scenarios to calculate reduction factor

#	Scenario	Controls	Lighting-Only	Reduction Factor
1	All Working Controls vs. All Non-Controls + All Non-Working Controls	A1 + A2 + B	C1 + C2 + D	0.31
2	Working Program Controls vs. All Non-Controls + All Non-Working Controls	A1	C1 + C2 + D	0.38
3	All Program Controls (Working/Non-Working) vs. All Non-Controls + All Non-Program Controls	A1 + C1	A2 + B + C2 + D	0.36
4	Working Program Controls vs. All Non-Controls + All Non-Program Controls	A1	A2 + B + C2 + D	0.36
5	Working Program Controls vs. All Non-Controls	A1	C2 + D	0.39
6	Working Program Controls vs. Non-Control (Lighting-Only Projects)	A1	D	0.24
7	All Program Controls (Working/Non-Working) vs. Non-Program Control and Non-Controls (Lighting-Only Projects)	A1 + C1	B + D	0.24
8	Working Program Controls vs. Non-Program Control and Non-Controls (Lighting-Only Projects) and Non-Control (Control Projects)	A1	B + C2 + D	0.37
9	Working Program Controls vs. Non-Working Controls (Control Projects) and Non-Control (Lighting-Only Projects)	A1	C1 + D	0.24
10	All Program Controls (Working/Non-Working) vs. Non-Control (Control and Lighting-Only Projects)	A1 + C1	C2 + D	0.38

Depending on how you define the two groups to compare hours of use, the reduction factor ranges from 0.24 to 0.39. EMI recommends using the tenth scenario (last one in the table above), which compares all program controls (working and non-operational) versus all lighting measures without controls. This results in an average reduction factor of 0.38.

As mentioned at the beginning of the presentation, the default reduction factor used by Energy Trust is 0.25, but this could be overridden if there was better information or reason to believe it was different. We looked at how often this default value was actually used as opposed to a non-default value, but were only able to do this for a subset of 84 projects. 58% of these projects used the default reduction factor of 0.25. The other 42% of projects used a non-default reduction factor – common values observed were 0.35, 0.4, and 0.5. The weighted average RF across all 84 projects was 0.35. Ultimately, we'd like to calibrate the default reduction factor that is used by Energy Trust programs based on the results of this study. However, we only have information on what reduction factor was used for some of the projects in the sample. So, we need to go back and analyze the entire sample, because this subset may not be representative. This analysis will determine how we adjust the default reduction factor.

Phil commented that using the information we currently have, based on the 84 projects, our initial results indicate that the default reduction factor would change from 0.25 to 0.30. However, since we only looked at a subset of projects, we want to gather information for, and analyze, the

rest of them and see if things change. As we saw, the reduction factor is fairly sensitive to how it is calculated, so we want to make sure we have a solid number. Alan asked if this study was rigorous enough to answer these questions. Ken said the Regional Technical Forum (RTF) has been debating this and whether to do a study that attempts to use a comparison group to determine the average reduction factor. A lot depends on the space types that are in the samples. The RTF is trying to come up with a more complicated approach to getting at reductions. This study contributes to the weight of evidence on lighting controls, but is not conclusive by itself. But, this was a costly study with a lot of metering and doing more may not be feasible.

Alan asked Jennifer for her opinion of the study design. Jennifer commented that a pre-post design is ideal but difficult to implement. The comparison group design is a good alternative, but she also wanted to see what the space types were that were compared to understand how representative the groups were of one another. Phil responded that the study had a lot of goals and it was difficult enough to get both persistence and reduction factor data overall, and that we did not dig into differences by space type. Also, this study was just looking at Energy Trust project participants. One of the implications is that the calibrated reduction factor value can be used for True-up and to adjust the default value for controls projects, but it can't be used to adjust the non-default value RF projects. If people want to know more about specific space types, we can build on this study in the future. For warehouses, we have a pretty good idea, since they comprised the majority of the sample. For other space types, we don't know as much. Fred cautioned against analyzing specific space types, because there are so many to look at and that the size of the space may be as important as space type.

Steve commented that in the 1990s, a 0.30 reduction factor default value for lighting controls was used as the industry standard and that this study appears to validate that standard. On average, controls are working out to save about 30%. Jackie said that default reduction factor is based on 0.25 of the reported hours of use and that the actual baseline hours of use might be different from what was reported, if it was metered. That could also cause a discrepancy but would stem from the reported hours of use and not the default reduction factor. It could be hard to tell the difference between these two types of errors. Phil said that we are adjusting for errors in both by doing the calibration. The default value can be overridden if better information is available, but it is available so that we don't have to estimate it for every project. The calibrated reduction factor could also be used to true-up savings of past projects. Moving forward, we'd also adjust the default. Susan asked if 0.38 was the value we will use to true-up and if this was higher or lower on average than the current reduction factor. Phil answered that it is more complicated, because we have to break out default value projects and non-default value projects. We don't know yet. Susan noted that potentially going from 0.25 to a 0.30 reduction factor is a huge increase and that numbers have to be defensible if we are going to make that change. Ken said that information about the savings achieved by controls is important for those writing code so they can estimate the savings resulting from their decisions about code.

Conclusions: Lighting controls were most often installed in warehouses. The vast majority (99%) of lighting controls are still operational three to four years after installation. Our best estimate of the overall average reduction factor for lighting controls is 0.38.

Recommendations: Energy Trust should update the default reduction factor, but we first need to determine what that will be. The hours of use should be recorded at the space level rather than by project (which can include multiple spaces that may have different hours of use). We should take another look at lighting controls a few years down the road to assess persistence over a longer period of time.

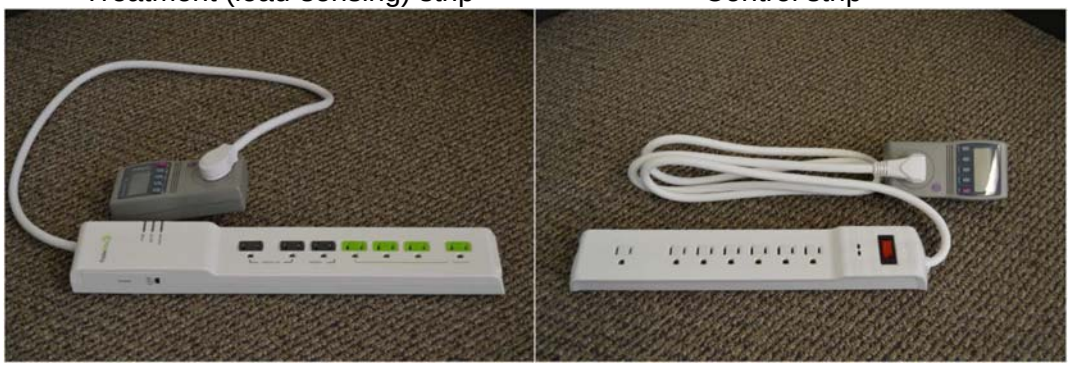
Energy Trust Take: Lighting controls appear to persist, although long term tracking is needed to confirm this finding over time. This is especially true if programs begin installing controls in a more diverse set of building and space types where different factors could impact persistence. We will be working to calibrate the default reduction factor, and there will be more to come on that soon.

4. Tier I Advanced Power Strips Pilot Evaluation

Presented by Paul Sklar

Background: This study on load-sensing (tier 1) power strips was done by Lockheed Martin in existing multifamily buildings. These types of power strips work by using a "control" outlet that senses current. The strips have "switched" outlets that are turned off when the current drops below a set level. There are also "always on" outlets to accommodate devices that should not be turned off. The study used a comparison power strip that simply has an on/off switch and was selected to be as similar as possible to the load-sensing strip. The image below shows the power strips that were used for the study. For this study, we will refer to the treatment technology as load-sensing power strips. The basic comparison strips will be referred to as control power strips. Another type of power strip that is available senses infrared. These strips will turn off your TV and connected devices if you don't use the TV remote for a period of time.

Treatment (load-sensing) strip Control strip



Recruitment: The pilot study was conducted between March and July 2015. Sign up forms were delivered to building management and tenants were given the opportunity to participate in the study. Participants were recruited from both affordable and market rate properties. The opt-in strategy initially resulted in fewer participating tenants per building than desired. The recruitment goals were reached by offering tenants a reward on the completion of a final survey. First, two movie tickets were offered, then a $25 gift card was tried, and finally, an offer of four movie tickets increased participation. The pilot used rolling implementation and re-used the same meter in consecutive locations.

Implementation: Tenants from ten multifamily buildings participated in the study. Some participants in each building were randomly assigned to the treatment group and others to the control group. The treatment group participants received a TrickleStar load-sensing power strip, and the control group participants received basic Belkin power strips (see image above). Kill-A-Watt EZ meters were used to collect electric usage data for every power strip. The treatment and control group power strip energy use was monitored side-by-side for a two week period.

Attrition: 125 participants (treatment and control) were initially enrolled in the study. Five tenants did not have TVs, so were dropped and their data was not used. Having a TV will be a requirement in a regular program offering. Meter readings with zero kWh, of which there were 11, were considered "non-installs" and dropped. Strips with weather-dependent devices, such as air conditioning, and those used in non-AV applications were also removed. The five cases where usage data was above zero but no device data was available were removed. The attrition table below shows the sample sizes at each step.

Attrition table for load sensing power strip study

Rule		*Number of Participants*				
		Control		APS		
		Market	Affordable	Market	Affordable	*Totals*
		42	21	43	19	**125**
1. Did not have TV	*dropped*	1	3	0	1	5
	remaining	**41**	**18**	**43**	**18**	**120**
2. Zero kWh reading and no device data	*dropped*	2	1	2	0	5
	remaining	**39**	**17**	**41**	**18**	**115**
3. Weather-dependent devices (e.g. AC units)	*dropped*	0	2	1	3	6
	remaining	**39**	**15**	**40**	**15**	**109**
4. Strip used in non-AV application	*dropped*	1	1	0	1	3
	remaining	**38**	**14**	**40**	**14**	**106**
5. Zero kWh reading with device data	*dropped*	1	1	3	1	6
	remaining	**37**	**13**	**37**	**13**	**100**
6. Usage data but no device data	*dropped*	1	2	2	0	5
	remaining	**36**	**11**	**35**	**13**	**95**

Normalization: We wanted to normalize the study results to what we think future program participants will look like. We looked at several options, including device count, connected watts, and modeling expected energy use. All three normalization options produced similar results. We used device count normalization to get final results. This information was already on hand from the study, so it was relatively simple. The normalization equation used was:

$$Adjusted\ Test\ Group\ Usage = Test\ Group\ Usage * \left(1 + \frac{Control\ Value - Test\ Value}{Test\ Value}\right)$$

Non-Install Rate: We computed a non-install rate for the study, so we could factor in the rate at which devices were not installed or improperly installed into the savings estimate. Fourteen participants who had TVs were counted as non-installs because they had no kWh data, a device other than a TV plugged into the control outlet, or a weather-dependent device, such as air conditioning, was plugged into the always-on outlet. These tenants were generally using the device in a way we hadn't anticipated and that would not save energy, so were counted as "non-installs". After adjusting the proportion of market rate and affordable units, based on Residential Building Stock Assessment (RBSA) data, the non-install rate was found to be 10%.

Adjustments to Savings: The customary RTF HVAC interaction for non-lighting measures is 15%, which was deducted from the estimated savings. We also adjusted the savings to match the proportion of market rate and affordable multifamily housing in the population based on RBSA data. A different number of devices was installed in control group homes than in

treatment group homes. This was also adjusted for in the normalization process. Ultimately, the weighted average electric savings was computed, normalizing for affordable/market rate and number of devices, and the result was 100 kWh per year. After adjustment for HVAC interactions and the non-install rate, this was reduced to 76 kWh. Much more often than not, it appears that the power strips were installed in a way that would result in savings.

Ken said that the HVAC interaction factor might be different in single family than multifamily, so the reduction might not be as large. Paul agreed that was possible. Jackie asked if the difference in number of devices plugged into strips in treatment and comparison homes was a random difference or if there was something about the power strips that made people plug fewer devices into the load-sensing strips. Paul said that they chose a control strip that was as similar as possible to reduce this possibility.

At the start of pilot, the program thought that some people would install audio equipment and get savings from that. This was true if their audio equipment was installed in the same outlet as the TV, but there were no cases where audio equipment was used in the control outlet. 24% of respondents had audio systems in a separate location from their TV and not plugged into the same outlet. Speakers were sometimes plugged into switched outlets when a TV was in the control outlet (n = 13). Game consoles were more commonly plugged into switched outlets controlled by a TV (n = 22). This was new information for us. There is likely some savings from game consoles, but we want more information on this to determine if game consoles with hard drives will eventually be removed from strips to avoid improper shutdown procedures. We will be doing follow-up to learn more about this.

Survey Results: A survey was conducted at the same time the meters were collected from participating tenants. Four respondents said they had not installed the power strip (in addition to those already counted as non-installs). If these four cases are considered “non-installs,” the non-install rate increases to 14%. 88% of treatment group participants said that they plan to keep using their load-sensing power strip. Only one participant who indicated they would not continue to use the power strip was not in the group of non-installs. However, these data are not sufficient to establish persistence due to the short time interval of the study.

Ken asked if this was a cost-effective measure with 76 kWh of savings. Paul said that it is and it is being rolled out as a measure in the multifamily program. Ken asked if it was only in multifamily and Paul answered yes, at this time. He said that we had issues with the study we were doing in single family, but hope to extend the research and measure to single family in the future. Phil said we hope to do a pilot study of this type in the future using strips with on-board monitoring capabilities. Mike said that after this pilot was completed, Energy Trust discovered a requirement in state fire code that power strips must be plugged directly into an outlet and may not be plugged into a Kill A Watt. The requirement was meant to prevent daisy chaining power strips, not the use of Kill A Watt meters, but it posed a risk for Energy Trust. So, further pilots using this methodology have been discontinued.

Alan said that he thinks we don’t have much data to go on here. It is only two weeks and we don’t have any information about persistence. Alan said that he had real difficulty figuring out how he could use one of these power strips in his house. Paul said that we do need to do a follow-up study to determine persistence. Ken said that having non-weather sensitive loads plugged in to the strips is an important assumption. Seasonality is still a potential issue though. Paul said that people used the strips in a lot of different ways and people were interested enough in figuring out how to make them work. He clarified that if they had a device that should be plugged into an always on outlet, people generally were able to figure that out.

Jennifer asked about seasonality since the group of tenants in affordable housing had lower savings and all of the power strips for this group were installed in the summer. She asked if this could be a difference in seasonality of use rather than housing type. Alan asked what the strips cost at retail and what incentive was being provided. Tracy responded that Energy Trust got these power strips at a wholesale cost of $28 and will be providing them for free. Mike said that this savings number is about twice what the RTF had estimated based on more limited data. This study was done to collect additional data. Some of the vendors have claimed twice this amount of savings. Paul said that savings really depends on what is assumed to be plugged into the strip. The RTF used average number of devices per home as found in the Residential Building Stock Assessment, which were different devices than in the Energy Trust pilot. For instance, we found a lot of game consoles.

Wrap-Up & Next Steps

This will be the last evaluation committee meeting of 2015. In terms of the next meeting, there will be a number of studies ready to present at a February 2016 or March 2016 meeting. Alan requested that staff send out a Doodle poll to determine the date of the next meeting.

REPORT

Nexant

Reimagine tomorrow.

2015 Products Program: Process Evaluation Report

Submitted to Energy Trust of Oregon

November 4, 2015

Principal authors:

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Contents

1 Executive Summary

Energy Trust of Oregon (Energy Trust) serves Oregon customers of Portland General Electric, Pacific Power, NW Natural, and Cascade Natural Gas, and Washington customers of NW Natural. As part of its mission, Energy Trust provides its customers with cash incentives, information, and other solutions to help them save energy and generate renewable energy. The Energy Trust Products program provides incentives to residential customers in Energy Trust's service territory to encourage the purchase and use of energy efficient products. The program includes lighting, showerheads, appliances, appliance recycling, new manufactured homes and low income kits that include faucet aerators. Energy savings from the Products program come primarily from lighting measures and showerheads, followed somewhat distantly by refrigerator recycling.

Following the selection of a new Program Management Contractor (PMC) in July 2014, Energy Trust established a transition period of September 1, 2014 to December 31, 2014. During this period, a variety of activities occurred to support a smooth transition of program services from the previous PMC, PECI (now CLEAResult), to Ecova, Inc. Although PECI is now part of CLEAResult, from this point on the report will refer to PECI as the former PMC to distinguish that from the current role CLEAResult has with the regional Simple Steps, Smart Savings™ program.

In May 2015, Energy Trust contracted with Nexant to conduct a process evaluation of the transition period and the first few months of implementation under the new PMC. Readers should note that our task in this project was to review documentation and conduct in-depth interviews with a variety of contacts involved in the transition process and first few months of the new PMC's management of the program. Coordination and communication issues are common and expected in program management transitions; rather than belabor these, our objective is to review the timeline and processes and gather the perspectives of those involved to provide findings and recommendations for how Energy Trust can continue to improve transitions in program management and identify emerging issues for the Products program as it plans for 2016.

1.1 Conclusions

The Products program contains six[1] separate, largely independent, components. Not all of these components were prioritized equally during the transition period. The transition team intentionally focused on two key components of the program: retail lighting and appliance recycling. Unsurprisingly, other components of the program (showerhead promotions, pop-up retail, new manufactured homes and kits) were progressing slower in the early months of 2015

[1] The Products program often combines retail lighting and showerhead promotions, as they are delivered in a similar manner; however the two products involve different sets of manufacturers and (occasionally) retailers. Showerhead promotions lagged retail lighting in early 2015.

and received additional attention. In the appliance component of the program, while the rebates did not change and program activities largely carried over as-is from 2014, development and rollout of new appliance point of purchase marketing materials was also intentionally delayed.

We found broad agreement that the transition process went well. The staff and stakeholders closest to the transition process noted that two primary components of the transition process seemed to be most important: first, a dedicated launch manager at Ecova provided continuity from contract signing through staffing and launch; and second, a transition contract established for both the incumbent and new PMC firms created an incentive for the competing firms to cooperate and ensure a smooth hand off. Integrating new program contractors and new program components resulted in minor issues around clarifying expectations, establishing new relationships, and monitoring service level agreements.

At Energy Trust, the transition period was affected by an unexpectedly high level of staff turnover within the residential program, as well as within Planning and IT. As other staff members stepped in to continue the transition process, some of the continuity and organizational knowledge was lost. Regardless, those involved reported working through these changes and staying focused on achieving an orderly transition of program activities from PECI to Ecova.

Participating retailer and manufacturer contacts also reported high overall satisfaction with the transition itself and with their interactions with the new PMC. Several contacts acknowledged the difficulties of transitioning program services and while a few reported minor issues in obtaining materials or information, none had major complaints.

By June 2015 most of the transition-specific issues were largely resolved and Products program staff began turning attention to peripheral components of the program, some of which had been de-emphasized during transition planning. Appliances, showerhead promotions, pop-up retail, kits & giveaways all received more focused attention in early 2015 than they had during the transition contract period at the end of 2014.

Coordination with the regional Simple Steps program emerged as a challenge several months into 2015, in part because of changes to Bonneville Power Administration's (BPA) contract with its implementer, CLEAResult, for the Simple Steps program, and in part because of unforeseen complexities in sales allocation using the Regional Sales Allocation Tool[2] and changes in BPA's price structure that affected transactions for savings acquired at shared stores. Issues resulting from changes to BPA's contract with CLEAResult and changes to CLEAResult's price structure were being addressed when interviews were being conducted for this project. According to program staff, a contract amendment executed in early July 2015 resolved issues around pricing structure and Ecova-run stores supported by Simple Steps utilities.

[2] The Retail Sales Allocation Tool (RSAT) is a tool used to allocate retail sales to the electric utilities that serve the customers of a given location. It facilitates proportional allocation of credit for energy saving product sales among stores frequented by customers of multiple utilities.

1.2 Recommendations

Recommendations are presented below in three categories: lessons learned in the PMC transition process, recommendations to enhance the Products program processes, and overarching strategies for expanding or enhancing measures promoted by the program.

1.2.1 Transition-specific

Consider deploying a contract to cover transition activities for future PMC transitions. The existence of a contract that encouraged outgoing and incoming PMC staff to work together and compensated them for their efforts worked well for the Products program. This was augmented by SharePoint communication tools that minimized extensive email communication between PECI and Ecova and allowed Energy Trust to monitor progress and identify information gaps.

Increase documentation of specific decisions and negotiations associated with complex contracting and invoicing. Multiple issues were likely affecting the communications between Ecova and CLEAResult about Simple Steps. These issues include competition among the implementation firms, revisions to BPA's willingness to pay for regional savings, the maintenance of long-established supply chain relationships, and a shifting consensus on the value of the regional brand. The complexity of the contracting and regional politics means that Energy Trust and BPA should have been more closely involved in the discussions between implementers.

1.2.2 Program-specific

In a general sense, recommendations in this vein focused on making things simpler for program contractors (e.g. PMC or other subcontractors) and market participants and included enhancements to electronic application processes and streamlining approval processes for low risk activities. As one contact noted, program components will need to be continually assessed as the market and program environment becomes less stable. Taking small risks on marginal or emerging solutions could reveal places where standard approaches to planning and marketing are too cumbersome.

Begin the shift toward mid- and up-stream incentives for appliances. Interviewees discussed the cost effectiveness challenges associated with the downstream appliance rebate model and noted potential benefits from shifting to an upstream program model. This shift will require developing new relationships with appliance manufacturers and retailers and could require more engagement and commitment on their part than the previous downstream rebate program model. In addition, the plans for Simple Steps to expand program offerings to include midstream and upstream appliance offers will likely require additional collaboration and coordination with BPA's program. Because of challenges in the lighting and showerhead allocation process that emerged early in 2015, this collaboration should be given particular attention in planning for appliances in 2016 and beyond.

Increase outreach to retailer contacts involved in showerhead promotions. Interviews indicate that retailer contacts were less aware of showerhead promotions than lighting and appliances. As the primary source of therm savings, retail showerheads remain important to achieving the goals of the Products program. More direct or aggressive promotion of the water saving features of *WaterSense*®-qualified showerheads could leverage community concerns about drought and spur consumers to finally take action.

Look for opportunities to minimize restrictions on program activities. Comments from staff and stakeholder interviewees indicate a desire for more flexibility in program delivery. These comments included mentions of exacting requirements for qualified lighting products that include specific criteria and specialized lists, Energy Trust marketing review that can take a substantial amount of time, tiered incentives for refrigerator recycling, and a narrow definition of qualified pop-up retail. These requirements may be associated with ensuring high quality program delivery, but it is worth monitoring this to ensure requirements are not unnecessarily limiting program reach. Specifically, Energy Trust should:

- Consider opportunities to relax product specifications while ensuring energy savings are obtained.
- Monitor the tiered incentive requirements for refrigerator recycling to ensure that the added complexity is not affecting uptake.
- Track proposed pop-up retail activity declined or disqualified by Energy Trust and the rationale for disqualification.

If specific restrictions emerge repeatedly, consider the potential savings value of relaxing that requirement.

1.2.3 Measure-specific Enhancement or Expansion

Energy Trust works with its PMCs to develop and expand program offerings; not all of the products or strategies considered will ultimately work for the program. Nevertheless, Energy Trust and its PMCs will need to be ready to test new measures and deployment strategies that go beyond brick-and-mortar retail programs and promote customized product solutions to those shopping online or with specific budget or performance requirements that limit their willingness to consider energy efficiency. Multiple contacts noted that savings from energy-efficient lighting is declining and that programs will likely need to both expand and simplify to remain cost-effective in the future. In addition to the proposed program enhancements listed in Section 2.4, interviewees offered suggestions that added to or expanded upon those already proposed. Recommendations tended to reflect the specific perspective or expertise of a given contact; however the theme of expansion and simplification was universally present. While a specific measure or enhancement may not pass program cost-effectiveness screening, these overall themes could inform future program planning.

- ***Consider expanding heat pump options for new manufactured homes.*** Allowing both ductless heat pump and standard heat pumps in qualified new manufactured homes could reduce barriers and obtain savings. Contacts at Earth Advantage noted

that modeling showed both measures saved energy and standard heat pumps could be a solution for manufacturers who do not allow DHPs to be integrated.

- ***Continue regional collaboration efforts with NEEA on high performance new manufactured homes.*** Look for opportunities to link programs to financing to replace old manufactured homes with newer high performance homes.
- ***Promote water solutions***. Develop a strategy for linking showerheads to water savings by leveraging public concern about water supplies. Leveraging the work of water bureaus, government organizations, and other advocacy groups could provide new exposure to water saving solutions (that also save natural gas).
- ***Prepare to integrate Products measures with "managed home" solutions***. The link between the performance of existing homes and emerging residential products that communicate with and control equipment will increase the need for program efforts to simplify what could become an increasingly complex market.

1.3 This Report

The remainder of this report is organized into four sections:

- Section 2 provides background and an overview of the transition process
- Section 3 summarizes feedback from staff and stakeholders
- Section 4 summarizes feedback from retailer and manufacturer contacts
- Section 5 summarizes conclusions and recommendations

MEMO

Date: November 11, 2015
To: Energy Trust Board of Directors
From: Mark Wyman, Residential Program Manager
Erin Rowland, Residential Sr. Project Manager
Erika Kociolek, Evaluation Project Manager
Subject: Staff Response to 2015 Products Process Evaluation

Energy Trust undertook a targeted process evaluation of the Products program in 2015, primarily to assess the transition to Ecova as program management contractor (PMC) and the first few months of program operation under the new PMC. The evaluator reviewed program materials and conducted interviews with program staff, as well as with retailer and manufacturer contacts involved with the retail lighting and showerhead component of the program.

The evaluator found that the transition went smoothly, despite staff turnover, and attributed the success of the transition to dedicated staff at the incoming PMC and Energy Trust, and the presence of transition contracts with both the outgoing and incoming PMCs. The first few months of program operation have gone well; retailer and manufacturer contacts reported being highly satisfied with the transition and new PMC.

In addition to the PMC transition, the Products program experienced two key changes in program design starting in 2015. First, the retail lighting and showerheads program component underwent significant changes. Prior to 2015, Energy Trust participated in the Simple Steps, Smart Savings program, which is managed by the Bonneville Power Administration. Starting in 2015, the program moved to having the PMC manage the retail lighting and showerheads component for select stores. At the time of the interviews for this process evaluation (May 2015), there were some significant challenges with transitioning away from the Simple Steps and adapting to changes to the Simple Steps program; the challenges specifically related to store allocations, BPA's willingness to acquire savings in stores with BPA utility allocations, and data issues. These issues have been resolved in the months since the interviews for this evaluation.

The second key change relates to the addition of a new program component, TechniArt, a pop-up retailer that offers heavily discounted lighting and showerheads at employee events at businesses. There were some coordination challenges with TechniArt, namely lack of alignment between the program and TechniArt on the types of sites eligible for pop-up retail, which led to the discontinuation of several events. As a result, the evaluator recommended that Energy Trust track and monitor pop-up retail activity that was declined or disqualified by Energy Trust and the rationale for disqualification. The program believes that the timing of the interviews for the evaluation coincided with a time

when these coordination challenges were in the process of being resolved, and feels that coordination with TechniArt since then has been much smoother.

For 2016, the program is working to diversify its measure mix by offering incentives for recycled clothes washers. Additionally, the program will offer incentives for smart thermostats and heat pump water heaters sold at retail. The program is also continuing to assess the potential for new measures, such as super-efficient dryers, advanced power strips, and moving to midstream and upstream program designs.

Tab 4

Board Decision
Office Space Lease Extension Negotiation

February 24, 2016

Summary

Authorize the Executive Director or her designee to negotiate and sign a lease extension for office space.

Background

- Energy Trust's current office space lease will expire on June 30, 2019.
- Energy Trust's current office space lease provides an option to renew for an additional five years at market rates.
- Current lease rates are significantly below current market rates because the existing lease was signed in 2011 when downtown Portland rental market rates were low. Energy Trust's current rate is approximately $20 per square foot, and the current market rate for the Lincoln Building space is just over $26 per square foot.
- Energy Trust's current space is Class B, and the location and space continue to be pleasant, workable and supported by staff. Costs and resources associated with relocating can be substantial and disruptive.
- Current and projected market conditions for downtown and close-in Portland office space are very strong, and Energy Trust staff forecasts significant rental rate increases at the expiration of the current lease in 2019. According to Chris Elsenbach of Jones Lang, our tenant representative, projected market rates could be in the $30-$33 per square foot rate at the end of the current lease period and are expected to continue to rise after that.
- Energy Trust's current landlord, G&I VII Lincoln Building, LP, is willing to negotiate an extension at favorable market rates in the interest of retaining a long term, quality tenant like Energy Trust. A lease extension proposal has been presented and is being reviewed by Energy Trust staff.
- Oregon Public Utility Commission (OPUC) staff have also been advised of the extension negotiations. A detailed notice of the proposed lease extension terms has been provided to OPUC staff in accordance with Grant Agreement requirements.

Discussion

To protect Energy Trust's ability to negotiate the most favorable terms, the Executive Director seeks authority to negotiate a lease extension which meets the following general parameters:

- For purposes of negotiation, a cost-competitive package for the lease extension would be consistent with the following parameters, and any final lease extension would not deviate from these parameters:
  - Cost per square foot may not exceed $35.00 per year for the lease extension period
  - Lease term extension will begin July 1, 2019 and end not earlier than December 31, 2025, in order to align lease expiration with Energy Trust's current legislated sunset date

- In addition, the negotiations would seek to:
  - Maximize reimbursement to Energy Trust for minor tenant improvements
  - Obtain some amounts of rent abatement under the current lease currently estimated at five and one half months
  - Maximize flexibility related to both current and future space requirements
  - Enhance productivity and efficiency of staff functions and foster teamwork

- The Executive Director will obtain OPUC approval for the terms of any final lease extension and submit the final lease extension for review by the Board Finance Committee of the specific lease terms prior to signing a lease extension document.

Recommendation

Authorize the Executive Director to negotiate and sign a lease extension for building office space consistent with resolution 768 below.

RESOLUTION 768
AUTHORIZE EXECUTIVE DIRECTOR TO NEGOTIATE
FAVORABLE BUILDING OFFICE SPACE LEASE EXTENSION

WHEREAS:

1. **Energy Trust's current office space lease expires June 30, 2019.**
2. **Energy Trust's current office space is Class B, and in a favorable location for Energy Trust operations. Costs and resources associated with relocating can be substantial.**
3. **The downtown Portland office building market is active, and rental rates are increasing significantly and are expected to continue to increase.**
4. **Energy Trust's current landlord is willing to negotiate a lease extension and to commit to favorable rent rates through 2025.**
5. **To maintain Energy Trust's ability to negotiate favorable terms, the board authorizes the executive director to complete lease extension negotiations within certain parameters.**

It is therefore RESOLVED, the Board authorizes the Executive Director or her designee to negotiate and sign a lease extension for a lease extension term consistent with the following general terms:

a. **Cost per square foot may not exceed $35.00 per year for the lease extension period**
b. **Lease term extension will begin July 1, 2019 and end not earlier than December 31, 2025**

- **In addition, the negotiations will seek to:**
  - **Maximize reimbursement to Energy Trust for minor tenant improvements**
  - **Obtain some amounts of rent abatement under the current lease**
  - **Maximize flexibility related to both current and future space requirements**
  - **Enhance productivity and efficiency of staff functions and foster teamwork**

- **As required by the Oregon Public Utility Commission (OPUC) Grant Agreement, the Executive Director or her designee will obtain approval by the OPUC for the terms of the lease extension prior to signing the final lease extension documentation.**

- **The Executive Director or her designee will submit the final lease extension proposal for review by the Board Finance Committee prior to signing final lease extension documentation.**

Moved by: Seconded by:

Vote: In favor: Abstained:

Opposed:

Notes on November 2015 Financial Statements

December 17, 2015

Revenue

Year-to-Date revenue remains close to budgeted amounts.

Nov-15	YTD Actual	YTD Budget	YTD Var	YTD %	PY
PGE	72,921,274	71,597,080	1,324,194	1.8%	79,666,160
PAC	44,444,579	44,299,586	144,993	0.3%	48,820,500
NWN	16,459,041	16,996,993	(537,952)	-3.2%	20,647,963
CNG	1,113,511	1,645,790	(532,279)	-32.3%	2,267,952
Investment Income	572,680	264,000	308,680	116.9%	235,752
Total	135,511,086	134,803,449	707,636	0.5%	151,638,327

Reserves

Program reserves remain 19% lower than where we were at this time last year. We expect a significant hockey stick decline next month.

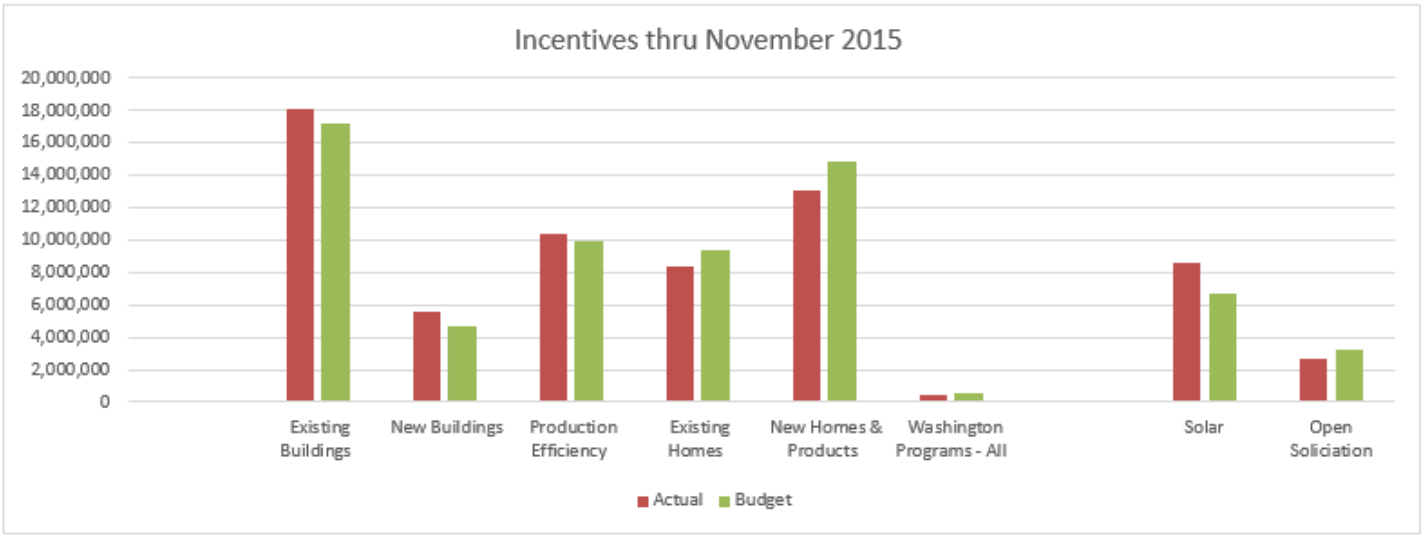
Reserves

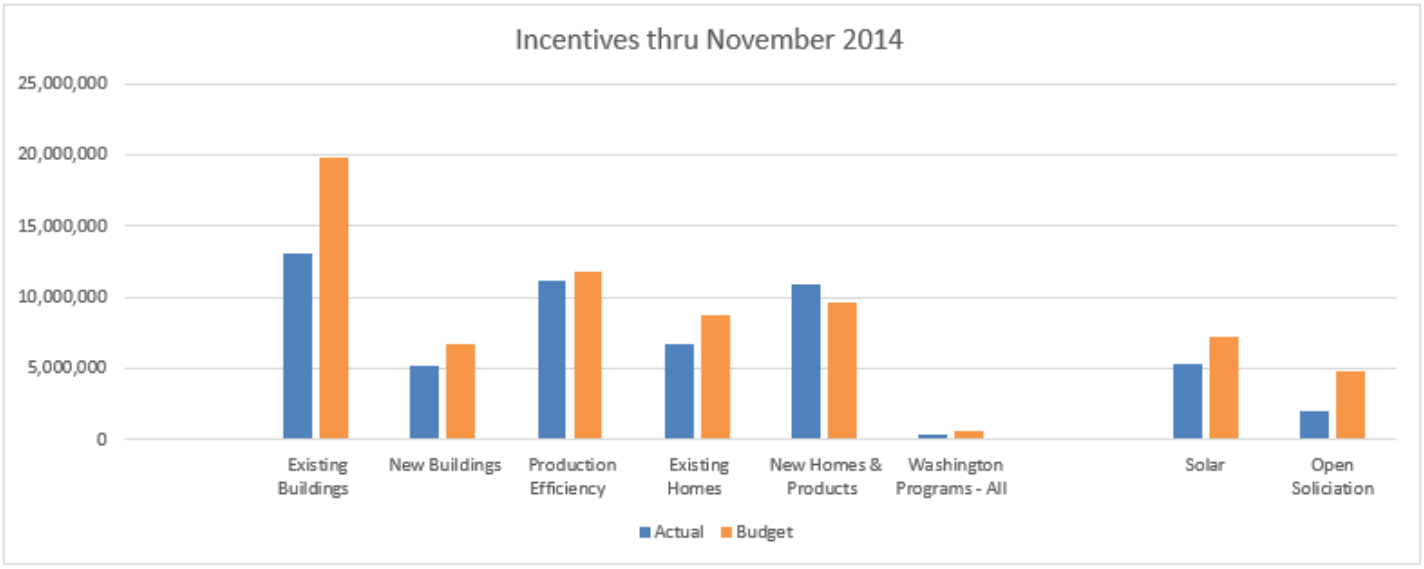
	Actual 11/30/15 Amount	Actual 12/31/14 Amount	YTD % Change	Actual 11/30/14 Amount	12 month % Change
PGE	31,874,906	27,816,061	15%	40,474,860	-21%
PacifiCorp	15,170,879	15,090,308	1%	21,722,650	-30%
NW Natural	8,595,928	9,503,289	-10%	10,899,994	-21%
Cascade	716,092	1,156,900	-38%	1,352,660	-47%
NWN Industrial	2,020,812	580,920	248%	1,664,525	21%
NWN Washington	545,500	217,848	150%	595,673	-8%
PGE Renewables	11,946,425	13,736,997	-13%	14,387,287	-17%
PAC Renewables	11,394,470	10,937,994	4%	12,952,075	-12%
Program Reserves	82,265,012	79,040,317	4%	104,049,724	-21%
Contingency Reserve	5,000,000	5,000,000	0%	5,000,000	0%
Contingency Available	3,761,034	3,186,804	18%	3,242,862	16%
Total	91,026,040	87,227,121	4%	112,292,587	-19%

Incentive Expenses

Total expenses for November were $1.7 million below budget, largely due to incentive spending. Spending for the year is now $3.8 million below budget, although we expect to make that up in December as incentive processing accelerates for year end. Spending vs. last year is $14.4 million higher (12%).

Incentives for the month were lower than expected, but we remain within 1% of our budget for the year. Results by program are comparable to last month. A comparison with last year's incentive status is below. It shows the dramatic increase in incentive spending for all programs. We have spent $12.3 million more on incentives this year than last year.





Total Incentives
Year-to-Date 2015

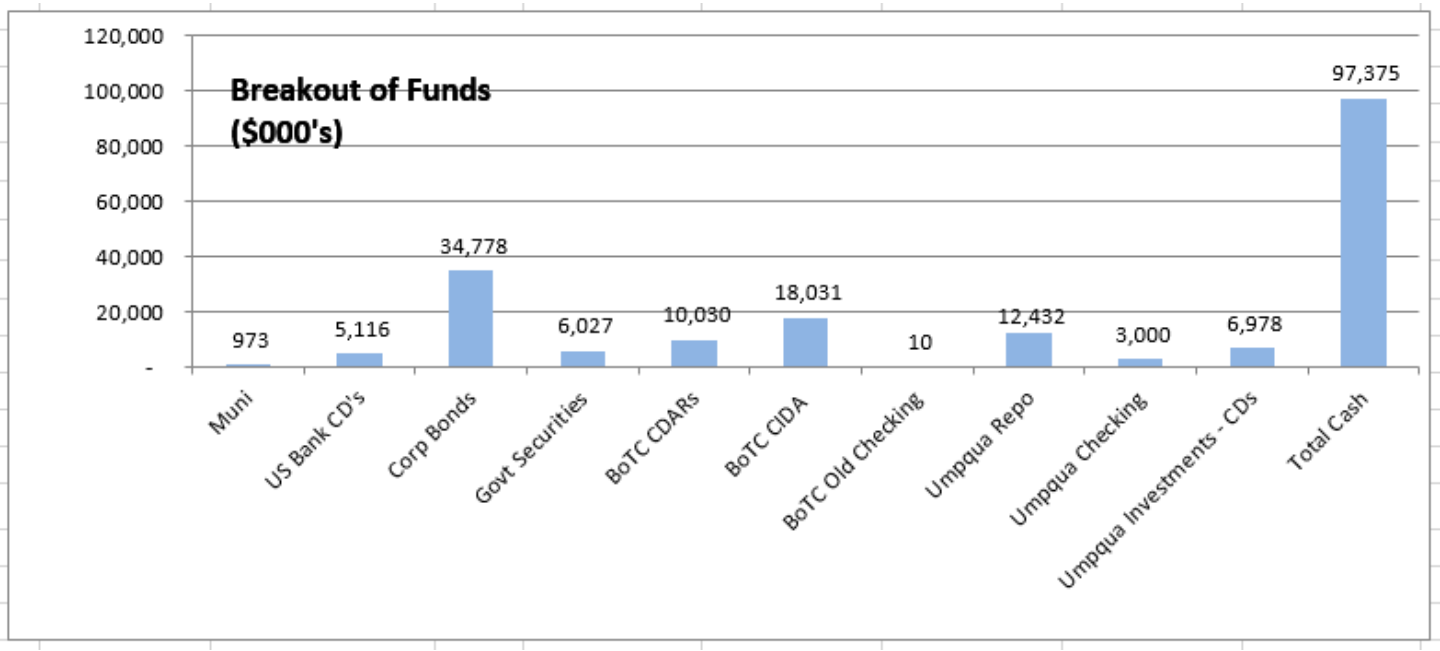
Incentives thru November 2015	Actual	Budget	Variance	Var %
Existing Buildings	18,076,251	17,208,595	(867,656)	-5%
New Buildings	5,529,667	4,636,844	(892,823)	-19%
Production Efficiency	10,416,188	9,937,172	(479,016)	-5%
Existing Homes	8,369,860	9,366,836	996,976	11%
New Homes & Products	13,077,697	14,880,857	1,803,160	12%
Washington Programs - All	420,734	518,401	97,667	19%
Solar	8,639,582	6,688,817	(1,950,765)	-29%
Open Soliciation	2,681,271	3,260,778	579,507	18%
Total Incentives	67,211,250	66,498,300	(712,950)	-1%
Energy Efficiency Only	**55,890,397**	**56,548,705**	**658,308**	**1%**

Total Incentives
Year-to-Year Comparison

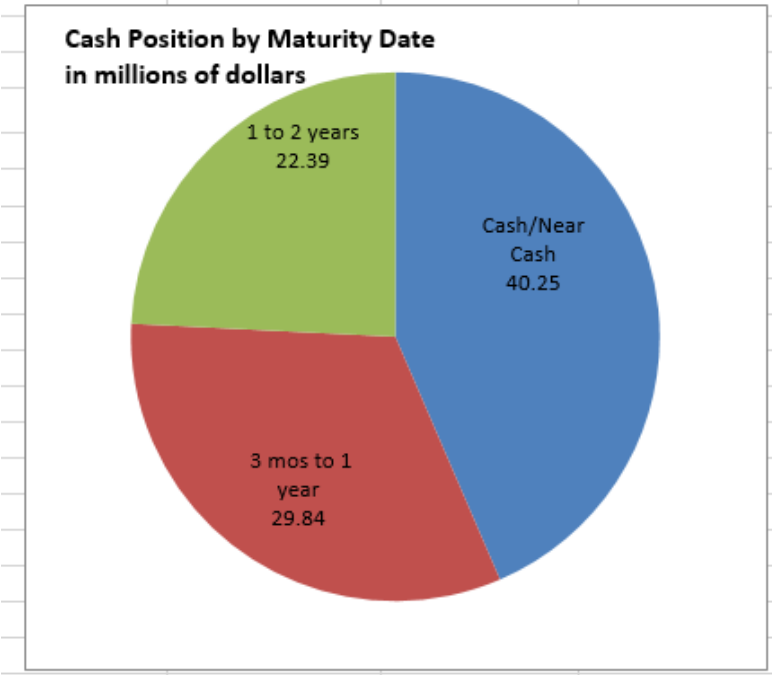
Nov 2015 vs. Nov 2014	Current Year	Prior Year	Variance	Var %
Existing Buildings	18,076,251	13,111,756	(4,964,495)	-38%
New Buildings	5,529,667	5,253,861	(275,806)	-5%
Production Efficiency	10,416,188	11,232,705	816,517	7%
Existing Homes	8,369,860	6,732,934	(1,636,926)	-24%
New Homes & Products	13,077,697	10,913,510	(2,164,187)	-20%
Washington Programs - All	420,734	317,973	(102,761)	-32%
Solar	8,639,582	5,379,604	(3,259,978)	-61%
Open Solicitation	2,681,271	1,992,223	(689,048)	-35%
Total Incentives	67,211,250	54,934,566	(12,276,688)	-22%
Energy Efficiency Only	**55,890,397**	**47,562,739**	**(8,327,658)**	-18%

Investment Status

The graphs below show the type of investments we hold and the locations where our funds are held at the end of September (including cash). The average liquidity for all assets held at 11/30/15 was 197 days. Because of year end cash demands and next year's planned budget, we are planning to maintain relatively short term liquidity going forward.



Average Days to Maturity:	197
Average Portfolio Yield:	0.58%



Energy Trust of Oregon
BALANCE SHEET
November 30, 2015
(Unaudited)

	November 2015	October 2015	Dec 2014	November 2014	Change from one month ago	Change from Beg. of Year	Change from one year ago
Current Assets							
Cash & Cash Equivalents	33,475,881	36,763,122	51,411,367	60,771,440	(3,287,241)	(17,935,486)	(27,295,559)
Investments	63,997,194	63,074,649	64,490,244	62,650,476	922,545	(493,050)	1,346,718
Receivables	364,373	314,752	323,531	314,390	49,621	40,842	49,983
Prepaid Expenses	447,814	522,558	405,430	463,190	(74,744)	42,384	(15,376)
Advances to Vendors	978,530	1,700,028	1,482,149	1,224,036	(721,499)	(503,619)	(245,507)
Total Current Assets	**99,263,791**	**102,375,110**	**118,112,720**	**125,423,532**	**(3,111,319)**	**(18,848,929)**	**(26,159,741)**
Fixed Assets							
Computer Hardware and Software	3,509,829	3,487,578	1,653,762	1,634,233	22,252	1,856,067	1,875,596
Software Development in Progress	137,584	124,618	1025908.62	892120.69	12,966	(888,324)	(754,536)
Leasehold Improvements	318,964	318,964	318,964	318,964	-	-	0
Office Equipment and Furniture	701,604	698,874	679,343	610,910	2,729.66	22,260.41	90,693
Total Fixed Assets	**4,667,982**	**4,630,034**	**3,677,978**	**3,456,229**	**37,948**	**990,003**	**1,211,753**
Less Depreciation	(2,595,255)	(2,519,404)	(1,831,551)	(1,796,201)	(75,851)	(763,704)	(799,053)
Net Fixed Assets	**2,072,727**	**2,110,630**	**1,846,428**	**1,660,027**	**(37,903)**	**226,299**	**412,700**
Other Assets							
Deposits	132,340	132,340	135,340	135,340	0	(3,000)	(3,000)
Deferred Compensation Asset	717,716	710,257	630,176	586,872	7,460	87,540	130,845
Note Receivable, net of allowance	86,789	86,789	86,789	100000	-	-	(13,211)
Total Other Assets	**936,846**	**929,386**	**852,305**	**822,212**	**7,460**	**84,540**	**114,634**
Total Assets	**102,273,363**	**105,415,126**	**120,811,454**	**127,905,771**	**(3,141,762)**	**(18,538,090)**	**(25,632,408)**
Current Liabilities							
Accounts Payable and Accruals	9,442,400	9,009,638	31,924,631	13,965,246	432,761	(22,482,231)	(4,522,846)
Salaries, Taxes, & Benefits Payable	764,078	739,235	671,849	703,609	24,843	92,229	60,469
Total Current Liabilities	**10,206,478**	**9,748,874**	**32,596,480**	**14,668,855**	**457,604**	**(22,390,002)**	**(4,462,377)**
Long Term Liabilities							
Deferred Rent	319,129	321,908	349,692	352,470	(2,778)	(30,562)	(33,341)
Deferred Compensation Payable	717,716	713,057	632,976	586,872	4,660	84,740	130,845
Other Long-Term Liabilities	3,990	3,990	5,185	4,995	-	(1,195)	(1,005)
Total Long-Term Liabilities	**1,040,835**	**1,038,954**	**987,852**	**944,336**	**1,881**	**52,983**	**96,499**
Total Liabilities	**11,247,313**	**10,787,828**	**33,584,332**	**15,613,191**	**459,485**	**(22,337,019)**	**(4,365,878)**
Net Assets							
Unrestricted Net Assets	91,026,050	94,627,298	87,227,121	112,292,580	(3,601,247)	3,798,929	(21,266,530)
Total Net Assets	**91,026,050**	**94,627,298**	**87,227,121**	**112,292,580**	**(3,601,247)**	**3,798,929**	**(21,266,530)**
Total Liabilities and Net Assets	**102,273,363**	**105,415,126**	**120,811,454**	**127,905,771**	**(3,141,762)**	**(18,538,090)**	**(25,632,408)**

Energy Trust of Oregon
Cash Flow Statement-Indirect Method
Monthly 2015

	January	February	March	April	May	June	July	August	September	October	November	Year to Date
Operating Activities:												
Revenue less Expenses	8,620,993	6,726,499	1,531,158	715,318	(2,736,736)	(4,113,196)	(1,391,665)	949,161	(362,902)	(2,538,454)	(3,601,245)	$ 3,798,929
Non-cash items:												
Depreciation	40,242	41,284	64,566	71,460	73,396	75,252	81,000	81,976	82,826	75,851	75,851	763,704
Change in Reserve on Long Term Note	-	-	-									-
Loss on disposal of assets												
Receivables	5,800	11,583	-	(7,684)	-	(10,698)	5,001		20,580	(1,300)	(6,988)	16,294
Interest Receivable	4,268	(50,180)	58,204	8,452	(43,458)	9,862	8,932	(34,926)	68,538	(44,194)	(42,633)	(57,135)
Advances to Vendors	543,337	465,160	(1,177,147)	228,917	594,462	(1,000,894)	451,715	529,587	(1,317,505)	464,489	721,498	503,619
Prepaid expenses and other costs	14,982	47,842	(254,416)	68,730	7,275	95,511	(101,812)	79,428	(46,110)	(28,558)	74,744	(42,384)
Accounts payable	(20,265,729)	(2,448,214)	(352,009)	212,675	(972,984)	457,462	(90,250)	8,713	43,295	492,048	432,762	(22,482,231)
Payroll and related accruals	17,794	52,944	96,210	(24,170)	24,831	10,229	(25,607)	(35,898)	39,784	(8,650)	29,502	176,969
Deferred rent and other	(11,515)	(11,028)	(10,673)	(8,029)	(13,988)	(11,029)	(10,948)	(11,068)	(9,819)	(7,964)	(10,239)	(116,300)
Cash rec'd from / (used in) Operating Activities	(11,029,828)	4,835,890	(44,107)	1,265,669	(3,067,202)	(4,487,501)	(1,073,634)	1,566,973	(1,481,313)	(1,596,732)	(2,326,748)	$ (17,438,533)
Investing Activities:												
Investment Activity (1)	(2,475,092)	(5,431,428)	(1,217,888)	2,835,537	3,803,928	(2,582,238)	(1,185,464)	4,589,524	(979,021)	4,057,737	(922,545)	493,050
(Acquisition)/Disposal of Capital Assets	(132,268)	(142,396)	(143,192)	(151,901)	(98,053)	(128,592)	(100,776)	(47,053)	(9,862)	2,037	(37,948)	(990,004)
Cash rec'd from / (used in) Investing Activities	(2,607,360)	(5,573,824)	(1,361,080)	2,683,636	3,705,875	(2,710,830)	(1,286,240)	4,542,471	(988,883)	4,059,774	(960,493)	$ (496,954)
Cash at beginning of Period	51,411,367	37,774,180	37,036,243	35,631,058	39,580,364	40,219,037	33,020,705	30,660,832	36,770,273	34,300,080	36,763,122	51,411,367
Increase/(Decrease) in Cash	(13,637,187)	(737,934)	(1,405,187)	3,949,305	638,673	(7,198,331)	(2,359,874)	6,109,444	(2,470,195)	2,463,042	(3,287,241)	(17,935,486)
Cash at end of period	$ 37,774,180	$ 37,036,243	$ 35,631,058	$ 39,580,364	$ 40,219,037	$ 33,020,705	$ 30,660,832	$ 36,770,275	$ 34,300,080	$ 36,763,122	$ 33,475,881	$ 33,475,881

(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 2015 - December 2016

	Actual											2015 R3 Forecast
	January	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**
Cash In:												
Public purpose and Incr funding	15,740,912	15,125,779	12,539,730	13,204,663	10,891,616	10,343,345	11,275,486	11,838,796	11,505,033	12,586,340	9,886,704	14,198,500
From other sources	5,800	11,583	-	(7,684)	700	(10,698)	5,351	-	20,581	(799)	(6,987)	-
Investment Income	110,630	(27,478)	123,371	70,057	8,631	12,301	48,465	(14,203)	161,730	26,605	(4,564)	-
Total cash in	15,857,342	15,109,884	12,663,101	13,267,036	10,900,947	10,344,948	11,329,302	11,824,593	11,687,344	12,612,146	9,875,153	14,198,500
Cash Out:	29,494,530	15,847,819	14,068,288	9,317,730	10,262,273	17,543,282	13,689,174	5,715,147	14,157,540	10,149,102	13,162,396	19,540,798
Net cash flow for the month	(13,637,188)	(737,935)	(1,405,187)	3,949,306	638,674	(7,198,334)	(2,359,872)	6,109,446	(2,470,196)	2,463,044	(3,287,243)	(5,342,298)
Beginning Balance: Cash & MM	51,411,367	37,774,180	37,036,248	35,631,058	39,580,364	40,219,037	33,020,705	30,660,832	36,770,275	34,300,080	36,763,122	33,475,881
Ending cash & MM	**37,774,180**	**37,036,243**	**35,631,058**	**39,580,364**	**40,219,037**	**33,020,705**	**30,660,832**	**36,770,275**	**34,300,080**	**36,763,122**	**33,475,881**	**28,133,583**
Future Commitments												
Renewable Incentives	17,600,000	17,500,000	17,000,000	16,900,000	16,600,000	14,600,000	14,400,000	14,200,000	16,000,000	15,600,000	14,500,000	12,300,000
Efficiency Incentives	48,400,000	47,100,000	63,000,000	60,400,000	58,500,000	62,200,000	58,900,000	58,800,000	70,700,000	70,800,000	85,100,000	76,700,000
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	71,000,000	69,600,000	85,000,000	82,300,000	80,100,000	81,800,000	78,300,000	78,000,000	91,700,000	91,400,000	104,600,000	94,000,000

(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
Cash Flow Projection
January 2015 - December 2016

	2016 R2 Budgeted Amounts											
	January	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**
Cash In:												
Public purpose and Incr funding	16,400,000	15,700,000	13,000,000	13,800,000	11,200,000	10,600,000	11,600,000	12,100,000	11,600,000	11,800,000	11,400,000	13,800,000
From other sources												
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
Total cash in	16,425,000	15,725,000	13,025,000	13,825,000	11,225,000	10,625,000	11,625,000	12,125,000	11,625,000	11,825,000	11,425,000	13,825,000
Cash Out:	33,000,000	10,700,000	12,400,000	12,000,000	13,900,000	15,400,000	12,400,000	13,000,000	15,100,000	14,200,000	17,000,000	18,000,000
Net cash flow for the month	(16,575,000)	5,025,000	625,000	1,825,000	(2,675,000)	(4,775,000)	(775,000)	(875,000)	(3,475,000)	(2,375,000)	(5,575,000)	(4,175,000)
Beginning Balance: Cash & MM	28,133,583	11,558,583	16,583,583	17,208,583	19,033,583	16,358,583	11,583,583	10,808,583	9,933,583	6,458,583	4,083,583	(1,491,417)
Ending cash & MM	**11,558,583**	**16,583,583**	**17,208,583**	**19,033,583**	**16,358,583**	**11,583,583**	**10,808,583**	**9,933,583**	**6,458,583**	**4,083,583**	**(1,491,417)**	**(5,666,417)**
Future Commitments												
Renewable Incentives	11,900,000	13,000,000	13,900,000	16,300,000	16,100,000	16,400,000	16,900,000	17,500,000	17,500,000	17,500,000	17,500,000	17,500,000
Efficiency Incentives	74,000,000	74,400,000	71,800,000	71,300,000	73,500,000	72,800,000	73,600,000	75,900,000	75,900,000	75,900,000	75,900,000	75,900,000
Emergency Contingency Pool	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000
Total Commitments	90,900,000	92,400,000	90,700,000	92,600,000	94,600,000	94,200,000	95,500,000	98,400,000	98,400,000	98,400,000	98,400,000	98,400,000

(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
Income Statement - Actual and Budget Comparison
For the Month Ending November 30, 2015
(Unaudited)

	November				YTD			
	Actual	**Budget**	**Budget Variance**	**Variance %**	**Actual**	**Budget**	**Budget Variance**	**Variance %**
REVENUES								
Public Purpose Funds-PGE	2,717,418	2,466,667	250,752	10%	34,101,679	33,777,160	324,520	1%
Public Purpose Funds-PacifiCorp	2,031,237	2,434,931	(403,694)	-17%	24,929,738	25,553,426	(623,688)	-2%
Public Purpose Funds-NW Natural	529,679	601,143	(71,464)	-12%	11,945,094	12,588,222	(643,128)	-5%
Public Purpose Funds-Cascade	69,084	229,645	(160,561)	-70%	1,113,511	1,645,790	(532,279)	-32%
Total Public Purpose Funds	**5,347,419**	**5,732,387**	**(384,968)**	**-7%**	**72,090,021**	**73,564,597**	**(1,474,576)**	**-2%**
Incremental Funds - PGE	2,949,416	3,560,809	(611,393)	-17%	38,819,595	37,819,921	999,674	3%
Incremental Funds - PacifiCorp	1,589,870	1,757,910	(168,040)	-10%	19,514,841	18,746,160	768,682	4%
NW Natural - Industrial DSM			0		3,078,432	2,997,419	81,013	3%
NW Natural - Washington			0		1,435,515	1,411,352	24,163	2%
Contributions			0		1,550		1,550	
Revenue from Investments	38,069	24,000	14,069	59%	572,680	264,000	308,680	117%
TOTAL REVENUE	**9,924,774**	**11,075,106**	**(1,150,331)**	**-10%**	**135,512,634**	**134,803,449**	**709,185**	**1%**
EXPENSES								
Program Subcontracts	4,323,294	4,597,435	274,141	6%	46,376,686	47,339,509	962,823	2%
Incentives	7,593,708	8,788,334	1,194,626	14%	67,211,250	66,498,299	(712,951)	-1%
Salaries and Related Expenses	921,063	970,406	49,342	5%	9,827,874	10,777,781	949,907	9%
Professional Services	468,398	663,349	194,952	29%	5,826,815	7,608,458	1,781,643	23%
Supplies	2,648	3,650	1,002	27%	30,427	40,150	9,723	24%
Telephone	4,797	5,458	661	12%	53,653	60,417	6,763	11%
Postage and Shipping Expenses	934	1,100	166	15%	11,242	12,100	858	7%
Occupancy Expenses	53,328	61,519	8,191	13%	590,612	676,707	86,094	13%
Noncapitalized Equip. & Depr.	93,870	108,609	14,739	14%	1,094,986	1,073,074	(21,912)	-2%
Call Center	10,213	13,000	2,787	21%	137,358	143,000	5,642	4%
Printing and Publications	109	10,946	10,837	99%	55,098	120,404	65,307	54%
Travel	10,970	14,508	3,539	24%	136,526	183,592	47,066	26%
Conference, Training & Mtng Exp	5,016	25,962	20,946	81%	124,708	296,928	172,220	58%
Interest Expense and Bank Fees		208	208		1,774	2,292	518	23%
Insurance	8,486	9,167	680	7%	95,376	100,833	5,457	5%
Miscellaneous Expenses	10,418		(10,418)		33,083		(33,083)	
Dues, Licenses and Fees	18,770	6,890	(11,881)	-172%	106,236	128,218	21,982	17%
TOTAL EXPENSES	**13,526,022**	**15,280,540**	**1,754,519**	**11%**	**131,713,705**	**135,061,761**	**3,348,056**	**2%**
TOTAL REVENUE LESS EXPENSES	**(3,601,247)**	**(4,205,435)**	**604,187**	**14%**	**3,798,929**	**(258,312)**	**4,057,241**	**1571%**

Energy Trust of Oregon
Income Statement - Actual and Prior Year Comparison
For the Month Ending November 30, 2015
(Unaudited)

	November				YTD			
	Actual	Actual Prior Year	Prior Year Variance	Variance %	Actual	Actual Prior Year	Prior Year Variance	Variance %
REVENUES								
Public Purpose Funds-PGE	2,717,418	2,737,964	(20,545)	-1%	34,101,679	34,266,784	(165,105)	0%
Public Purpose Funds-PacifiCorp	2,031,237	1,971,917	59,320	3%	24,929,738	25,085,372	(155,634)	-1%
Public Purpose Funds-NW Natural	529,679	648,423	(118,744)	-18%	11,945,094	16,520,556	(4,575,462)	-28%
Public Purpose Funds-Cascade	69,084	66,776	2,307	3%	1,113,511	2,267,952	(1,154,441)	-51%
Total Public Purpose Funds	**5,347,419**	**5,425,080**	**(77,661)**	**-1%**	**72,090,021**	**78,140,663**	**(6,050,642)**	**-8%**
Incremental Funds - PGE	2,949,416	3,270,829	(321,412)	-10%	38,819,595	45,399,377	(6,579,782)	-14%
Incremental Funds - PacifiCorp	1,589,870	1,722,984	(133,114)	-8%	19,514,841	23,735,128	(4,220,286)	-18%
NW Natural - Industrial DSM			0		3,078,432	3,073,052	5,380	0%
NW Natural - Washington			0		1,435,515	1,054,355	381,160	36%
Contributions			0		1,550	13,400	(11,850)	
Revenue from Investments	38,069	33,623	4,446	13%	572,680	235,752	336,928	143%
TOTAL REVENUE	**9,924,774**	**10,452,515**	**(527,741)**	**-5%**	**135,512,634**	**151,651,727**	**(16,139,093)**	**-11%**
EXPENSES								
Program Subcontracts	4,323,294	4,854,913	531,619	11%	46,376,686	44,826,671	(1,550,015)	-3%
Incentives	7,593,708	8,222,607	628,899	8%	67,211,250	54,934,565	(12,276,685)	-22%
Salaries and Related Expenses	921,063	779,238	(141,825)	-18%	9,827,874	9,517,354	(310,520)	-3%
Professional Services	468,398	407,488	(60,909)	-15%	5,826,815	5,859,056	32,241	1%
Supplies	2,648	3,070	422	14%	30,427	32,752	2,325	7%
Telephone	4,797	4,289	(508)	-12%	53,653	50,673	(2,981)	-6%
Postage and Shipping Expenses	934	727	(207)	-28%	11,242	11,454	212	2%
Occupancy Expenses	53,328	52,568	(759)	-1%	590,612	590,401	(211)	0%
Noncapitalized Equip. & Depr.	93,870	90,466	(3,405)	-4%	1,094,986	675,326	(419,660)	-62%
Call Center	10,213	10,297	84	1%	137,358	135,130	(2,228)	-2%
Printing and Publications	109	3,874	3,765	97%	55,098	108,702	53,604	49%
Travel	10,970	6,618	(4,352)	-66%	136,526	134,319	(2,206)	-2%
Conference, Training & Mtng Exp	5,016	4,713	(303)	-6%	124,708	168,332	43,624	26%
Interest Expense and Bank Fees			0		1,774	2,000	226	11%
Insurance	8,486	8,630	144	2%	95,376	93,443	(1,934)	-2%
Miscellaneous Expenses	10,418		(10,418)		33,083	3,316	(29,767)	
Dues, Licenses and Fees	18,770	17,588	(1,183)	-7%	106,236	146,223	39,987	27%
TOTAL EXPENSES	**13,526,022**	**14,467,086**	**941,064**	**7%**	**131,713,705**	**117,289,719**	**(14,423,987)**	**-12%**
TOTAL REVENUE LESS EXPENSES	**(3,601,247)**	**(4,014,571)**	**413,324**	**10%**	**3,798,929**	**34,362,008**	**(30,563,079)**	**-89%**

Energy Trust of Oregon
Statement of Functional Expenses
For the Eleven Months Ending November 30, 2015
(Unaudited)

	Energy Efficiency	Renewable Energy	Total Program Expenses	Management & General	Communications & Customer Service	Total Admin Expenses	Total	Budget	Variance	% Var
Program Expenses										
Incentives/ Program Management & Deliver	$101,867,763	$11,720,173	$113,587,936				$ 113,587,936	$113,837,808	$ 249,872	0%
Payroll and Related Expenses	2,757,859	841,409	3,599,268	1,862,381	1,110,830	2,973,211	6,572,480	7,132,460	559,980	8%
Outsourced Services	3,634,344	838,847	4,473,190	195,386	897,878	1,093,264	5,566,454	7,112,917	1,546,463	22%
Planning and Evaluation	1,832,121	60,899	1,893,020	1,354		1,354	1,894,373	2,171,734	277,361	13%
Customer Service Management	527,880	37,004	564,884				564,884	497,248	(67,636)	-14%
Trade Allies Network	277,171	18,864	296,036				296,036	368,071	72,035	20%
Total Program Expenses	**110,897,138**	**13,517,196**	**124,414,334**	**2,059,121**	**2,008,708**	**4,067,828**	**128,482,163**	**131,120,237**	**2,638,074**	**2%**
Program Support Costs										
Supplies	8,163	2,980	11,143	7,519	3,717	11,236	22,379	28,555	6,176	22%
Postage and Shipping Expenses	2,059	2,592	4,651	2,938	865	3,803	8,454	7,431	(1,023)	-14%
Telephone	2,346	774	3,120	1,407	1,105	2,512	5,633	9,059	3,426	38%
Printing and Publications	43,100	1,595	44,695	4,582	4,204	8,785	53,480	116,572	63,092	54%
Occupancy Expenses	169,984	56,114	226,098	101,962	71,397	173,359	399,457	449,652	50,195	11%
Insurance	27,450	9,062	36,512	16,466	11,530	27,995	64,507	67,001	2,494	4%
Equipment	6,357	57,966	64,324	3,813	2,670	6,484	70,807	123,551	52,744	43%
Travel	26,197	13,394	39,591	21,615	44,049	65,665	105,255	145,400	40,145	28%
Meetings, Trainings & Conferences	24,239	14,441	38,679	38,488	12,979	51,466	90,146	242,138	151,992	63%
Interest Expense and Bank Fees				1,774		1,774	1,774	2,292	518	23%
Depreciation & Amortization	46,005	15,187	61,192	27,595	19,323	46,918	108,110	94,839	(13,271)	-14%
Dues, Licenses and Fees	60,346	9,410	69,756	(5,425)	18,128	12,703	82,459	94,806	12,347	
Miscellaneous Expenses	31,831	249	32,080	289	194	483	32,563		(32,563)	
IT Services	1,446,358	190,798	1,637,156	325,387	223,974	549,362	2,186,518	2,560,229	373,711	15%
Total Program Support Costs	**1,894,435**	**374,562**	**2,268,997**	**548,410**	**414,135**	**962,545**	**3,231,542**	**3,941,525**	**709,983**	**18%**
TOTAL EXPENSES	**112,791,573**	**13,891,758**	**126,683,331**	**2,607,531**	**2,422,844**	**5,030,373**	**131,713,705**	**135,061,763**	**3,348,058**	**2%**
OPUC Measure vs. 8%	**5.4%**									

ENERGY TRUST OF OREGON
Year to Date by Program/Service Territory
For the Eleven Months Ending November 30, 2015
Unaudited

	ENERGY EFFICIENCY								
	PGE	PacifiCorp	Total	NWN Industrial	NW Natural	Cascade	Oregon Total	NWN WA	ETO Total
REVENUES									
Public Purpose Funding	$26,445,368	$19,476,771	$45,922,139	$0	$11,945,094	$1,113,511	$58,980,743	$0	$58,980,743
Incremental Funding	38,819,595	19,514,841	58,334,436	3,078,432			61,412,868	1,435,515	62,848,383
Contributions									
Revenue from Investments									
TOTAL PROGRAM REVENUE	**65,264,962**	**38,991,612**	**104,256,575**	**3,078,432**	**11,945,094**	**1,113,511**	**120,393,611**	**1,435,515**	**121,829,126**
EXPENSES									
Program Management (Note 3)	2,669,745	1,699,785	4,369,532	129,182	660,924	104,410	5,264,045	112,245	5,376,290
Program Delivery	20,766,161	13,931,036	34,697,197	779,871	3,731,714	545,650	39,754,431	331,297	40,085,728
Incentives	29,770,188	18,046,995	47,817,182	559,724	6,396,749	696,009	55,469,664	420,734	55,890,398
Program Eval & Planning Svcs.	1,809,412	1,180,528	2,989,939	34,611	361,155	39,711	3,425,416	39,223	3,464,639
Program Marketing/Outreach	2,192,635	1,446,927	3,639,562	37,363	702,808	60,647	4,440,381	50,056	4,490,437
Program Quality Assurance	25,184	15,779	40,962	0	11,376	953	53,291	0	53,291
Outsourced Services	367,485	237,003	604,489	12,306	84,267	9,298	710,357	20,900	731,257
Trade Allies & Cust. Svc. Mgmt.	353,057	258,610	611,666	3,429	151,029	11,591	777,715	27,335	805,050
IT Services	694,747	469,507	1,164,254	12,448	215,470	20,956	1,413,127	33,230	1,446,357
Other Program Expenses - all	219,936	138,792	358,726	7,028	46,104	5,734	417,591	30,532	448,123
TOTAL PROGRAM EXPENSES	**58,868,550**	**37,424,962**	**96,293,509**	**1,575,962**	**12,361,596**	**1,494,959**	**111,726,018**	**1,065,552**	**112,791,570**
ADMINISTRATIVE COSTS									
Management & General (Notes 1&2)	1,211,695	770,320	1,982,015	32,438	254,440	30,770	2,299,664	21,932	2,321,596
Communications & Customer Svc (Notes 1&2)	1,125,872	715,759	1,841,633	30,140	236,419	28,590	2,136,782	20,379	2,157,161
Total Administrative Costs	**2,337,567**	**1,486,079**	**3,823,648**	**62,578**	**490,859**	**59,360**	**4,436,446**	**42,311**	**4,478,757**
TOTAL PROG & ADMIN EXPENSES	**61,206,117**	**38,911,041**	**100,117,157**	**1,638,540**	**12,852,455**	**1,554,319**	**116,162,464**	**1,107,863**	**117,270,327**
TOTAL REVENUE LESS EXPENSES	**4,058,845**	**80,571**	**4,139,418**	**1,439,892**	**(907,361)**	**(440,808)**	**4,231,147**	**327,652**	**4,558,799**
NET ASSETS - RESERVES									
Cumulative Carryover at 12/31/14	27,816,061	15,090,308	42,906,369	580,920	9,503,289	1,156,900	54,147,478	217,848	54,365,326
Change in net assets this year	4,058,845	80,571	4,139,418	1,439,892	(907,361)	(440,808)	4,231,147	327,652	4,558,799
Ending Net Assets - Reserves	**31,874,906**	**15,170,879**	**47,045,787**	**2,020,812**	**8,595,928**	**716,092**	**58,378,625**	**545,500**	**58,924,125**
Ending Reserve by Category									
Program Reserves (Efficiency and Renewables)	31,874,906	15,170,879	47,045,787	2,020,812	8,595,928	716,092	58,378,625	545,500	58,924,125
Operational Contingency Pool									
Emergency Contingency Pool									
TOTAL NET ASSETS CUMULATIVE	31,874,906	15,170,879	47,045,787	2,020,812	8,595,928	716,092	58,378,625	545,500	58,924,125

Note 1) Management & General and Communications & Customer Service Expenses (Admin) have been allocated based on total expenses.
Note 2) Admin costs are allocated for mgmt reporting only. GAAP for Not for Profits does not allow allocation of admin costs to program expenses.
Note 3) Program Management costs include both outsourced and internal staff.

ENERGY TRUST OF OREGON
Year to Date by Program/Service Territory
For the Eleven Months Ending November 30, 2015
Unaudited

	RENEWABLE ENERGY				TOTAL			
	PGE	PacifiCorp	Total	Other	All Programs	Approved budget	Change	% Change
REVENUES								
Public Purpose Funding	$7,656,312	$5,452,967	$13,109,278	0	$72,090,021	$73,564,597	($1,474,576)	-2%
Incremental Funding					62,848,383	60,974,852	1,873,531	3%
Contributions				1,550	1,550		1,550	
Revenue from Investments				572,680	572,680	264,000	308,680	117%
TOTAL PROGRAM REVENUE	**7,656,312**	**5,452,967**	**13,109,278**	**574,230**	**135,512,634**	**134,803,449**	**709,185**	**1%**
EXPENSES								
Program Management (Note 3)	536,781	322,947	859,727		6,236,017	6,777,351	541,334	8%
Program Delivery	241,852	139,134	380,986		40,466,714	41,118,146	651,432	2%
Incentives	7,664,476	3,656,377	11,320,853		67,211,251	66,498,300	(712,951)	-1%
Program Eval & Planning Svcs.	39,395	24,718	64,113		3,528,752	4,438,193	909,441	20%
Program Marketing/Outreach	122,724	99,912	222,636		4,713,073	5,091,856	378,783	7%
Program Quality Assurance	0	0	0		53,291	75,000	21,709	29%
Outsourced Services	205,713	407,285	612,997		1,344,254	1,760,173	415,919	24%
Trade Allies & Cust. Svc. Mgmt.	38,873	16,996	55,868		860,918	865,320	4,402	1%
IT Services	119,016	71,781	190,798		1,637,155	1,916,973	279,818	15%
Other Program Expenses - all	117,262	66,517	183,779		631,902	861,737	229,835	27%
TOTAL PROGRAM EXPENSES	**9,086,092**	**4,805,667**	**13,891,757**	**-**	**126,683,327**	**129,403,049**	**2,719,722**	**2%**
ADMINISTRATIVE COSTS								
Management & General (Notes 1&2)	187,019	98,915	285,935		2,607,531	3,041,993	434,462	14%
Communications & Customer Svc (Notes 1&2)	173,773	91,909	265,683		2,422,844	2,616,723	193,879	7%
Total Administrative Costs	**360,792**	**190,824**	**551,618**		**5,030,375**	**5,658,716**	**628,341**	**11%**
TOTAL PROG & ADMIN EXPENSES	**9,446,884**	**4,996,491**	**14,443,375**		**131,713,705**	**135,061,763**	**3,348,058**	**2%**
TOTAL REVENUE LESS EXPENSES	**(1,790,572)**	**456,476**	**(1,334,097)**	**574,230**	**3,798,932**	**(258,314)**	**4,057,247**	**1571%**
NET ASSETS - RESERVES								
Cumulative Carryover at 12/31/14	13,736,997	10,937,994	24,674,991	8,186,804	87,227,121	88,912,387	(1,685,266)	-2%
Change in net assets this year	(1,790,572)	456,476	(1,334,097)	574,230	3,798,929	(258,314)	4,057,247	1571%
Ending Net Assets - Reserves	**11,946,425**	**11,394,470**	**23,340,894**	**8,761,034**	**91,026,050**	**88,654,073**	**2,371,981**	**3%**
Ending Reserve by Category								
Program Reserves (Efficiency and Renewables)	11,946,425	11,394,470	23,340,894		86,026,050			
Operational Contingency Pool				3,761,034				
Emergency Contingency Pool				5,000,000	5,000,000			
TOTAL NET ASSETS CUMULATIVE	11,946,425	11,394,470	23,340,894	8,761,034	91,026,050	88,654,073	2,371,981	3%

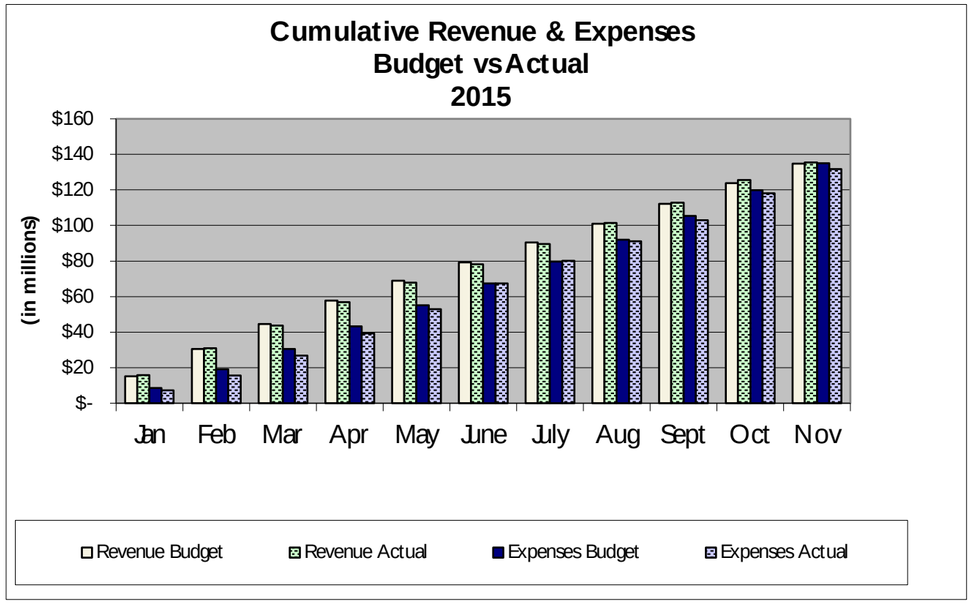
Energy Trust of Oregon
Program Expense by Service Territory
For the Eleven Months Ending November 30, 2015
(Unaudited)

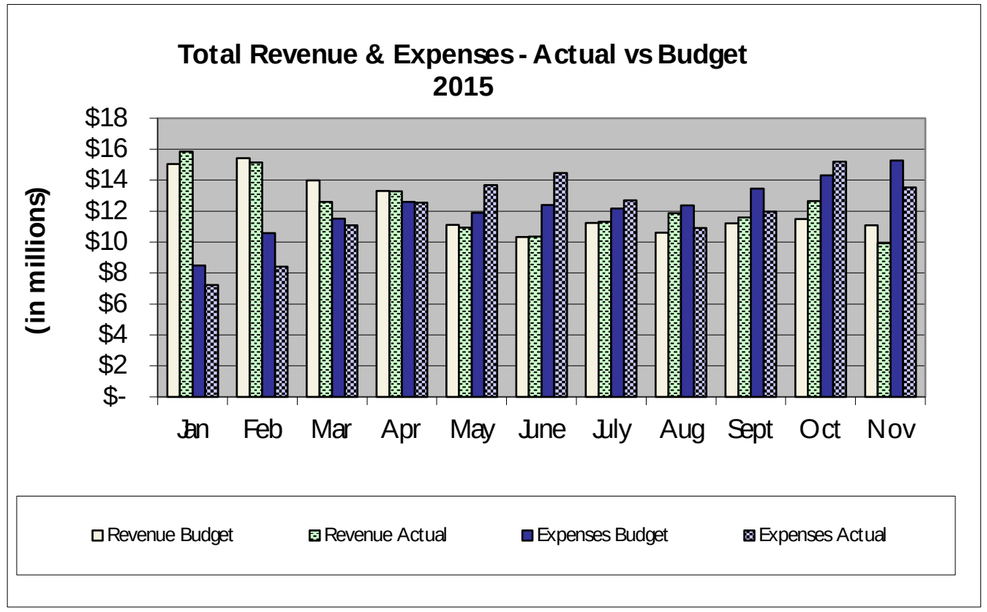
	PGE	Pacific Power	Subtotal Elec.	NWN Industrial	NW Natural Gas	Cascade	Subtotal Gas	Oregon Total	NWN WA	ETO Total	YTD Budget	Variance	% Var
Energy Efficiency													
Commercial													
Existing Buildings	$ 19,135,134	$ 13,248,989	$ 32,384,123	$ 832,730	$ 2,516,354	$ 342,512	$ 3,691,596	$ 36,075,719	$ 323,991	$ 36,399,710	$ 36,679,747	$ 280,037	1%
New Buildings	6,971,842	3,313,519	10,285,361	26,378	861,926	268,892	1,157,196	11,442,557		11,442,557	10,961,360	(481,197)	-4%
NEEA	1,183,162	836,196	2,019,359		64,449	6,571	71,020	2,090,379	5,423	2,095,802	2,662,584	566,782	21%
Total Commercial	**27,290,138**	**17,398,704**	**44,688,842**	**859,109**	**3,442,729**	**617,974**	**4,919,813**	**49,608,655**	**329,414**	**49,938,069**	**50,303,691**	**365,622**	**1%**
Industrial													
Production Efficiency	13,317,823	7,734,109	21,051,933	779,432	663,295	242,734	1,685,461	22,737,394		22,737,394	22,656,220	(81,174)	0%
NEEA	187,209	133,629	320,838					320,838		320,838	151,563	(169,275)	-112%
Total Industrial	**13,505,032**	**7,867,739**	**21,372,771**	**779,432**	**663,295**	**242,734**	**1,685,461**	**23,058,232**	**-**	**23,058,232**	**22,807,783**	**(250,449)**	**-1%**
Residential													
Existing Homes	6,779,309	6,533,228	13,312,537	-	4,419,030	232,916	4,651,946	17,964,483	380,507	18,344,990	20,111,215	1,766,225	9%
New Homes/Products	11,431,553	5,562,089	16,993,642	-	4,200,429	447,417	4,647,846	21,641,488	385,720	22,027,208	24,669,928	2,642,720	11%
NEEA	2,200,084	1,549,278	3,749,362		126,971	13,274	140,245	3,889,607	12,224	3,901,831	4,163,235	261,404	6%
Total Residential	**20,410,945**	**13,644,596**	**34,055,541**	**-**	**8,746,430**	**693,607**	**9,440,037**	**43,495,578**	**778,451**	**44,274,029**	**48,944,378**	**4,670,349**	**10%**
Energy Efficiency Costs	**61,206,117**	**38,911,041**	**100,117,157**	**1,638,540**	**12,852,455**	**1,554,319**	**16,045,311**	**116,162,464**	**1,107,863**	**117,270,330**	**122,055,852**	**4,785,522**	**4%**
Renewables													
Solar Electric (Photovoltaic)	7,407,564	3,175,764	10,583,328					10,583,328		10,583,328	8,671,562	(1,911,766)	-22%
Other Renewable	2,039,322	1,820,727	3,860,049					3,860,049		3,860,049	4,334,349	474,300	11%
Renewables Costs	**9,446,884**	**4,996,491**	**14,443,375**	**-**	**-**	**-**	**-**	**14,443,375**	**-**	**14,443,375**	**13,005,911**	**(1,437,466)**	**-11%**
Cost Grand Total	**70,653,001**	**43,907,529**	**114,560,531**	**1,638,540**	**12,852,455**	**1,554,319**	**16,045,311**	**130,605,842**	**1,107,863**	**131,713,705**	**135,061,763**	**3,348,058**	**2%**

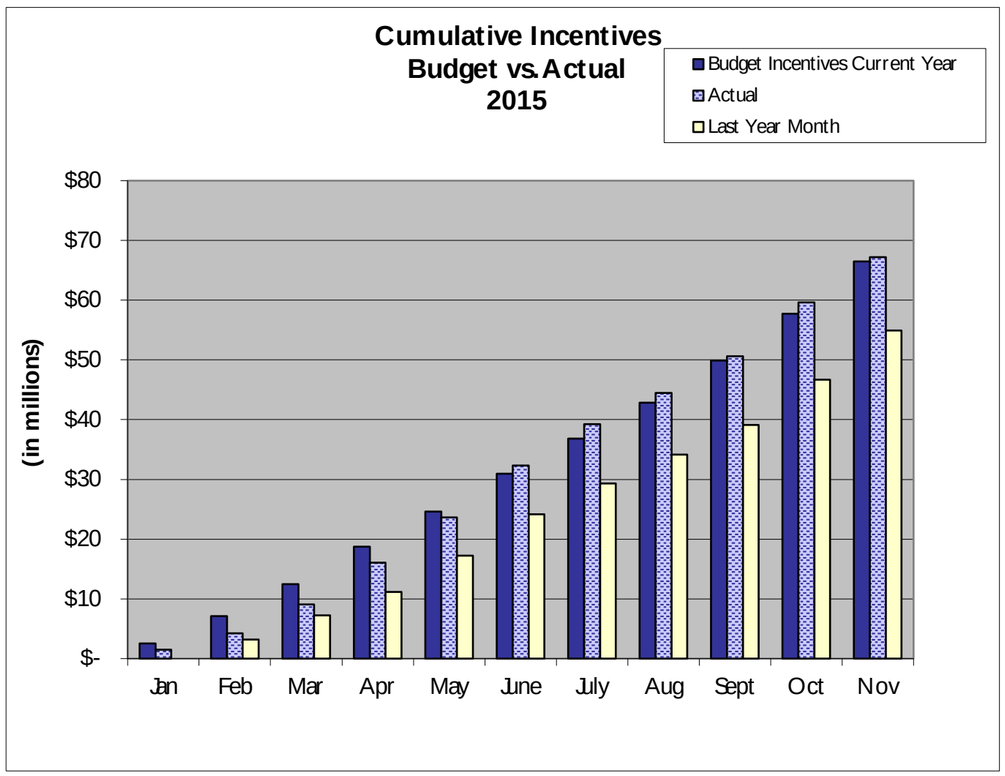
Energy Trust of Oregon
Administrative Expenses
For the 3rd Quarter and Eleven Months Ending November 30, 2015
(Unaudited)

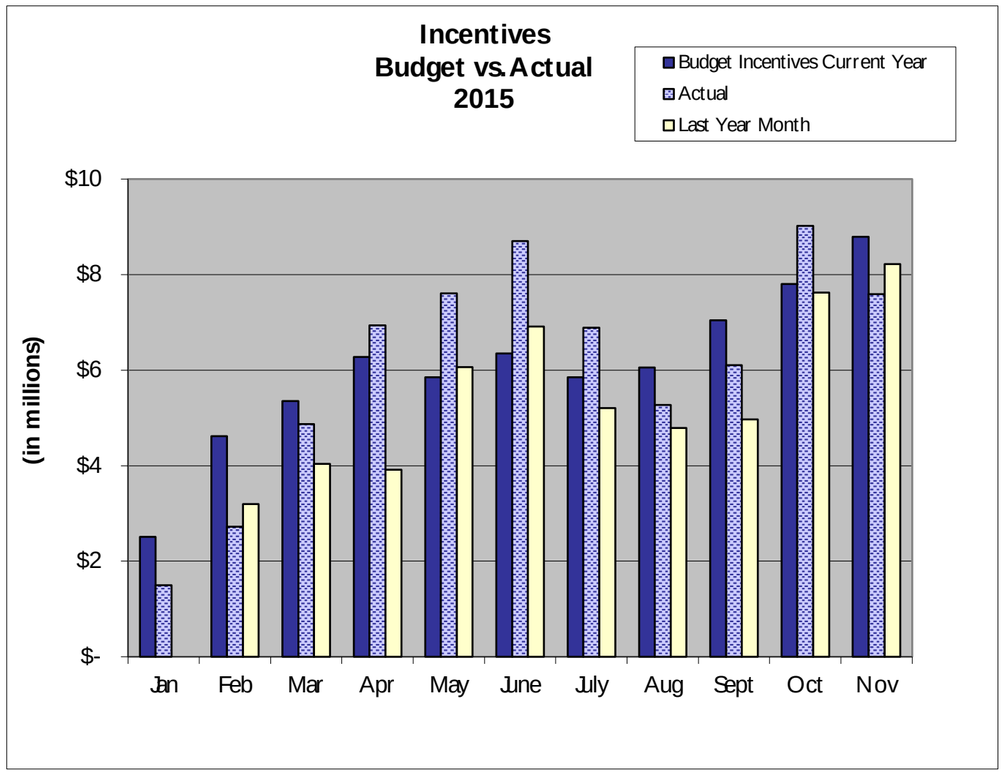
	MANAGEMENT & GENERAL						COMMUNICATIONS & CUSTOMER SERVICE					
	QUARTER			YTD			QUARTER			YTD		
	ACTUAL	BUDGET	REMAINING	ACTUAL	BUDGET	VARIANCE	ACTUAL	BUDGET	REMAINING	ACTUAL	BUDGET	VARIANCE
EXPENSES												
Outsourced Services	$19,027	$85,922	$66,895	$180,373	$355,714	$175,341	$160,845	$251,400	$90,555	$897,878	$968,700	$70,823
Legal Services		6,750	6,750	15,013	24,750	9,737						
Salaries and Related Expenses	326,376	528,459	202,084	1,862,353	1,924,603	62,250	208,633	332,886	124,253	1,110,810	1,220,581	109,771
Supplies	7	1,075	1,068	3,227	3,942	714	115	250	135	712	917	205
Telephone										120		(120)
Postage and Shipping Expenses	182		(182)	1,703		(1,703)						
Printing and Publications	1,297	87	(1,210)	3,977	321	(3,656)		1,250	1,250	3,780	4,583	803
Travel	2,628	12,388	9,760	21,615	45,421	23,805	10,514	6,250	(4,264)	44,049	22,917	(21,133)
Conference, Training & Mtngs	(1,444)	44,423	45,867	38,272	128,232	89,960	1,912	3,500	1,588	12,828	12,833	6
Interest Expense and Bank Fees		625	625	1,774	2,292	518						
Miscellaneous Expenses	12		(12)	12		(12)						
Dues, Licenses and Fees	609	1,419	810	(5,425)	5,432	10,857	3,897	2,125	(1,772)	18,128	7,792	(10,336)
Shared Allocation (Note 1)	26,826	45,959	19,133	157,895	168,733	10,838	20,754	31,635	10,881	110,564	116,144	5,580
IT Service Allocation (Note 2)	66,817	103,893	37,076	325,387	381,001	55,614	45,992	71,513	25,521	223,974	262,255	38,281
Planning & Eval	264	417	152	1,354	1,552	198						
TOTAL EXPENSES	**442,601**	**831,416**	**388,815**	**2,607,531**	**3,041,993**	**434,462**	**452,662**	**700,808**	**248,146**	**2,422,844**	**2,616,722**	**193,879**

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


Cumulative Revenue & Expenses
Budget vs Actual
2015
(in millions)
$160
$140
$120
$100
$80
$60
$40
$20
$-
Jan
Feb
Mar
Apr
May
June
July
Aug
Sept
Oct
Nov
Revenue Budget
Revenue Actual
Expenses Budget
Expenses Actual


Total Revenue & Expenses - Actual vs Budget
2015
(in millions)
$18
$16
$14
$12
$10
$8
$6
$4
$2
$-
Jan
Feb
Mar
Apr
May
June
July
Aug
Sept
Oct
Nov
Revenue Budget
Revenue Actual
Expenses Budget
Expenses Actual


Cumulative Incentives
Budget vs. Actual
2015
Budget Incentives Current Year
Actual
Last Year Month
(in millions)
$80
$70
$60
$50
$40
$30
$20
$10
$-
Jan
Feb
Mar
Apr
May
June
July
Aug
Sept
Oct
Nov


Incentives
Budget vs. Actual
2015
Budget Incentives Current Year
Actual
Last Year Month
(in millions)
$10
$8
$6
$4
$2
$-
Jan
Feb
Mar
Apr
May
June
July
Aug
Sept
Oct
Nov

Notes on December 2015 Financial Statements

February 2, 2016

Revenue

Year-to-Date revenue ended up close to budgeted amounts.

Dec-15	YTD Actual	YTD Budget	YTD Var	YTD %	PY
PGE	79,088,816	78,652,744	436,072	0.6%	86,101,381
PAC	48,093,050	49,141,796	(1,048,746)	-2.1%	52,839,268
NWN	17,367,078	18,214,382	(847,304)	-4.7%	22,007,534
CNG	1,294,913	1,913,709	(618,796)	-32.3%	2,455,200
Investment Income	551,531	288,000	263,531	91.5%	179,694
Total	146,395,389	148,210,631	(1,815,243)	-1.2%	163,583,077

Reserves

Program reserves remain are significantly lower than last year, as planned. We drew down program reserves by almost $20 million dollars. Our total ending reserves of $68.2 million were within 4% of forecast reserves of $65.6 million.

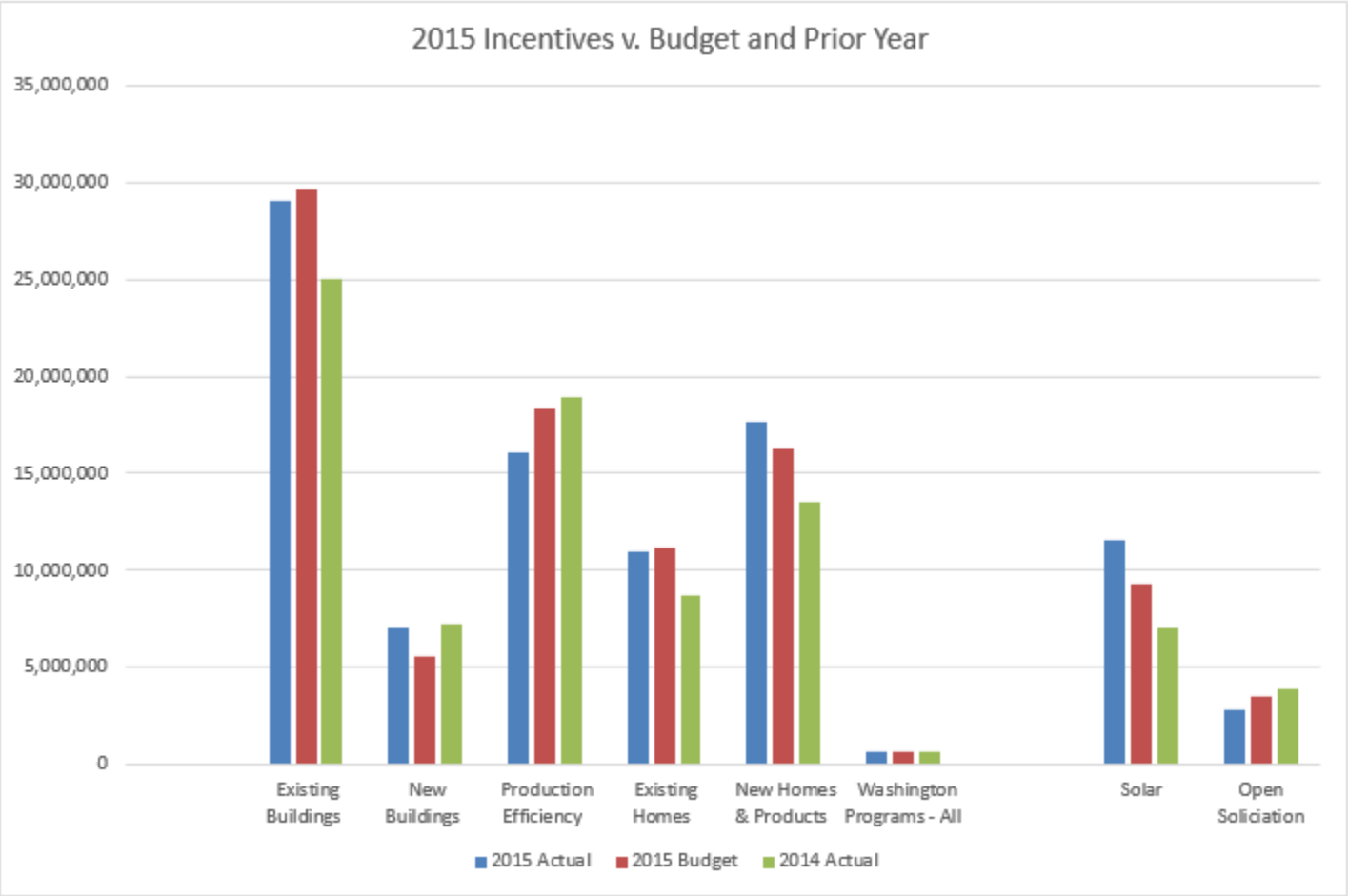
Reserves

	Actual 12/31/15 Amount	Actual 12/31/14 Amount	YTD % Change	2015 Forecast Amount	% Variance from Forecast
PGE	23,006,282	27,816,061	-17%	20,265,947	14%
PacifiCorp	7,481,735	15,090,308	-50%	8,736,703	-14%
NW Natural	6,430,002	9,503,289	-32%	6,786,041	-5%
Cascade	229,935	1,156,900	-80%	715,602	-68%
NWN Industrial	1,032,752	580,920	78%	844,081	22%
NWN Washington	257,872	217,848	18%	66,524	288%
PGE Renewables	10,144,624	13,736,997	-26%	9,214,346	10%
PAC Renewables	10,910,203	10,937,994	0%	10,326,868	6%
Program Reserves	59,493,405	79,040,317	-25%	56,956,112	4%
Contingency Reserve	5,000,000	5,000,000	0%	5,000,000	0%
Contingency Available	3,739,885	3,186,804	17%	3,608,804	4%
Total	68,233,284	87,227,121	-22%	65,564,916	4%

Incentive Expenses

Total expenses for December were $1.1 million below budget, largely due to unearned performance compensation. Spending for the year ended at $4.5 million below budget. Spending vs. last year was $11 million greater than last year.

Incentives for the month came in almost as expected, and we ended the year spending $1.3 million or 1% more than budgeted. Results by program show the year-end surge in spending as incentives were finalized and recorded.



Total Incentives
Year-to-Date 2015

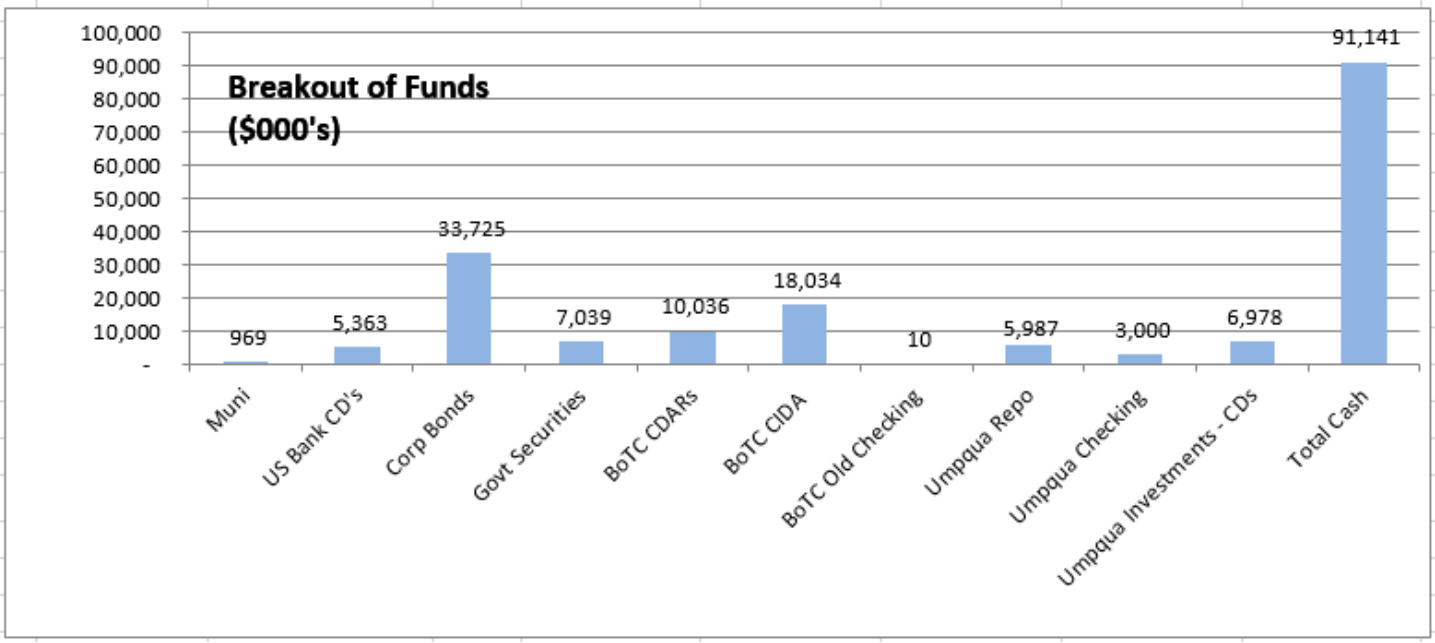
Incentives thru December 2015	Actual	Budget	Variance	Var %
Existing Buildings	29,007,467	29,643,312	635,846	2%
New Buildings	7,006,588	5,608,266	(1,398,322)	-25%
Production Efficiency	16,104,745	18,348,595	2,243,850	12%
Existing Homes	10,972,946	11,158,110	185,164	2%
New Homes & Products	17,660,080	16,263,966	(1,396,114)	-9%
Washington Programs - All	633,612	628,225	(5,387)	-1%
Solar	11,549,720	9,304,000	(2,245,720)	-24%
Open Soliciation	2,854,313	3,532,173	677,860	19%
Total Incentives	95,789,470	94,486,648	(1,302,823)	-1%
Energy Efficiency Only	**81,385,438**	**81,650,475**	**265,037**	**0%**

Total Incentives
Year-to-Year Comparison

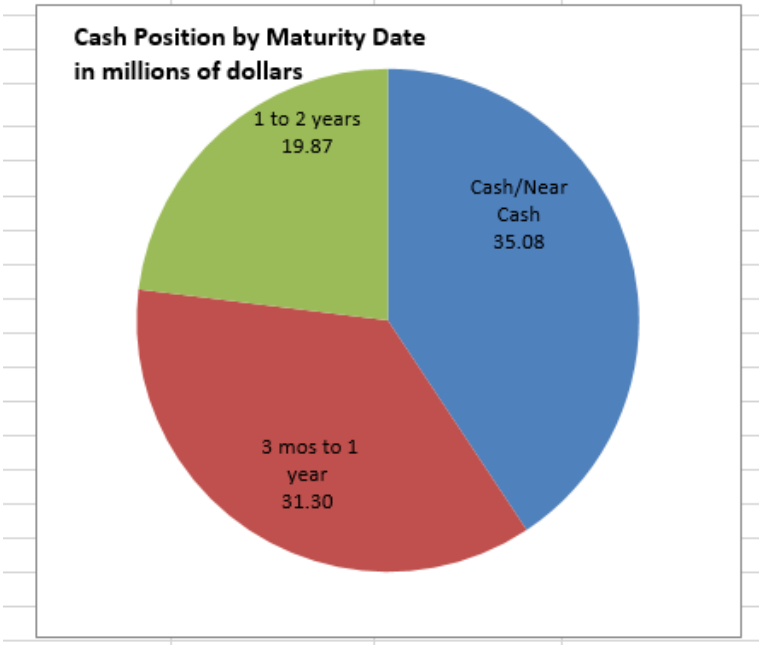
Dec 2015 vs. Dec 2014	Current Year	Prior Year	Variance	Var %
Existing Buildings	29,007,467	25,065,294	(3,942,172)	-16%
New Buildings	7,006,588	7,280,427	273,838	4%
Production Efficiency	16,104,745	18,965,075	2,860,330	15%
Existing Homes	10,972,946	8,725,800	(2,247,146)	-26%
New Homes & Products	17,660,080	13,570,202	(4,089,878)	-30%
Washington Programs - All	633,612	611,613	(21,999)	-4%
Solar	11,549,720	7,074,941	(4,474,779)	-63%
Open Solicitation	2,854,313	3,883,890	1,029,578	27%
Total Incentives	95,789,470	85,177,242	(10,612,232)	-12%
Energy Efficiency Only	**81,385,438**	**74,218,411**	**(7,167,027)**	-10%

Investment Status

The graphs below show the type of investments we hold and the locations where our funds are held at the end of December (including cash). The average liquidity for all assets held at 12/31/15 was 200 days. We are planning to maintain relatively short term liquidity going forward.



Average Days to Maturity:	200
Average Portfolio Yield:	0.62%



Energy Trust of Oregon
BALANCE SHEET
December 31, 2015
(Unaudited)

	December 2015	November 2015	December 2014	Change from one month ago	Change from one year ago
Current Assets					
Cash & Cash Equivalents	27,186,505	33,475,881	51,411,367	(6,289,375)	(24,224,861)
Investments	63,884,187	63,997,194	64,490,244	(113,008)	(606,058)
Receivables	374,615	364,373	323,531	10,242	51,085
Prepaid Expenses	479,349	447,814	405,430	31,536	73,920
Advances to Vendors	2,049,018	978,530	1,482,149	1,070,488	566,869
Total Current Assets	**93,973,675**	**99,263,791**	**118,112,720**	**(5,290,116)**	**(24,139,046)**
Fixed Assets					
Computer Hardware and Software	3,509,829	3,509,829	1,653,762	0	1,856,067
Software Development in Progress	150,148	137,584	1,025,909	12,563	(875,761)
Leasehold Improvements	318,964	318,964	318,964	0	0
Office Equipment and Furniture	701,604	701,604	679,343	0	22,260
Total Fixed Assets	**4,680,545**	**4,667,982**	**3,677,978**	**12,563**	**1,002,566**
Less Depreciation	(2,672,098)	(2,595,255)	(1,831,551)	(76,843)	(840,547)
Net Fixed Assets	**2,008,447**	**2,072,727**	**1,846,428**	**(64,280)**	**162,019**
Other Assets					
Deposits	132,340	132,340	135,340	0	(3,000)
Deferred Compensation Asset	724,981	717,716	630,176	7,265	94,805
Note Receivable, net of allowance	85,609	86,789	86,789	(1,180)	(1,180)
Total Other Assets	**942,930**	**936,846**	**852,305**	**6,084**	**90,625**
Total Assets	**96,925,052**	**102,273,363**	**120,811,454**	**(5,348,311)**	**(23,886,402)**
Current Liabilities					
Accounts Payable and Accruals	26,911,612	9,442,400	31,924,631	17,469,212	(5,013,019)
Salaries, Taxes, & Benefits Payable	733,902	764,078	671,849	(30,176)	62,053
Total Current Liabilities	**27,645,513**	**10,206,478**	**32,596,480**	**17,439,036**	**(4,950,967)**
Long Term Liabilities					
Deferred Rent	314,472	319,129	349,692	(4,657)	(35,219)
Deferred Compensation Payable	727,781	717,716	632,976	10,065	94,805
Other Long-Term Liabilities	3,990	3,990	5,185	0	(1,195)
Total Long-Term Liabilities	**1,046,243**	**1,040,835**	**987,852**	**5,407**	**58,390**
Total Liabilities	**28,691,756**	**11,247,313**	**33,584,332**	**17,444,443**	**(4,892,576)**
Net Assets					
Unrestricted Net Assets	68,233,296	91,026,050	87,227,121	(22,792,754)	(18,993,825)
Total Net Assets	**68,233,296**	**91,026,050**	**87,227,121**	**(22,792,754)**	**(18,993,825)**
Total Liabilities and Net Assets	**96,925,052**	**102,273,363**	**120,811,454**	**(5,348,311)**	**(23,886,402)**

Energy Trust of Oregon
Cash Flow Statement-Indirect Method
Monthly 2015

	January	February	March	April	May	June	July	August	September	October	November	December	Year to Date
Operating Activities:													
Revenue less Expenses	8,620,993	6,726,499	1,531,158	715,318	(2,736,736)	(4,113,196)	(1,391,665)	949,161	(362,902)	(2,538,454)	(3,601,245)	(22,792,757)	$ (18,993,828)
Non-cash items:													
Depreciation	40,242	41,284	64,566	71,460	73,396	75,252	81,000	81,976	82,826	75,851	75,851	76,843	840,547
Change in Reserve on Long Term Note	-	-	-										-
Loss on disposal of assets													
Receivables	5,800	11,583	-	(7,684)	-	(10,698)	5,001		20,580	(1,300)	(6,988)	(47,702)	(31,408)
Interest Receivable	4,268	(50,180)	58,204	8,452	(43,458)	9,862	8,932	(34,926)	68,538	(44,194)	(42,633)	37,460	(19,675)
Advances to Vendors	543,337	465,160	(1,177,147)	228,917	594,462	(1,000,894)	451,715	529,587	(1,317,505)	464,489	721,498	(1,070,488)	(566,869)
Prepaid expenses and other costs	14,982	47,842	(254,416)	68,730	7,275	95,511	(101,812)	79,428	(46,110)	(28,558)	74,744	(31,535)	(73,919)
Accounts payable	(20,265,729)	(2,448,214)	(352,009)	212,675	(972,984)	457,462	(90,250)	8,713	43,295	492,048	432,762	17,469,211	(5,013,020)
Payroll and related accruals	17,794	52,944	96,210	(24,170)	24,831	10,229	(25,607)	(35,898)	39,784	(8,650)	29,502	(20,111)	156,858
Deferred rent and other	(11,515)	(11,028)	(10,673)	(8,029)	(13,988)	(11,029)	(10,948)	(11,068)	(9,819)	(7,964)	(10,239)	(10,741)	(127,041)
Cash rec'd from / (used in) Operating Activities	(11,029,828)	4,835,890	(44,107)	1,265,669	(3,067,202)	(4,487,501)	(1,073,634)	1,566,973	(1,481,313)	(1,596,732)	(2,326,748)	(6,389,820)	$ (23,828,353)
Investing Activities:													
Investment Activity (1)	(2,475,092)	(5,431,428)	(1,217,888)	2,835,537	3,803,928	(2,582,238)	(1,185,464)	4,589,524	(979,021)	4,057,737	(922,545)	113,007	606,057
(Acquisition)/Disposal of Capital Assets	(132,268)	(142,396)	(143,192)	(151,901)	(98,053)	(128,592)	(100,776)	(47,053)	(9,862)	2,037	(37,948)	(12,563)	(1,002,567)
Cash rec'd from / (used in) Investing Activities	(2,607,360)	(5,573,824)	(1,361,080)	2,683,636	3,705,875	(2,710,830)	(1,286,240)	4,542,471	(988,883)	4,059,774	(960,493)	100,444	$ (396,510)
Cash at beginning of Period	51,411,367	37,774,180	37,036,243	35,631,058	39,580,364	40,219,037	33,020,705	30,660,832	36,770,273	34,300,080	36,763,122	33,475,881	51,411,367
Increase/(Decrease) in Cash	(13,637,187)	(737,934)	(1,405,187)	3,949,305	638,673	(7,198,331)	(2,359,874)	6,109,444	(2,470,195)	2,463,042	(3,287,241)	(6,289,376)	(24,224,862)
Cash at end of period	$ 37,774,180	$ 37,036,243	$ 35,631,058	$ 39,580,364	$ 40,219,037	$ 33,020,705	$ 30,660,832	$ 36,770,275	$ 34,300,080	$ 36,763,122	$ 33,475,881	$ 27,186,505	$ 27,186,505

(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 2015 - December 2016

	Actual											
	January	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**
Cash In:												
Public purpose and Incr funding	15,740,912	15,125,779	12,539,730	13,204,663	10,891,616	10,343,345	11,275,486	11,838,796	11,505,033	12,586,340	9,886,704	10,905,454
From other sources	5,800	11,583	-	(7,684)	700	(10,698)	5,351	-	20,581	(799)	(6,987)	(47,701)
Investment Income	110,630	(27,478)	123,371	70,057	8,631	12,301	48,465	(14,203)	161,730	26,605	(4,564)	16,311
Total cash in	15,857,342	15,109,884	12,663,101	13,267,036	10,900,947	10,344,948	11,329,302	11,824,593	11,687,344	12,612,146	9,875,153	10,874,064
Cash Out:	29,494,530	15,847,819	14,068,288	9,317,730	10,262,273	17,543,282	13,689,174	5,715,147	14,157,540	10,149,102	13,162,396	17,163,437
Net cash flow for the month	(13,637,188)	(737,935)	(1,405,187)	3,949,306	638,674	(7,198,334)	(2,359,872)	6,109,446	(2,470,196)	2,463,044	(3,287,243)	(6,289,373)
Beginning Balance: Cash & MM	51,411,367	37,774,180	37,036,248	35,631,058	39,580,364	40,219,037	33,020,705	30,660,832	36,770,275	34,300,080	36,763,122	33,475,881
Ending cash & MM	**37,774,180**	**37,036,243**	**35,631,058**	**39,580,364**	**40,219,037**	**33,020,705**	**30,660,832**	**36,770,275**	**34,300,080**	**36,763,122**	**33,475,881**	**27,186,505**

Future Commitments

Renewable Incentives	17,600,000	17,500,000	17,000,000	16,900,000	16,600,000	14,600,000	14,400,000	14,200,000	16,000,000	15,600,000	14,500,000	15,300,000
Efficiency Incentives	48,400,000	47,100,000	63,000,000	60,400,000	58,500,000	62,200,000	58,900,000	58,800,000	70,700,000	70,800,000	85,100,000	64,500,000
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	71,000,000	69,600,000	85,000,000	82,300,000	80,100,000	81,800,000	78,300,000	78,000,000	91,700,000	91,400,000	104,600,000	84,800,000

(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 2015 - December 2016

	2016 R2 Budgeted Amounts											
	January	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**
Cash In:												
Public purpose and Incr funding	16,500,000	15,800,000	13,100,000	13,900,000	11,300,000	10,700,000	11,600,000	12,500,000	11,700,000	11,900,000	11,500,000	14,000,000
From other sources												
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
Total cash in	16,525,000	15,825,000	13,125,000	13,925,000	11,325,000	10,725,000	11,625,000	12,525,000	11,725,000	11,925,000	11,525,000	14,025,000
Cash Out:	27,000,000	10,400,000	12,200,000	12,200,000	13,900,000	15,200,000	12,400,000	13,100,000	15,000,000	14,200,000	16,900,000	18,000,000
Net cash flow for the month	(10,475,000)	5,425,000	925,000	1,725,000	(2,575,000)	(4,475,000)	(775,000)	(575,000)	(3,275,000)	(2,275,000)	(5,375,000)	(3,975,000)
Beginning Balance: Cash & MM	27,187,000	16,712,000	22,137,000	23,062,000	24,787,000	22,212,000	17,737,000	16,962,000	16,387,000	13,112,000	10,837,000	5,462,000
Ending cash & MM	**16,712,000**	**22,137,000**	**23,062,000**	**24,787,000**	**22,212,000**	**17,737,000**	**16,962,000**	**16,387,000**	**13,112,000**	**10,837,000**	**5,462,000**	**1,487,000**
Future Commitments												
Renewable Incentives	15,000,000	16,800,000	14,900,000	14,300,000	14,000,000	14,100,000	14,100,000	14,100,000	14,100,000	14,100,000	14,100,000	14,100,000
Efficiency Incentives	67,200,000	65,600,000	58,400,000	55,400,000	54,800,000	52,400,000	51,800,000	51,800,000	51,800,000	51,800,000	51,800,000	51,800,000
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	78,300,000	74,700,000	73,800,000	71,500,000	70,900,000	70,900,000	70,900,000	70,900,000	70,900,000	70,900,000

(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 Month Ending December 31, 2015
(Unaudited)

	December				YTD			
	Actual	**Budget**	**Budget Variance**	**Variance %**	**Actual**	**Budget**	**Budget Variance**	**Variance %**
REVENUES								
Public Purpose Funds-PGE	2,933,669	2,875,584	58,085	2%	37,035,349	36,652,744	382,605	1%
Public Purpose Funds-PacifiCorp	2,159,531	2,738,370	(578,840)	-21%	27,089,268	28,291,796	(1,202,528)	-4%
Public Purpose Funds-NW Natural	908,037	1,217,389	(309,352)	-25%	12,853,131	13,805,611	(952,480)	-7%
Public Purpose Funds-Cascade	181,402	267,919	(86,517)	-32%	1,294,913	1,913,709	(618,796)	-32%
Total Public Purpose Funds	**6,182,639**	**7,099,263**	**(916,623)**	**-13%**	**78,272,661**	**80,663,860**	**(2,391,199)**	**-3%**
Incremental Funds - PGE	3,233,873	4,180,079	(946,206)	-23%	42,053,468	42,000,000	53,468	0%
Incremental Funds - PacifiCorp	1,488,941	2,103,840	(614,899)	-29%	21,003,782	20,850,000	153,782	1%
NW Natural - Industrial DSM			0		3,078,432	2,997,419	81,013	3%
NW Natural - Washington			0		1,435,515	1,411,352	24,163	2%
Contributions			0		1,550		1,550	
Revenue from Investments	(21,149)	24,000	(45,149)	-188%	551,531	288,000	263,531	92%
TOTAL REVENUE	**10,884,305**	**13,407,182**	**(2,522,877)**	**-19%**	**146,396,939**	**148,210,631**	**(1,813,692)**	**-1%**
EXPENSES								
Program Subcontracts	3,494,268	4,815,694	1,321,426	27%	49,870,954	52,155,203	2,284,249	4%
Incentives	28,578,220	27,988,349	(589,871)	-2%	95,789,471	94,486,648	(1,302,823)	-1%
Salaries and Related Expenses	901,104	970,406	69,302	7%	10,728,978	11,748,186	1,019,209	9%
Professional Services	464,250	751,574	287,324	38%	6,291,065	8,360,032	2,068,967	25%
Supplies	2,778	3,650	872	24%	33,206	43,800	10,594	24%
Telephone	5,058	5,583	526	9%	58,711	66,000	7,289	11%
Postage and Shipping Expenses	1,726	1,100	(626)	-57%	12,968	13,200	232	2%
Occupancy Expenses	54,868	61,519	6,651	11%	645,480	738,226	92,746	13%
Noncapitalized Equip. & Depr.	94,251	108,274	14,023	13%	1,189,237	1,181,348	(7,889)	-1%
Call Center	11,705	13,000	1,295	10%	149,063	156,000	6,937	4%
Printing and Publications	1,959	10,946	8,987	82%	57,057	131,350	74,293	57%
Travel	18,137	22,508	4,372	19%	154,662	206,100	51,438	25%
Conference, Training & Mtng Exp	9,122	30,212	21,090	70%	133,830	327,140	193,310	59%
Interest Expense and Bank Fees	113	208	95		1,887	2,500	613	25%
Insurance	8,486	9,167	680	7%	103,862	110,000	6,138	6%
Miscellaneous Expenses	18,614		(18,614)		51,697		(51,697)	
Dues, Licenses and Fees	12,401	12,902	501	4%	118,636	141,120	22,484	16%
TOTAL EXPENSES	**33,677,059**	**34,805,091**	**1,128,032**	**3%**	**165,390,765**	**169,866,854**	**4,476,088**	**3%**
TOTAL REVENUE LESS EXPENSES	**(22,792,754)**	**(21,397,909)**	**(1,394,845)**	**-7%**	**(18,993,825)**	**(21,656,224)**	**2,662,396**	**12%**

Energy Trust of Oregon
Income Statement - Actual and Prior Year Comparison
For the Month Ending December 31, 2015
(Unaudited)

	December				YTD			
	Actual	Actual Prior Year	Prior Year Variance	Variance %	Actual	Actual Prior Year	Prior Year Variance	Variance %
REVENUES								
Public Purpose Funds-PGE	2,933,669	2,906,230	27,439	1%	37,035,349	37,173,014	(137,666)	0%
Public Purpose Funds-PacifiCorp	2,159,531	2,168,083	(8,553)	0%	27,089,268	27,253,456	(164,187)	-1%
Public Purpose Funds-NW Natural	908,037	1,359,571	(451,534)	-33%	12,853,131	17,880,127	(5,026,996)	-28%
Public Purpose Funds-Cascade	181,402	187,248	(5,846)	-3%	1,294,913	2,455,200	(1,160,287)	-47%
Total Public Purpose Funds	**6,182,639**	**6,621,133**	**(438,494)**	**-7%**	**78,272,661**	**84,761,796**	**(6,489,136)**	**-8%**
Incremental Funds - PGE	3,233,873	3,528,990	(295,117)	-8%	42,053,468	48,928,367	(6,874,899)	-14%
Incremental Funds - PacifiCorp	1,488,941	1,850,684	(361,743)	-20%	21,003,782	25,585,812	(4,582,030)	-18%
NW Natural - Industrial DSM			0		3,078,432	3,073,052	5,380	0%
NW Natural - Washington			0		1,435,515	1,054,355	381,160	36%
Contributions			0		1,550	13,400	(11,850)	
Revenue from Investments	(21,149)	(56,058)	34,909	-62%	551,531	179,694	371,837	207%
TOTAL REVENUE	**10,884,305**	**11,944,749**	**(1,060,444)**	**-9%**	**146,396,939**	**163,596,476**	**(17,199,537)**	**-11%**
EXPENSES								
Program Subcontracts	3,494,268	5,163,336	1,669,069	32%	49,870,954	49,990,007	119,053	0%
Incentives	28,578,220	30,242,678	1,664,458	6%	95,789,471	85,177,243	(10,612,227)	-12%
Salaries and Related Expenses	901,104	805,698	(95,406)	-12%	10,728,978	10,323,052	(405,926)	-4%
Professional Services	464,250	580,210	115,960	20%	6,291,065	6,439,266	148,201	2%
Supplies	2,778	3,477	699	20%	33,206	36,229	3,024	8%
Telephone	5,058	4,982	(76)	-2%	58,711	55,655	(3,056)	-5%
Postage and Shipping Expenses	1,726	767	(959)	-125%	12,968	12,221	(747)	-6%
Occupancy Expenses	54,868	54,660	(208)	0%	645,480	645,061	(419)	0%
Noncapitalized Equip. & Depr.	94,251	71,143	(23,108)	-32%	1,189,237	746,469	(442,768)	-59%
Call Center	11,705	12,088	383	3%	149,063	147,218	(1,845)	-1%
Printing and Publications	1,959	7,390	5,431	73%	57,057	116,092	59,035	51%
Travel	18,137	16,602	(1,535)	-9%	154,662	150,921	(3,741)	-2%
Conference, Training & Mtng Exp	9,122	17,734	8,612	49%	133,830	186,066	52,236	28%
Interest Expense and Bank Fees	113		(113)		1,887	2,000	113	6%
Insurance	8,486	8,630	144	2%	103,862	102,073	(1,790)	-2%
Miscellaneous Expenses	18,614	13,343	(5,271)	-40%	51,697	16,659	(35,038)	-210%
Dues, Licenses and Fees	12,401	7,470	(4,931)	-66%	118,636	153,693	35,057	23%
TOTAL EXPENSES	**33,677,059**	**37,010,208**	**3,333,149**	**9%**	**165,390,765**	**154,299,927**	**(11,090,838)**	**-7%**
TOTAL REVENUE LESS EXPENSES	**(22,792,754)**	**(25,065,459)**	**2,272,704**	**9%**	**(18,993,825)**	**9,296,549**	**(28,290,375)**	**-304%**

Energy Trust of Oregon
Statement of Functional Expenses
For the Twelve Months Ending December 31, 2015
(Unaudited)

	Energy Efficiency	Renewable Energy	Total Program Expenses	Management & General	Communications & Customer Service	Total Admin Expenses	Total	Budget	Variance	% Var
Program Expenses										
Incentives/ Program Management & Delivery	130,821,955	14,838,469	145,660,424				145,660,424	146,641,850	$ 981,426	1%
Payroll and Related Expenses	2,999,116	916,972	3,916,088	2,041,291	1,209,638	3,250,929	7,167,017	7,776,600	609,583	8%
Outsourced Services	3,867,883	981,317	4,849,200	211,437	931,073	1,142,510	5,991,710	7,825,532	1,833,822	23%
Planning and Evaluation	2,003,932	66,610	2,070,543	1,480		1,480	2,072,023	2,377,729	305,706	13%
Customer Service Management	576,955	37,575	614,530				614,530	542,444	(72,086)	-13%
Trade Allies Network	301,668	20,532	322,199				322,199	401,524	79,325	20%
Total Program Expenses	**140,571,510**	**16,861,474**	**157,432,983**	**2,254,209**	**2,140,711**	**4,394,919**	**161,827,903**	**165,565,680**	**3,737,777**	**2%**
Program Support Costs										
Supplies	8,856	3,216	12,071	8,292	4,012	12,304	24,376	31,151	6,775	22%
Postage and Shipping Expenses	2,400	2,707	5,108	3,179	1,004	4,184	9,291	8,107	(1,184)	-15%
Telephone	2,683	888	3,570	1,607	1,242	2,849	6,420	9,974	3,554	36%
Printing and Publications	43,292	1,612	44,904	5,768	4,713	10,480	55,385	127,169	71,784	56%
Occupancy Expenses	185,894	61,533	247,427	111,372	77,787	189,159	436,586	490,530	53,944	11%
Insurance	29,912	9,901	39,813	17,921	12,516	30,437	70,250	73,092	2,842	4%
Equipment	6,903	58,153	65,056	4,136	2,889	7,025	72,080	134,783	62,703	47%
Travel	27,398	15,298	42,697	26,852	53,375	80,226	122,923	160,800	37,877	24%
Meetings, Trainings & Conferences	26,194	15,414	41,607	42,722	13,595	56,317	97,924	265,369	167,445	63%
Interest Expense and Bank Fees				1,887		1,887	1,887	2,500	613	25%
Depreciation & Amortization	50,253	16,634	66,888	30,107	21,028	51,136	118,023	103,381	(14,642)	-14%
Dues, Licenses and Fees	67,257	9,430	76,687	(4,156)	21,896	17,740	94,426	101,570	7,144	
Miscellaneous Expenses	50,992	176	51,168	157	101	258	51,426		(51,426)	
IT Services	1,588,808	209,589	1,798,397	357,434	246,033	603,467	2,401,864	2,792,748	390,884	14%
Total Program Support Costs	**2,090,841**	**404,551**	**2,495,393**	**607,277**	**460,192**	**1,067,469**	**3,562,862**	**4,301,174**	**738,312**	**17%**
TOTAL EXPENSES	**142,662,349**	**17,266,027**	**159,928,376**	**2,861,486**	**2,600,904**	**5,462,390**	**165,390,765**	**169,866,854**	**4,476,089**	**3%**
OPUC Measure vs. 9%	**5.5%**									

ENERGY TRUST OF OREGON
Year to Date by Program/Service Territory
For the Twelve Months Ending December 31, 2015
Unaudited

	ENERGY EFFICIENCY								
	PGE	PacifiCorp	Total	NWN Industrial	NW Natural	Cascade	Oregon Total	NWN WA	ETO Total
REVENUES									
Public Purpose Funding	$28,723,137	$21,164,176	$49,887,313	$0	$12,853,131	$1,294,913	$64,035,357	$0	$64,035,357
Incremental Funding	42,053,468	21,003,782	63,057,250	3,078,432			66,135,682	1,435,515	67,571,197
Contributions									
Revenue from Investments									
TOTAL PROGRAM REVENUE	**70,776,605**	**42,167,958**	**112,944,564**	**3,078,432**	**12,853,131**	**1,294,913**	**130,171,039**	**1,435,515**	**131,606,554**
EXPENSES									
Program Management (Note 3)	2,476,397	1,582,887	4,059,284	101,616	590,893	70,448	4,822,238	109,709	4,931,947
Program Delivery	22,531,065	15,272,807	37,803,873	836,679	4,141,251	683,895	43,465,698	389,924	43,855,622
Incentives	41,989,778	27,147,470	69,137,247	1,470,045	8,924,623	1,219,910	80,751,826	633,612	81,385,438
Program Eval & Planning Svcs.	1,920,702	1,314,638	3,235,338	46,123	388,804	45,774	3,716,039	42,902	3,758,941
Program Marketing/Outreach	2,381,467	1,582,941	3,964,410	39,848	791,920	74,300	4,870,475	54,702	4,925,177
Program Quality Assurance	25,617	15,713	41,331	0	11,527	846	53,704	0	53,704
Outsourced Services	387,288	256,486	643,772	15,015	91,705	10,616	761,109	20,900	782,009
Trade Allies & Cust. Svc. Mgmt.	386,069	278,087	664,157	4,677	167,226	12,344	848,406	30,216	878,622
IT Services	751,795	521,353	1,273,148	16,760	238,896	23,502	1,552,304	36,504	1,588,808
Other Program Expenses - all	240,075	160,621	400,697	8,992	54,402	6,892	470,982	31,099	502,081
TOTAL PROGRAM EXPENSES	**73,090,253**	**48,133,003**	**121,223,257**	**2,539,755**	**15,401,247**	**2,148,527**	**141,312,781**	**1,349,568**	**142,662,349**
ADMINISTRATIVE COSTS									
Management & General (Notes 1&2)	1,307,604	860,967	2,168,572	45,494	275,112	38,426	2,527,602	24,056	2,551,658
Communications & Customer Svc (Notes 1&2)	1,188,527	782,561	1,971,088	41,351	250,059	34,925	2,297,424	21,867	2,319,291
Total Administrative Costs	**2,496,131**	**1,643,528**	**4,139,660**	**86,845**	**525,171**	**73,351**	**4,825,026**	**45,923**	**4,870,949**
TOTAL PROG & ADMIN EXPENSES	**75,586,384**	**49,776,531**	**125,362,917**	**2,626,600**	**15,926,418**	**2,221,878**	**146,137,807**	**1,395,491**	**147,533,298**
TOTAL REVENUE LESS EXPENSES	**(4,809,779)**	**(7,608,573)**	**(12,418,353)**	**451,832**	**(3,073,287)**	**(926,965)**	**(15,966,768)**	**40,024**	**(15,926,744)**
NET ASSETS - RESERVES									
Cumulative Carryover at 12/31/14	27,816,061	15,090,308	42,906,369	580,920	9,503,289	1,156,900	54,147,478	217,848	54,365,326
Change in net assets this year	(4,809,779)	(7,608,573)	(12,418,353)	451,832	(3,073,287)	(926,965)	(15,966,768)	40,024	(15,926,744)
Ending Net Assets - Reserves	**23,006,282**	**7,481,735**	**30,488,016**	**1,032,752**	**6,430,002**	**229,935**	**38,180,710**	**257,872**	**38,438,582**
Ending Reserve by Category									
Program Reserves (Efficiency and Renewables)	23,006,282	7,481,735	30,488,016	1,032,752	6,430,002	229,935	38,180,710	257,872	38,438,582
Operational Contingency Pool									
Emergency Contingency Pool									
TOTAL NET ASSETS CUMULATIVE	23,006,282	7,481,735	30,488,016	1,032,752	6,430,002	229,935	38,180,710	257,872	38,438,582

Note 1) Management & General and Communications & Customer Service Expenses (Admin) have been allocated based on total expenses.
Note 2) Admin costs are allocated for mgmt reporting only. GAAP for Not for Profits does not allow allocation of admin costs to program expenses.
Note 3) Program Management costs include both outsourced and internal staff.

ENERGY TRUST OF OREGON
Year to Date by Program/Service Territory
For the Twelve Months Ending December 31, 2015
Unaudited

	RENEWABLE ENERGY				TOTAL			
	PGE	PacifiCorp	Total	Other	All Programs	Approved budget	Change	% Change
REVENUES								
Public Purpose Funding	$8,312,211	$5,925,092	$14,237,304	0	$78,272,661	$80,663,860	($2,391,199)	-3%
Incremental Funding					67,571,197	67,258,771	312,426	0%
Contributions				1,550	1,550		1,550	
Revenue from Investments				551,531	551,531	288,000	263,531	92%
TOTAL PROGRAM REVENUE	**8,312,211**	**5,925,092**	**14,237,304**	**553,081**	**146,396,939**	**148,210,631**	**(1,813,692)**	**-1%**
EXPENSES								
Program Management (Note 3)	573,611	356,846	930,457		5,862,404	7,539,735	1,677,331	22%
Program Delivery	268,584	152,353	420,937		44,276,559	45,243,371	966,812	2%
Incentives	9,957,576	4,446,456	14,404,033		95,789,471	94,486,647	(1,302,824)	-1%
Program Eval & Planning Svcs.	45,358	28,831	74,189		3,833,130	4,895,930	1,062,800	22%
Program Marketing/Outreach	129,353	100,830	230,183		5,155,360	5,531,791	376,431	7%
Program Quality Assurance	0	0	0		53,704	75,000	21,296	28%
Outsourced Services	240,263	503,292	743,555		1,525,564	1,948,050	422,486	22%
Trade Allies & Cust. Svc. Mgmt.	41,558	16,548	58,107		936,729	943,970	7,241	1%
IT Services	129,460	80,129	209,589		1,798,397	2,091,073	292,676	14%
Other Program Expenses - all	124,564	70,414	194,977		697,058	938,540	241,482	26%
TOTAL PROGRAM EXPENSES	**11,510,327**	**5,755,699**	**17,266,027**	**-**	**159,928,376**	**163,694,107**	**3,765,731**	**2%**
ADMINISTRATIVE COSTS								
Management & General (Notes 1&2)	206,533	103,295	309,828		2,861,486	3,322,445	460,959	14%
Communications & Customer Svc (Notes 1&2)	187,724	93,889	281,613		2,600,904	2,850,306	249,402	9%
Total Administrative Costs	**394,257**	**197,184**	**591,441**		**5,462,390**	**6,172,751**	**710,361**	**12%**
TOTAL PROG & ADMIN EXPENSES	**11,904,584**	**5,952,883**	**17,857,468**		**165,390,765**	**169,866,854**	**4,476,089**	**3%**
TOTAL REVENUE LESS EXPENSES	**(3,592,373)**	**(27,791)**	**(3,620,164)**	**553,081**	**(18,993,825)**	**(21,656,227)**	**2,662,402**	**12%**
NET ASSETS - RESERVES								
Cumulative Carryover at 12/31/14	13,736,997	10,937,994	24,674,991	8,186,804	87,227,121	88,912,387	(1,685,266)	-2%
Change in net assets this year	(3,592,373)	(27,791)	(3,620,164)	553,081	(18,993,827)	(21,656,227)	2,662,400	12%
Ending Net Assets - Reserves	**10,144,624**	**10,910,203**	**21,054,827**	**8,739,885**	**68,233,294**	**67,256,160**	**977,134**	**1%**
Ending Reserve by Category								
Program Reserves (Efficiency and Renewables)	10,144,624	10,910,203	21,054,827		59,493,409			
Operational Contingency Pool				3,739,885	3,739,885			
Emergency Contingency Pool				5,000,000	5,000,000			
TOTAL NET ASSETS CUMULATIVE	10,144,624	10,910,203	21,054,827	8,739,885	68,233,294	67,256,160	977,134	1%

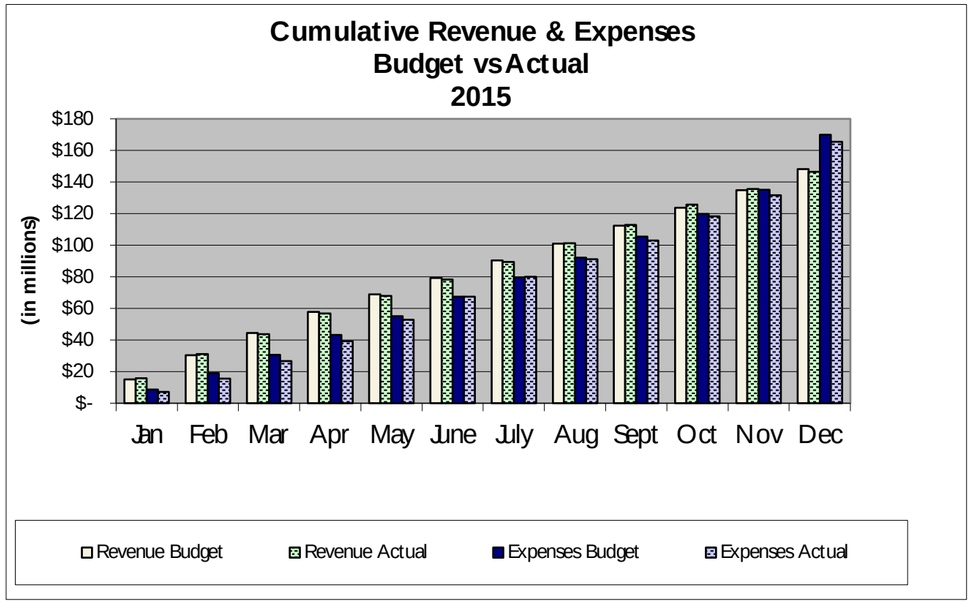
Energy Trust of Oregon
Program Expense by Service Territory
For the Twelve Months Ending December 31, 2015
(Unaudited)

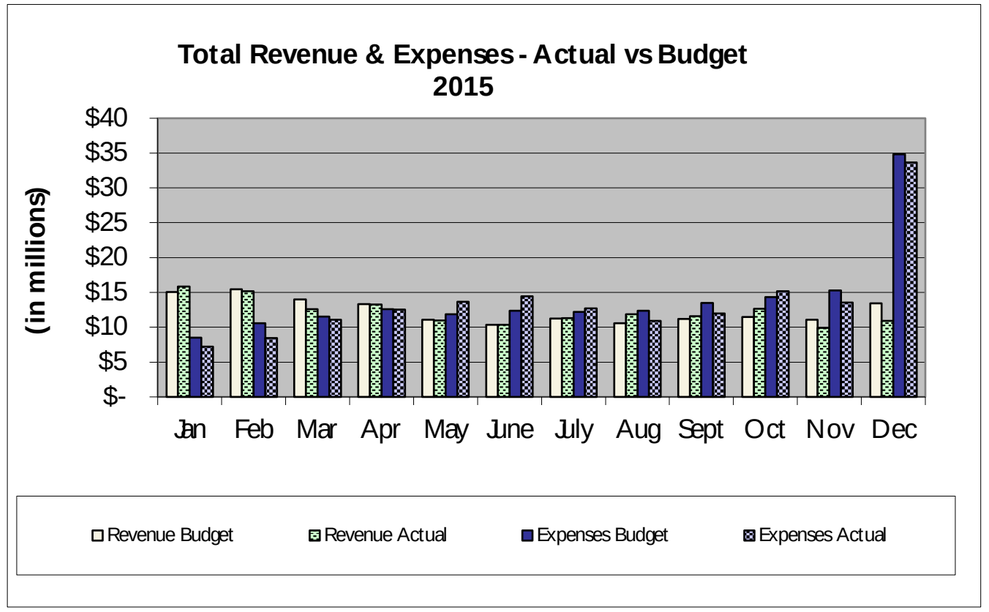
	PGE	Pacific Power	Subtotal Elec.	NWN Industrial	NW Natural Gas	Cascade	Subtotal Gas	Oregon Total	NWN WA	ETO Total	YTD Budget	Variance	% Var
Energy Efficiency													
Commercial													
Existing Buildings	24,971,253	17,358,313	42,329,566	1,442,888	3,340,427	838,431	5,621,746	47,951,312	425,794	48,377,106	51,173,057	2,795,951	5%
New Buildings	7,691,002	4,462,822	12,153,824	60,515	1,015,630	329,298	1,405,444	13,559,268		13,559,268	12,521,638	(1,037,630)	-8%
NEEA	1,320,440	931,509	2,251,949		76,154	7,826	83,981	2,335,929	6,751	2,342,680	2,917,374	574,694	20%
Total Commercial	**33,982,695**	**22,752,644**	**56,735,339**	**1,503,403**	**4,432,212**	**1,175,555**	**7,111,171**	**63,846,509**	**432,545**	**64,279,054**	**66,612,069**	**2,333,015**	**4%**
Industrial													
Production Efficiency	16,505,635	10,702,345	27,207,980	1,123,195	732,150	295,127	2,150,471	29,358,451		29,358,451	32,271,582	2,913,131	9%
NEEA	202,237	144,056	346,293					346,293		346,293	167,585	(178,708)	-107%
Total Industrial	**16,707,872**	**10,846,400**	**27,554,273**	**1,123,195**	**732,150**	**295,127**	**2,150,471**	**29,704,744**	**0**	**29,704,744**	**32,439,167**	**2,734,423**	**8%**
Residential													
Existing Homes	8,279,417	7,552,178	15,831,595	0	5,423,617	244,911	5,668,528	21,500,123	472,272	21,972,395	23,129,606	1,157,211	5%
New Homes/Products	14,272,352	6,976,085	21,248,437	0	5,184,991	490,175	5,675,165	26,923,602	475,456	27,399,058	26,833,257	(565,801)	-2%
NEEA	2,344,047	1,649,222	3,993,269		153,450	16,110	169,560	4,162,829	15,216	4,178,045	4,661,874	483,829	10%
Total Residential	**24,895,816**	**16,177,484**	**41,073,300**	**0**	**10,762,058**	**751,195**	**11,513,253**	**52,586,554**	**962,944**	**53,549,498**	**54,624,737**	**1,075,239**	**2%**
Energy Efficiency Costs	**75,586,384**	**49,776,531**	**125,362,917**	**2,626,600**	**15,926,418**	**2,221,878**	**20,774,895**	**146,137,807**	**1,395,491**	**147,533,298**	**153,675,973**	**6,142,677**	**4%**
Renewables													
Solar Electric (Photovoltaic)	9,868,578	3,817,022	13,685,600					13,685,600		13,685,600	11,490,728	(2,194,872)	-19%
Other Renewable	2,036,006	2,135,859	4,171,865					4,171,865		4,171,865	4,700,153	528,288	11%
Renewables Costs	**11,904,584**	**5,952,883**	**17,857,468**	**0**	**0**	**0**	**0**	**17,857,468**	**0**	**17,857,465**	**16,190,881**	**(1,666,584)**	**-10%**
Cost Grand Total	**87,490,967**	**55,729,410**	**143,220,377**	**2,626,600**	**15,926,418**	**2,221,878**	**20,774,895**	**163,995,272**	**1,395,491**	**165,390,765**	**169,866,854**	**4,476,093**	**3%**

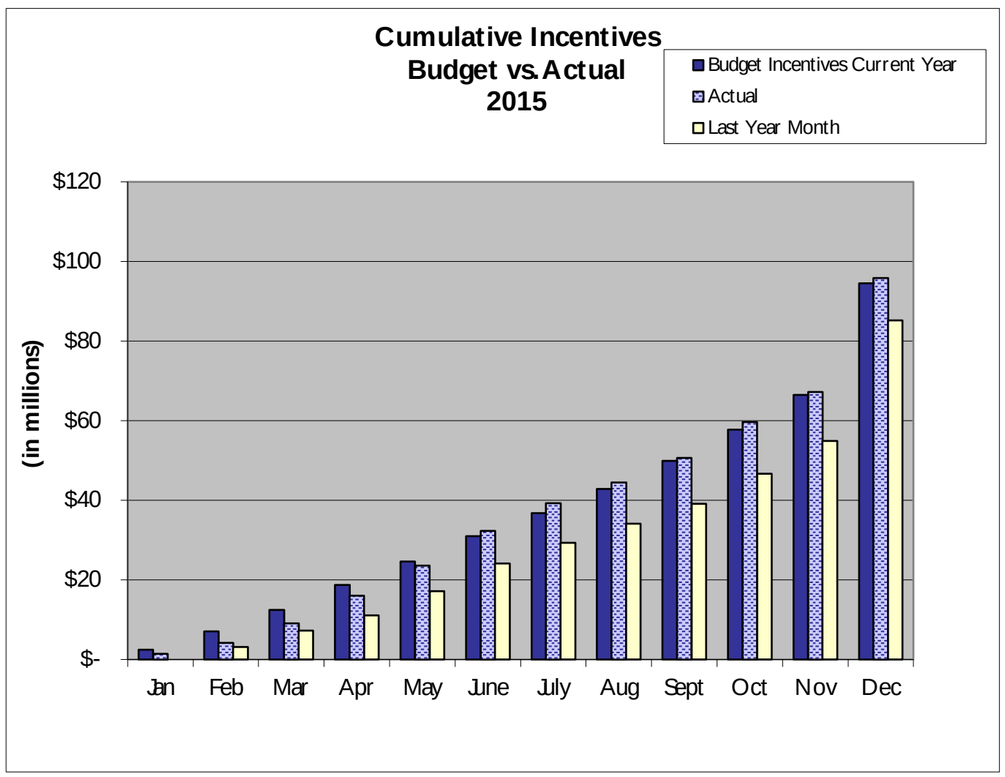
Energy Trust of Oregon
Administrative Expenses
For the 4th Quarter and Twelve Months Ending December 31, 2015
(Unaudited)

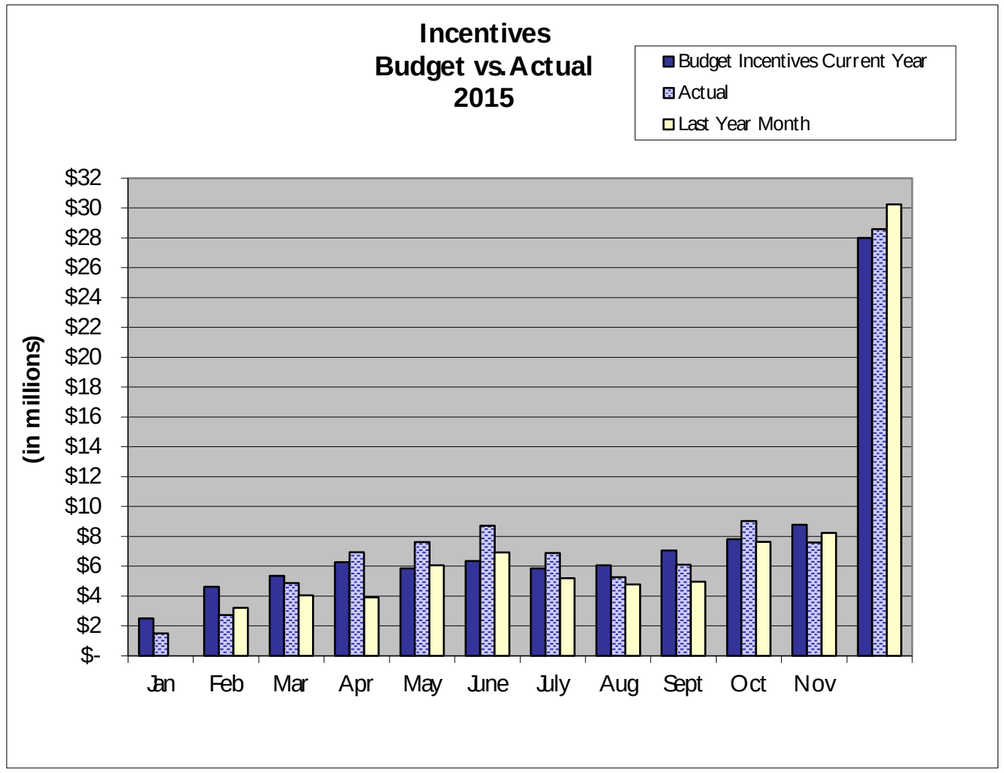
	MANAGEMENT & GENERAL						COMMUNICATIONS & CUSTOMER SERVICE					
	QUARTER			YTD			QUARTER			YTD		
	ACTUAL	BUDGET	REMAINING	ACTUAL	BUDGET	VARIANCE	ACTUAL	BUDGET	REMAINING	ACTUAL	BUDGET	VARIANCE
EXPENSES												
Outsourced Services	$35,078	$85,922	$50,844	$196,424	$387,688	$191,264	$194,040	$251,400	$57,360	$931,073	$1,052,500	$121,427
Legal Services		6,750	6,750	15,013	27,000	11,987						
Salaries and Related Expenses	505,285	528,459	23,174	2,041,263	2,100,756	59,494	307,441	332,886	25,445	1,209,619	1,331,543	121,925
Supplies	370	1,075	705	3,590	4,300	710	132	250	118	729	1,000	271
Telephone										120		(120)
Postage and Shipping Expenses	220		(220)	1,741		(1,741)						
Printing and Publications	2,455	87	(2,367)	5,134	350	(4,784)	490	1,250	760	4,270	5,000	730
Travel	7,864	12,388	4,524	26,852	49,550	22,698	19,839	6,250	(13,589)	53,375	25,000	(28,375)
Conference, Training & Mtngs	2,790	44,423	41,632	42,506	143,040	100,534	2,529	3,500	972	13,444	14,000	556
Interest Expense and Bank Fees	113	625	512	1,887	2,500	613						
Miscellaneous Expenses	12		(12)	12		(12)						
Dues, Licenses and Fees	1,878	1,419	(459)	(4,156)	5,905	10,061	7,665	2,125	(5,540)	21,896	8,500	(13,396)
Shared Allocation (Note 1)	41,235	45,959	4,724	172,304	184,053	11,748	30,535	31,635	1,100	120,345	126,689	6,344
IT Service Allocation (Note 2)	98,864	103,893	5,029	357,434	415,604	58,170	68,051	71,513	3,462	246,033	286,073	40,040
Planning & Eval	391	417	25	1,480	1,699	218						
TOTAL EXPENSES	**696,555**	**831,417**	**134,861**	**2,861,486**	**3,322,445**	**460,960**	**630,722**	**700,809**	**70,088**	**2,600,904**	**2,850,306**	**249,402**

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


Cumulative Revenue & Expenses
Budget vs Actual
2015
(in millions)
$180
$160
$140
$120
$100
$80
$60
$40
$20
$-
Jan Feb Mar Apr May June July Aug Sept Oct Nov Dec
Revenue Budget
Revenue Actual
Expenses Budget
Expenses Actual


Total Revenue & Expenses - Actual vs Budget
2015
(in millions)
$40
$35
$30
$25
$20
$15
$10
$5
$-
Jan Feb Mar Apr May June July Aug Sept Oct Nov Dec
Revenue Budget
Revenue Actual
Expenses Budget
Expenses Actual


Cumulative Incentives
Budget vs. Actual
2015
Budget Incentives Current Year
Actual
Last Year Month
(in millions)
$120
$100
$80
$60
$40
$20
$-
Jan Feb Mar Apr May June July Aug Sept Oct Nov Dec


Incentives
Budget vs. Actual
2015
Budget Incentives Current Year
Actual
Last Year Month
(in millions)
$32
$30
$28
$26
$24
$22
$20
$18
$16
$14
$12
$10
$8
$6
$4
$2
$-
Jan Feb Mar Apr May June July Aug Sept Oct Nov

CONTRACTOR	Description	City	EST COST	Actual TTD	Remaining	Start	End
Administration							
		Administration Total:	**6,441,495**	**3,146,896**	**3,294,599**		
Communications							
		Communications Total:	**3,191,375**	**1,136,741**	**2,054,634**		
Energy Efficiency							
Northwest Energy Efficiency Alliance	Regional EE Initiative Agmt	Portland	33,662,505	7,978,718	25,683,787	1/1/2015	7/1/2020
ICF Resources, LLC	2016 BE PMC	Fairfax	10,380,579	0	10,380,579	1/1/2016	12/31/2016
ICF Resources, LLC	2015 BE PMC	Fairfax	9,361,147	9,114,547	246,600	1/1/2015	12/31/2015
CLEAResult Consulting Inc	2015 HES PMC	Austin	6,831,251	6,565,901	265,350	1/1/2015	12/31/2015
CLEAResult Consulting Inc	2016 HES PMC	Austin	6,627,975	0	6,627,975	1/1/2016	12/31/2016
Northwest Energy Efficiency Alliance	Regional Gas EE Initiative	Portland	6,200,354	507,845	5,692,509	1/1/2015	7/1/2020
CLEAResult Consulting Inc	2016 NBE PMC	Austin	5,868,253	0	5,868,253	1/1/2016	12/31/2016
CLEAResult Consulting Inc	2015 NBE PMC	Austin	4,986,181	4,543,187	442,994	1/1/2015	12/31/2015
Lockheed Martin Corporation	2016 MF PMC	Grand Prairie	4,496,935	0	4,496,935	1/1/2016	12/31/2018
Lockheed Martin Services, Inc.	2015 MF PMC	Cherry Hill	4,158,899	4,010,135	148,764	1/1/2015	12/31/2015
Ecova Inc	2016 Products PMC	Spokane	3,756,714	0	3,756,714	1/1/2016	12/31/2016
Ecova Inc	2015 Products PMC	Spokane	3,601,890	3,375,750	226,140	1/1/2015	1/31/2016
Energy 350 Inc	PDC - PE 2016	Portland	3,123,000	0	3,123,000	1/1/2016	12/31/2016
CLEAResult Consulting Inc	2016 NH PMC	Austin	2,868,582	0	2,868,582	1/1/2016	12/31/2016
CLEAResult Consulting Inc	2015 NH PMC	Austin	2,807,252	2,737,242	70,010	1/1/2015	12/31/2015
Energy 350 Inc	PDC - PE 2015	Portland	2,451,150	2,369,200	81,950	1/1/2015	12/31/2015
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 2015	Portland	2,211,000	2,181,538	29,462	1/1/2015	12/31/2015
Portland General Electric	PDC - PE 2016	Portland	2,153,000	0	2,153,000	1/1/2016	12/31/2016
Oregon State University	CHP Project - OSU	Corvallis	2,024,263	1,982,682	41,581	12/20/2010	1/31/2016
Northwest Power & Conservation Council	RTF Funding Agreement		1,825,000	321,766	1,503,234	2/25/2015	12/31/2019
Cascade Energy, Inc.	PDC - PE 2016 Small Industrial	Walla Walla	1,674,518	0	1,674,518	1/1/2016	12/31/2016
RHT Energy Inc.	PDC - PE 2016	Medford	1,665,000	0	1,665,000	1/1/2016	12/31/2016
Cascade Energy, Inc.	PDC - PE 2015 Small Industrial	Walla Walla	1,497,000	1,485,432	11,568	1/1/2015	12/31/2015
Evergreen Consulting Group, LLC	PE Lighting PDC 2016	Tigard	1,371,500	0	1,371,500	1/1/2016	12/31/2016
NEXANT, INC.	PDC - PE 2015	San Francisco	1,338,550	1,337,891	659	1/1/2015	12/31/2015
Evergreen Consulting Group, LLC	PE Lighting PDC 2015	Tigard	1,296,000	1,252,987	43,013	1/1/2015	12/31/2015
HST&V, LLC	PDC - SEM 2016	Portland	1,185,354	0	1,185,354	1/1/2016	12/31/2016
RHT Energy Inc.	PDC - PE 2015	Medford	1,161,440	1,090,440	71,000	1/1/2015	12/31/2015

HST&V, LLC	PDC - SEM 2015	Portland	1,041,740	1,011,335	30,405	1/1/2015	12/31/2015
CLEAResult Consulting Inc	PDC - SEM 2015	Austin	695,500	579,136	116,364	1/1/2015	12/31/2015
EnergySavvy Inc.	EnergySavvy Online Audit Tool	Seattle	587,500	539,514	47,986	1/1/2012	5/31/2016
ADM Associates, Inc.	EB 2013/2014 Impact Evaluation	Seattle	422,000	0	422,000	1/1/2016	12/31/2016
Cascade Energy, Inc.	SEM Curriculum	Walla Walla	404,080	404,080	0	5/1/2014	4/30/2016
The Cadmus Group Inc.	PE Impact Eval 2012	Watertown	345,000	300,183	44,817	4/15/2014	6/30/2016
Energy Market Innovations, Inc.	Lighting Controls Savings Est	Seattle	317,000	314,962	2,038	10/1/2014	2/29/2016
Craft3	SWR Loan Origination/Loss Fund	Portland	305,000	14,519	290,481	6/1/2014	12/31/2016
EnerNoc, Inc.	Commercial SEM curriculum	Boston	300,915	272,343	28,572	6/27/2014	5/30/2016
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	0	289,600	1/1/2016	12/31/2016
CLEAResult Consulting Inc	2015 HES WA PMC	Austin	277,600	267,600	10,000	1/1/2015	12/31/2015
Pivotal Energy Solutions LLC	License Agreement	Gilbert	270,500	48,049	222,451	3/1/2014	12/31/2017
Enervee Corporation	Online Marketplace Development	Venice	212,558	0	212,558	1/15/2016	8/30/2016
KEMA Incorporated	Commercial SEM Impact Eval	Oakland	205,000	46,499	158,501	9/1/2015	6/30/2016
ICF Resources, LLC	2016 BE NWN WA PMC	Fairfax	200,724	0	200,724	1/1/2016	12/31/2016
ICF Resources, LLC	2015 BE NWN WA PMC	Fairfax	196,984	186,984	10,000	1/1/2015	12/31/2015
The Cadmus Group Inc.	PE SEM Impact Evaluation	Watertown	177,000	127,972	49,028	5/1/2015	6/30/2016
Balanced Energy Solutions LLC	New Homes QA Inspections	Portland	154,000	35,955	118,045	4/27/2015	12/31/2016
ICF Resources, LLC	2016 BE DSM PMC	Fairfax	122,019	0	122,019	1/1/2016	12/31/2016
ICF Resources, LLC	2015 BE DSM PMC	Fairfax	119,627	118,512	1,115	1/1/2015	12/31/2015
Abt SRBI Inc.	Fast Feedback Surveys	New York	118,000	107,984	10,016	1/31/2014	2/29/2016
Hitachi Consulting Corporation	SOW #18 PMC Transition	Dallas	105,000	0	105,000	2/1/2016	7/31/2016
ICF Resources, LLC	OSU CHP Performance Monitoring	Fairfax	100,000	66,118	33,883	7/1/2013	6/30/2016
1000 Broadway Building L.P.	Pay-for-Performance Pilot	Portland	88,125	0	88,125	10/17/2014	11/1/2018
Pivotal Energy Solutions LLC	EPS New Home dbase construct	Gilbert	86,725	69,275	17,450	7/1/2014	6/30/2016
Alliance For Sustainable Energy, LLC	Technical Services Agreement	Lakewood	74,215	35,000	39,215	10/30/2015	3/30/2016
Evergreen Economics	EB Process Evaluation	Portland	73,000	0	73,000	11/16/2015	9/30/2016
Research Into Action, Inc.	SWR OnBill Repmt Pilot Eval	Portland	73,000	64,379	8,621	11/1/2014	6/30/2016
SBW Consulting, Inc.	Path to Net Zero Impact Eval	Bellevue	70,000	65,609	4,391	3/19/2015	3/31/2016
The Cadmus Group Inc.	Solar PV Impact Evalution	Watertown	53,135	6,500	46,635	10/26/2015	3/31/2016
Evergreen Economics	New Homes Process Evaluation	Portland	50,000	36,925	13,075	6/1/2015	3/31/2016
PWP, Inc.	EB SBES Process Evaluation	Gaithersburg	50,000	25,935	24,065	9/14/2015	5/31/2016
MetaResource Group	Intel DX1 Mod 1&2 Megaproject	Portland	45,000	3,093	41,907	4/1/2015	5/1/2017
Research Into Action, Inc.	MPower Pilot Evaluation	Portland	38,100	29,627	8,474	2/1/2015	6/30/2016

KEMA Incorporated	Billing Analysis Review	Oakland	35,000	0	35,000	3/15/2015	12/31/2016
Apex Analytics LLC	Gas Thermostat	Boulder	30,000	29,280	720	10/20/2014	3/31/2016
WegoWise Inc	benchmarking license 2015	Boston	30,000	15,696	14,304	6/15/2014	12/31/2016
Energy Center of Wisconsin	Billing Analysis Review	Madison	25,000	0	25,000	3/15/2015	12/31/2016
Evergreen Economics	Air Sealing Pilot Evaluation	Portland	25,000	1,155	23,845	10/15/2014	4/30/2016
Cascade Energy, Inc.	Tablet Site Scoping Tool	Walla Walla	24,999	11,505	13,494	10/26/2015	1/10/2016
Sustainable Northwest	Klamath PAC Ag Program Aware	Portland	24,992	6,248	18,744	11/1/2015	8/10/2016
CLEAResult Consulting Inc	Professional Services/Trans	Austin	22,588	19,539	3,049	10/15/2014	10/15/2016
Ecotope, Inc.	NB VRF Pilot Evaluation	Seattle	20,000	0	20,000	1/1/2016	5/31/2017
MetaResource Group	Pay-for-Performance Pilot Eval	Portland	20,000	14,263	5,737	7/1/2015	5/30/2016
MetaResource Group	Paper Plant Impact Evaluation	Portland	20,000	0	20,000	10/30/2015	5/30/2016
Clark Public Utilities	Living Wise Kits Coop Agmt	Vancouver	15,000	0	15,000	11/1/2015	12/31/2016
Energy 350 Inc	Professional Services	Portland	14,920	14,920	0	12/10/2014	12/10/2016
Bridgetown Printing Company	January 2016 Bill Insert	Portland	14,677	0	14,677	1/1/2016	12/31/2016
PWP, Inc.	NBE Satisfaction Survey 2015	Gaithersburg	14,000	1,665	12,335	12/1/2015	3/31/2016
American Council for and Energy Efficient Economy	Intelligent Eff. Baseline		10,000	0	10,000	1/1/2016	12/31/2016
American Council for and Energy Efficient Economy	Smart Buildings		10,000	0	10,000	1/1/2016	12/31/2016
American Council for and Energy Efficient Economy	Small Business EE		10,000	0	10,000	1/1/2016	12/31/2016
NEXANT, INC.	PDC Transition - PE 2016	San Francisco	10,000	0	10,000	1/1/2016	2/10/2016
Northwest Food Processors Association	NW Industrial EE Summit 2016	Portland	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	8/31/2016
City of Portland Bureau of Planning & Sustainability	Sponsorship - 2016	Portland	8,000	8,000	0	1/1/2016	12/31/2016
Earth Advantage, Inc.	2015 Functional Sponsorship	Portland	7,500	7,500	0	3/1/2015	2/29/2016
Northwest Environmental Business Council	Future Energy Conference 2016	Portland	7,450	3,950	3,500	1/1/2016	12/31/2016
LightTracker, Inc.	CREED Data	Boulder	7,300	7,300	0	8/5/2015	8/4/2016
Sustainable Northwest	2015 Sponsorship	Portland	5,000	5,000	0	9/1/2015	9/1/2016
	Energy Efficiency Total:		**141,384,955**	**55,898,939**	**85,486,016**		

Joint Programs

Portland State University	Technology Forecasting		153,808	116,759	37,049	11/7/2011	12/31/2016
E Source Companies LLC	E Source Service Agreement	Boulder	74,900	74,900	0	2/1/2014	1/31/2016
The Cadmus Group Inc.	Evaluation Consultant	Watertown	63,305	41,518	21,788	6/20/2013	2/28/2016
CoStar Realty Information Inc	Property Data	Baltimore	33,620	28,991	4,629	6/1/2011	5/31/2016
Research Into Action, Inc.	EH Attic Air Sealing Pilot Eva	Portland	30,000	30,000	0	10/8/2014	9/30/2016
Bruins Analysis and Consulting	Fast Feedback Reporting	Bremerton	7,000	0	7,000	11/15/2015	4/30/2016
	Joint Programs Total:		**362,633**	**292,167**	**70,466**		

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	1,325,000	675,000	10/18/2012	10/18/2032
Steel Bridge Solar, LLC	Project Funding Agreement	Seattle	2,000,000	0	2,000,000	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	800,000	200,000	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
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	217,830	223,830	10/27/2010	10/27/2025
Farmers Conservation Alliance	Irrigation Collaboration Initi	Hood River	421,000	367,244	53,756	1/2/2015	12/31/2016
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		330,000	165,000	165,000	4/9/2014	7/9/2034
Clean Power Research, LLC	PowerClerk License	Napa	231,253	228,583	2,670	7/1/2014	6/30/2016
K2A Properties, LLC	Doerfler Wind Farm Project	Aumsville	230,000	230,000	0	5/20/2010	5/20/2030
Confederated Tribes of the Umatilla Indian Reservation	Small Wind Project Funding	Pendleton	170,992	170,992	0	7/25/2013	12/31/2028
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
Gary Higbee DBA WindStream Solar	Solar Verifier Services	Eugene	100,000	71,511	28,489	8/1/2014	7/31/2016
Sunflower Energy Solutions, Inc	Solar Verifier Services	Terrebonne	100,000	0	100,000	1/12/2016	7/31/2016
Wallowa Resources Community Solutions, Inc.	Upfront Hydroelectric Project		100,000	32,188	67,813	10/1/2011	10/1/2016
Solar Oregon	2015 Outreach Agreement	Portland	72,800	33,000	39,800	1/1/2015	12/31/2016
Mapdwell LLC	Mapdwell Account	Boston	64,595	64,595	0	3/17/2014	4/30/2016
SPS of Oregon Inc	Project Funding Agreement	Wallowa	60,000	0	60,000	10/15/2015	10/31/2036
State of Oregon Dept of Geology & Mineral Industries	Lidar Data	Portland	40,000	16,000	24,000	11/7/2014	12/1/2016
Clean Energy States Alliance	CESA Membership		39,500	39,500	0	7/1/2015	6/30/2016
Glenna R Wiseman	Solar Marketing Curriculum	Redlands	36,500	11,245	25,255	10/20/2015	7/31/2016
Kendrick Business Services LLC	Solar TA Business Consulting	Albany	30,000	11,450	18,550	10/8/2015	3/31/2016
University of Oregon	UO SRML Contribution - 2015	Eugene	24,999	24,999	0	2/11/2015	3/8/2016
Robert Migliori	42kW wind energy system	Newberg	24,125	21,673	2,452	4/11/2007	1/31/2024

Oregon Clean Power Cooperative	Grant Agreement	Corvallis	17,000	17,000	0	6/15/2015	6/30/2016
Oregon Solar Energy Industries Association	Solar Technical Training Class	Portland	13,500	0	13,500	12/10/2015	12/31/2016
Warren Griffin	Griffin Wind Project	Salem	13,150	9,255	3,895	10/1/2005	10/1/2020
Chaolysti	Solar TA Summit	Alameda	11,650	3,000	8,650	12/1/2015	5/30/2016
Oregon Solar Energy Industries Association	Sponsorship 2016	Portland	7,500	7,500	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:	**16,625,600**	**9,277,423**	**7,348,177**		
		Grand Total:	**168,006,058**	**69,752,166**	**98,253,892**		

Financial Glossary

(for internal use) - updated April 16, 2014

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 unqualified or qualified regarding specific items. Energy Trust strives for and has achieved in all its years an unqualified opinion.
- An unqualified 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 unqualified opinion regarding Energy Trust's financial records.
- 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.

FastTrack Projects Forecasting

Module developed in FastTrack 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 2nd 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 FastTrack. 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 “how to” sessions on insulation, weatherization, or high efficiency lighting.
- CFL online home review fulfillment and PMC direct installations.
- Technical trade ally training to enhance program knowledge.
- Incentives for equipment purchases by trade allies to garner improvements of services and diagnostics delivered to end-users, such as duct sealing, HVAC diagnosis, air filtration, etc.

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 FastTrack 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

Tab 5

Policy Committee Meeting

January 28, 2016, 3:30–5:00 pm

Attending by teleconference
Roger Hamilton, Ken Canon (arrived late in the meeting), Alan Meyer, John Reynolds

Attending at Energy Trust offices
Eddie Sherman, Amber Cole, Kim Crossman, Fred Gordon, Margie Harris, Steve Lacey, Debbie Menashe, John Volkman, Courtney Wilton

Policy for Review

Self-Direct Policy
The Self-Direct Policy is due for its regular three year review. Under the public purpose charge legislation, customers of PGE and Pacific Power in Oregon who use more than one average megawatt of electricity per year may direct their own energy efficiency or renewable energy investments, and deduct the cost from the public purpose charge on their monthly utility bills. In adopting the policy originally, several trade-offs were recognized: energy users who do not self-direct should not subsidize large users who do, but at the same time offering self-directors partial incentive would likely save more energy than individual self-direction, would allow potential self-directors to experience Energy Trust program offerings, and would result in low-cost savings.

John Volkman provided background and history regarding the policy to explain its intended purpose and its impact since originally implemented. Staff believes that implementation of the policy has been successful in addressing the trade-offs identified. Since 2010, the number of self-directors has actually fallen so that in 2015, of the approximately 170 sites eligible to self-direct, only 13 actually did.

Still, the policy is complex and difficult for many customers to understand and for Energy Trust to administer. As a result, staff recommended a number of changes to simplify the policy and its administration. Three substantive changes were recommended to simplify administration but still retain the overall self-direct concept:

- Allow less than a 50% incentive to firms that use self-direct credits at a site
- Update the category of measures that are exempted from the policy's limitations
- Eliminate the $1.5 million cap on incentives for self-directors across all Energy Trust programs

Committee members discussed the policy. Recognizing that the policy appears to have had the result of providing significant and highly cost effective savings from customers who could choose not to participate in the programs, the suggested changes seemed reasonable. However, there was also a more fundamental concern that providing any Energy Trust incentive to customers who self-direct raises some questions. Committee members asked staff to follow up with Ken Canon, who had significant experience and history and involvement with the self-direct concept and policy development as the executive director of ICNU. Staff committed to contacting Ken to discuss the policy and to report back to the committee on that conversation. Following those engagements, the committee will decide how to direct staff on the disposition of the Self-Direct Policy.

Other Matters

OPUC Board Attendance
Margie advised the committee that Commissioner Stephen Bloom will be attending Energy Trust board meetings in the future as an *ex officio* member. This *ex officio* appointment is provided for within Energy Trust's bylaws. Although Commissioner Savage has in the past served this function, he

has asked Commissioner Bloom to do so in the future. Margie will be meeting with Commissioner Bloom soon to provide an orientation to his *ex officio* role.

Waste Heat to Power Project Proposal
Staff briefly updated the board on the status of a potential energy efficiency waste-to-energy project that would require board approval to waive program incentive caps and authorize the executive director to execute a contract for incentive funding in excess of $500,000. The project owner recently was purchased, and staff is reviewing the new corporate structure and financial package. Staff expects to return to the Policy Committee at its next meeting with a preview of a board recommendation.

Brief Updates

Lease Extension
Courtney reported on negotiations currently underway for potential lease extension for Energy Trust's current office space. The current lease is set to expire in 2019, but given the active real estate market in downtown Portland, staff decided to explore a way to secure favorable rates for a longer term. Negotiations are currently underway for a lease extension through 2025, to correspond to the SB 1149 sunset date. The current proposal would provide stability in rates after 2019, some rate abatement, and a small amount of tenant improvement allowances. The landlord is motivated to have long term, reliable tenants enhances the property value. Staff will continue to brief the board on developments. Any final lease extension would require OPUC and board approval.

Legislative Update
Margie reported that the short, even-year Oregon legislative session is about to begin. Two legislative concepts have been submitted that are of direct relevance to Energy Trust: The Oregon Clean Electric Plan, which would revise current Renewable Portfolio Standard requirements and dictate a "loading order" for electric resource, and a legislative concept for a bill to restructure the public purpose charge provisions of ORS 757.612. The latter bill is the result of discussion coming out of the large customer funding limitations. Hearings on these bills will begin next week. Staff is proceeding to examine the legislative concept language and speculate on the impacts of each to Energy Trust programs.

Staffing Updates
Margie updated the committee on the new CFO recruitment process. Margie also advised the committee that Ana Morel will be leaving the organization and, as a result, another recruitment process will begin soon for Ana's position.

Adjourn
The meeting adjourned just before 5:00 pm. The next meeting of the Policy Committee is scheduled for March 10, 2016.

Tab 6

Strategic Planning Committee Meeting

February 2, 2016, 3:00 pm

Attending at Energy Trust offices
Mark Kendall, Elaine Prause, JP Batmale, Hannah Cruz, Fred Gordon, Margie Harris, Betsy Kauffman, Debbie Menashe, John Volkman

Attending by teleconference
Susan Brodahl, Ken Canon, John Reynolds

Review of Draft Strategic Planning Retreat Agenda
Staff presented its first draft retreat agenda to the committee. Staff also announced that the retreat location has been secured at Mercy Corps headquarters in downtown Portland. Mercy Corps is conveniently located just blocks away from Energy Trust offices and is a building that underwent significant renovation with technical design and incentive assistance from Energy Trust's New Buildings Program. Tours and information about the renovation could be built into the retreat agenda.

Committee members discussed the agenda and how to keep the discussion at an appropriately high level for board discussion. Committee members asked about the structure of the retreat and the agenda to support this kind of discussion. As in previous retreats, staff committed to identifying questions for the board's focus and will work with the committee in finalization of the agenda and presentation briefing papers to ensure that the questions are appropriate for board discussion. Staff will also inform Nick Viele, who is facilitating the retreat, of the committee's concern on this topic.

Committee members also asked whether it was possible to add meeting time on the second day of the retreat. Staff will work with Mercy Corps to ensure that there is time. There is the main meeting space as well as a smaller room, "The Gallery." The Gallery could be used for executive session should any executive session discussions be needed. Staff will revise the draft retreat agenda to add additional time in the afternoon of the second day to build in flexibility for additional discussions.

Committee members then discussed the demand response topic identified in the draft retreat. It is a big, important, and timely topic. It is tied into the Power Council's 7th Plan, and it is the first time that the Power Council planning has included this topic. The committee suggested that staff include some background and education information on demand response as a primer for the board. In addition, there should be updates on specific demand response activities underway or in planning.

Update on "Metrics Matrix": A Strategic Plan Implementation Dashboard
Hannah Cruz walked through a proposal for a "Metrics Matrix" Strategic Plan Implementation tool that staff has prepared for committee and board use in tracking Strategic Plan implementation. The dashboard is still in draft form, and staff presented it to the committee for comments. Committee members expressed support for the overall format and concept of the dashboard. Several suggestions for revision and improvement were offered: clarification and formatting of the Emerging Resource section, suggestion on additions for the Continuous Improvements in Operations section, and the addition of a section to track employee engagement.

Update on "Baseline" for Expanding Participation
Staff then updated the committee on its progress towards establishing a baseline for the Expand Participation strategy and presented some options. In 2014 and 2015, Energy Trust undertook several research projects based on program evaluation methodologies and aimed at providing an understanding of participation gaps in Energy Trust programs and services and to identify appropriate baselines from which future participation gains could be measured. Research results from these efforts did not prove conclusively that we have participation gaps. Notwithstanding these results, staff intends to continue to examine the question of Energy Trust program participation using other research approaches. Staff is moving forward with more market-based research approaches to focus

on learning more about specific consumer groups or measures in order to target outreach and marketing efforts to specific customer segments.

For purposes of tracking progress on these efforts, staff presented options to the committee: 1) track progress indicators for learning and addressing participation gaps and barriers 2) track progress indicators for program design and execution; 3) track progress indicators for individual measures or offers; 4) track progress indicators for number of sites served. Staff recommended options 1 and 2, and the committee expressed general support for these options as appropriate first steps in tracking efforts for the expanding participation strategy. Staff will add information into the dashboard document regarding this strategy and will provide initial reporting against the Option 1 and Option 2 progress indicators at the retreat in May.

The meeting adjourned at 4:50 pm.

The next meeting of the Strategic Planning Committee is scheduled for March 8, 2016 at 3:30 pm.

Tab 7

Energy Trust of Oregon 2015 Preliminary Annual Results

February 1, 2016

The following represents preliminary Energy Trust of Oregon 2015 annual savings and generation results, and progress to energy goals and IRP targets. This report contains the best available data at this time, and reflects net savings. Further review as part of Energy Trust's comprehensive annual reporting process may change the results reported here. The Energy Trust 2015 Annual Report to the Oregon Public Utility Commission will contain the most accurate and comprehensive Energy Trust data, and will be available on April 15, 2016.

A. Preliminary electric efficiency savings

In 2015, electric efficiency programs saved 54.1 average megawatts, achieving **102 percent of Energy Trust's 2015 electric savings goal** of 53.1 aMW.

Preliminary electric efficiency savings	Pacific Power aMW	Portland General Electric aMW	Total aMW
Existing Buildings	5.37	8.40	13.76
New Buildings*	2.84	2.87	5.71
Production Efficiency	5.10	7.48	12.58
New Homes and Products	3.57	6.01	9.58
Existing Homes	2.38	2.76	5.14
NEEA	3.02	4.34	7.36
Total electric efficiency programs	**22.28**	**31.86**	**54.14**

Electric efficiency savings numbers include transmission and distribution savings
**Includes Energy Trust electric market transformation savings acquired separately from NEEA efforts*

B. Preliminary natural gas efficiency savings

In 2015, gas efficiency programs saved 6.5 million annual therms of natural gas, achieving **116 percent of Energy Trust's 2015 gas savings goal** of 5.6 million annual therms.

Preliminary gas efficiency savings	Cascade Natural Gas therms	NW Natural—Oregon therms	Total therms
Existing Buildings	266,498	1,597,380	1,863,878
New Buildings*	94,457	457,920	552,377
Production Efficiency	47,606	1,992,610	2,040,217
New Homes and Products*	102,950	994,636	1,097,585
Existing Homes	61,015	879,850	940,865
Total gas efficiency programs	572,526	5,922,396	6,494,922

**Includes Energy Trust gas market transformation savings acquired separately from NEEA efforts*

C. Preliminary renewable energy generation

In 2015, renewable energy programs generated 3.90 aMW, achieving **112 percent of Energy Trust's 2015 renewable generation goal** of 3.47 aMW.

Preliminary renewable energy generation	Pacific Power aMW	PGE aMW	Total Generation aMW
Solar electric	0.63	1.29	1.91
Other renewables	0.24	1.75	1.99
Total renewable programs	**0.87**	**3.04**	**3.90**

Renewable energy generation numbers include transmission and distribution savings, where appropriate

D. Preliminary NW Natural—Washington gas efficiency savings

In 2015, gas efficiency programs for NW Natural customers in Washington saved 201,446 annual therms of natural gas, achieving **78 percent of Energy Trust's 2015 NW Natural—Washington gas savings stretch goal** of 259,895 annual therms.

Preliminary NW Natural—Washington gas efficiency savings	NW Natural—Washington therms
Existing Buildings	73,437
Existing Homes	58,465
New Homes	69,545
Total NW Natural—Washington gas efficiency programs	**201,446**

E. Preliminary progress to 2015 annual goals by utility

Preliminary progress to goals by utility	Annual Savings	Energy Trust annual goal		Annual IRP target	
		Goal	% Achieved	Goal	% Achieved
PGE	31.86 aMW	33.19 aMW	96%	33.78 aMW	94%
Pacific Power	22.28 aMW	19.93 aMW	112%	19.12* aMW	117%
NW Natural—Oregon	5,922,396 annual therms	5,153,194 annual therms	115%	4,624,249 annual therms	128%
Cascade Natural Gas	572,526 annual therms	433,020 annual therms	132%	433,020** annual therms	132%

Includes savings from NEEA and Energy Trust electric and gas market transformation savings acquired separately from NEEA efforts

*Pacific Power IRP target is pending acknowledgement from OPUC and was revised in April 2015. Energy Trust noted the forthcoming change in the final proposed 2015 Annual Budget adopted in December 2014, where the IRP target was indicated as 14.62 aMW.

**Cascade Natural Gas IRP target is pending acknowledgement from OPUC.

F. Preliminary efficiency results by sector

Preliminary efficiency results by sector	Electric efficiency results			Gas efficiency results		
	Annual Savings	Goal	% Achieved	Annual Savings	Goal	% Achieved
Commercial	20.45	20.33	101%	2,416,255	2,583,847	94%
Industry and agriculture	12.79	15.51	82%	2,040,217	1,065,576	191%
Residential	20.90	17.27	121%	2,038,451	1,936,791	105%
2015 annual total	54.14	53.12	102%	6,494,922	5,586,214	116%

Includes savings from NEEA and Energy Trust electric and gas market transformation savings acquired separately from NEEA efforts

Briefing Paper
2016 State Legislation Update

February 24, 2016

Summary

This paper highlights bills introduced in the 79th Oregon legislative session.

Background

- The session began February 1, by which time approximately 260 bills were introduced. The session is scheduled to end March 6.
- We monitor bills that could impact Energy Trust and respond to legislative requests for information in coordination with the OPUC. We do not take positions on bills.

Discussion

- The report attached to this paper summarizes all the bills we are tracking and provides links to the bills themselves (in the "Bill Number" column). The summary below highlights some of the more significant bills. The first bill, which would have amended the law that underlies Energy Trust electric utility funding, was withdrawn after some supporters could not agree on a key provision.
- **Public purpose charge, SB 1509** (withdrawn) would have required the OPUC to: (1) adopt "cost-effective energy conservation measures and market transformation measures for electric companies to fund"; (2) require utilities to collect a range of funding for either the construction and operation of new renewable energy resources of 20 megawatts or less, or "non-fossil fuel based projects that provide ancillary services and assist in the integration of renewable energy resources into the operation of the overall grid of an electric utility," or both; (3) require utilities to collect a range of funding for low-income weatherization and specific charges for low-income housing; and (4) apportion some energy conservation funds to school districts.
- **Renewable portfolio standard, HB 4036**, would: (1) require electric companies to eliminate coal-fired resources from their electricity supply; (2) increase renewable energy portfolio requirements by degrees, up to 50% in 2040; (3) change standards for use of renewable energy certificates; (4) direct the OPUC to establish stranded cost obligations for electric companies who acquire the service territory of another company and subject the acquiring utility to same renewable portfolio requirements; (5) authorize the OPUC to include in public bidding the value of long-term access to renewable energy projects past their depreciated and/or expected useful life; (6) require the OPUC to establish a way for electric companies to track and credit or charge customers for the difference between production tax credits included in rates and actual production tax credits received by the company; (7) require utilities to "plan for and pursue" all cost-effective energy efficiency and demand response resources before acquiring new energy resources; (8) require electric companies to file applications with the OPUC to accelerate electrification of vehicles, including investment in customer rebates for vehicle charging and related infrastructure, for which utilities earn a return on investment; and (9) repeal the minimum solar energy capacity standard for electric companies and direct the OPUC to establish a program for community solar projects.

- **Other renewable energy:**
  - **Solar: HB 4037** would direct the Oregon Business Development Department to establish a 5-year, 150-megawatt program to pay a half-cent per kilowatt hour of electricity generated. **SB 1572** would require OPUC to establish program for procurement of electricity from community solar projects.
  - **Biomass, SB 1520**, would add woody biomass to energy technologies for which state agencies must set aside 1.5 % of contract price for building.
- **Greenhouse gases:**
  - **HB 4038** would repeal Oregon's greenhouse gas emissions goals and require the Environmental Quality Commission to adopt goals for 2025, 2035 and 2050.
  - **SB 1574** would adopt a statewide greenhouse gas limit of 75% below 1990 levels by 2050. Emission allowances would be auctioned and the proceeds would be used for utility bill rate relieve, greenhouse gas reduction and community and economic adaption.
  - **HB 4101** would require the Environmental Quality Commission to adopt a program to assess the net impacts of state policies and programs that reduce greenhouse gases.

2015 True Up Report

Corrections of 2002-2014 Savings and Generation

Energy Trust of Oregon

Introduction

True Up is the annual process used to adjust and correct previous years' energy savings and renewable generation to reflect the best available information. The True Up process adjusts past savings and generation based on:

- corrections to transaction errors,
- updated measure assumptions,
- anticipated evaluation results (for years and programs where there is yet to be an evaluation completed)
- evaluation results (finalized prior to June 30th 2015)

This 2015 True Up document adjusts reportable Energy Trust savings from **2010-2014**. The majority of adjustments affect savings and generation claims after 2012. This report does **not** cover 2015.

This report contains three sections that describe (1) definitions of terms used in this report, (2) savings adjustments and impacts by program, and (3) the difference between pre-True Up and post-True Up savings and generation by sector.

Summary

The 2015 True Up resulted in adjustments to Energy Trust's reportable annual electric and gas savings reported. The 2015 True Up did not result in any adjustments to reported renewable energy generation totals. Total electric savings from 2002-2014 increased by 0.3 percent, from 470 aMW to 472 aMW, and total gas savings from 2003-2014[1] decreased by 0.8 percent, from 39.1 million therms to 38.8 million therms.

2014 reportable electric savings increased by 2.0 percent and 2014 reportable gas savings decreased by 2.3 percent compared to the savings shown in Energy Trust's 2014 Annual Report.

The largest changes underlying 2015 True Up adjustments were;

- Realization rate adjustments from the 2012 Existing Buildings Impact Evaluation
- Adjustments related to 2014 freerider rate estimates for Existing Buildings, New Buildings, and Production Efficiency programs
- Updated NEEA savings results for 2013 and 2014
- Savings revisions for Greenhouse measures
- Adjustments to 2014 refrigerator recycling savings based on updated weighting of pre/post 1993 fridges
- Adjustments to 2014 fireplace savings based on an update to the baseline

The annual changes to electric and gas savings are summarized by program in the Results section below. Additionally, there are a series of tables that represent overall changes by sector for each year. Lastly, results from the 2015 True Up are shown for each funding utility within Energy Trust's service territory starting on page 15.

[1] Energy Trust's electric programs began in 2002 and gas programs began in 2003

Definitions

Definitions

Working Savings/Generation: The estimate of anticipated results which are practical for data entry by program personnel while approving individual projects. These savings are based upon estimates of typical savings or generation for prescriptive measures and site-specific engineering calculations for custom energy efficiency measures. Transmission and distribution line loss savings are not included in working savings, and no adjustments are made for free riders (FR), who are customers that would have installed the measures absent program influence, or spillover, which represents customers who are influenced by the program but did not take the incentive for an efficiency measure. These adjustments are addressed when developing reportable savings/generation values.

The true-up process does not adjust working savings claimed in the past. Only reportable savings and generation are adjusted through the True Up process. New evaluation information used in True Up is incorporated in working savings estimates by updating measure savings and realization rate assumptions on a forward looking basis.

Reportable Savings/Generation: The estimate of savings results that are used when reporting Energy Trust achievements. Several factors are applied to working savings in order to arrive at reportable savings. Reportable energy savings are adjusted and updated annually through the true-up process based on new information. The factors applied to working savings in order to calculate reportable savings include;

- *Realization Rates (RR)* are used to adjust the initial estimate of savings; a realization rate of 100% indicates that site savings were as expected, on average.
- *Net to Gross Ratio (NTG):* Another adjustment is for market effects and is known as a Net-to-Gross (NTG) ratio. The NTG ratio adjusts for free riders and spillover.
- *Line Losses:* The final adjustment, which is applied only to electric savings, is for avoided line and transformer losses. Line losses are 10% for residential and commercial measures and 6% for industrial measures.

Working savings for Energy Trust's commercial and industrial programs are adjusted for reporting to account for market effects by applying an 'Evaluation Factor' at the *program level*, while working savings for Energy Trust's existing homes program are adjusted for market effects at the *measure level*. The evaluation factor applied to a measure or program's working savings, for any given program year, is calculated as follows:

$$Evaluation\ Factor = Realization\ Rate * (1 - Freerider\ Rate + Spillover\ Rate)$$

Free-rider rates are determined through Fast Feedback (FF) which is a short phone survey with a sample of recent program participants to assess satisfaction, understand customer decision making, and gather suggestions for program and process improvements. The survey is generally ten or fewer questions and is customized for each program or measure of interest. The goal of Fast Feedback is to get accurate answers to important questions within two months of program participation and to minimize the burden on survey respondents.

True Up adjusts reportable savings and generation estimates in different programs for different reasons. These adjustments fall into the following categories:

1) Corrections: Occasionally, through Energy Trust's routine quality assurance processes, transaction errors are discovered in the database, which require corrections. Individual transaction errors (i.e. typos that affect savings) are usually adjusted immediately and generic transaction errors (i.e. wrong deemed savings value for a measure) are easily fixed once per year during True Up.

2) *New Data:* Projections are updated based upon improved measure simulations and new data on measure performance.

3) *Anticipated Evaluation Results:* Experience shows that evaluated estimates of savings and generation can be either lower or higher than reportable estimates. Reportable estimates are often based on typical savings for prescriptive measures or "as installed" engineering analysis for custom measures. Impact evaluation uses energy use data and/or improved data on post-installation operation to improve reportable estimates. However, impact evaluations cannot be completed until well after programs finish a year's activity. This is due to the need to utilize post-installation energy use data. Based upon Board direction in the July, 2004 Strategic Work Session, staff is attempting to anticipate these effects in reportable savings for programs where there is not yet evaluation information available.

For program years where savings have not been evaluated for free-ridership or energy savings impact (realization rate), an anticipated evaluation result is applied prospectively until actual evaluation results are obtained and savings can be trued up. Anticipated evaluation results are calculated as the savings weighted average of the last three years of evaluated results. A program year is 'closed' when evaluation results and freerider rates specific to a given program year have been applied to savings in that program year, rather than the anticipated evaluation/ freerider results that are applied before evaluations of that program year are complete.

4) *Evaluation Results:* Once finalized, evaluations provide the most reliable representation of realized savings, and can replace the refined projections described above in (2) and (3). Evaluation results may change Energy Trust savings estimates for a

single year or all prior years. This is dependent upon what other evaluations have already been performed for prior years and whether results seem applicable to prior years (e.g. similar measures, participants, and circumstances.)

Results: Impacts by Program

Existing Buildings

Since last year's True Up, an impact evaluation of the 2012 Existing Buildings program year was completed. The 2015 True Up incorporates the results of the 2012 impact evaluation into the final evaluation factors applied to 2012 savings for the Existing Buildings program, and also in the anticipated evaluation factors for 2013-2016 since impact evaluations have not yet been completed for those years. Additionally, 2014 freerider rate estimates have been included in anticipated evaluation factors for 2014-2016.

Total electric savings from 2012-2014 for the Existing Buildings program decreased by 3.1 million kWh as a result of the 2015 True Up adjustments and total Existing Buildings gas savings for the same time period decreased by roughly 200,000 therms.

Table 1 below describes the evaluations which provide results that have been applied to reportable savings in the Existing Buildings program;

Table 1: Existing Buildings Evaluations

Program	Year	Source	Type of Adjustment	Notes
Existing Buildings	2002-2011	2002-2011 Impact Evaluations	Evaluation Factor	Closed in Previous True Ups
Existing Buildings	2012	2012 Impact Evaluation	Evaluation Factor	Closed in this True Up
Existing Buildings	2013-2014	2010-2012 Impact Evaluations	Anticipated Evaluation Factor	Realization Rate: 2010-2012 savings wtd. avg.
		2012-2014 Fast Feedback Freerider Rates		Freerider Rate: 2012-2014 savings wtd. avg.

Tables 2 and 3 describe the components of the evaluation factors that have been applied to reportable savings for 2012-2014, where blue shaded cells indicate anticipated evaluation results;

Table 2: Existing Buildings Evaluation Factor Components- Electric

		Market Effects				
Existing Buildings- Electric	Realization Rate	Freerider Rate	Participant spillover	Non-Part. Spillover	Evaluation Factor	Evaluation
2012	95%	16%	1%	7%	87%	2012 Impact Evaluation
2013	98%	38%	1%	7%	69%	*Anticipated Results
2014	98%	24%	1%	7%	82%	*Anticipated Results

* 2013 and 2014 realization rates are the average of 2010-2012 impact evaluation results

Table 3: Existing Buildings Evaluation Factor Components- Gas

		Market Effects				
Existing Buildings- Gas	Realization Rate	Freerider Rate	Participant spillover	Non-Part. Spillover	Evaluation Factor	Evaluation
2012	79%	18%	1%	7%	71%	2012 Impact Evaluation
2013	88%	28%	1%	7%	71%	**Anticipated Results**
2014	88%	28%	1%	7%	71%	**Anticipated Results**

* 2013 and 2014 realization rates are the average of 2010-2012 impact evaluation results

Tables 4 and 5 describe the change in total savings claimed for the Existing Buildings program for the program years 2012-2014, for electric and gas savings, respectively:

Table 4: Existing Buildings Savings Change- Electric

Year	Savings Pre True Up (kWh)	Trued Up Savings (kWh)	Change in Savings
2012	125,560,012	124,506,031	-0.84%
2013	106,496,579	108,584,370	1.96%
2014	134,743,439	130,573,638	-3.09%

Table 5: Existing Buildings Savings Change- Gas

Year	Savings Pre True Up (therms)	Trued Up Savings (therms)	Change in Savings
2012	1,968,065	1,826,791	-7.18%
2013	1,589,369	1,589,369	0.00%
2014	1,815,593	1,765,528	-2.76%

New Buildings

Adjustments to reportable savings for some 'custom' New Buildings projects installed in 2013 and 2014 were applied in the 2015 True Up. The corrections were required due to these projects not receiving an anticipated evaluation factor adjustment when they were initially recorded in Energy Trust's data systems. Projects of this type will receive the correct anticipated evaluation factor going forward.

Savings for New Buildings Multifamily in-unit clothes washers from 2013-2014 were also revised in the 2015 True Up to reflect an update per unit savings estimate for this measure. The updated savings, which were slightly lower than the original savings amount, were announced in 2012 but the savings being recorded in Energy Trust's data systems were not updated correspondingly. The per unit savings value that will be claimed going forward for in-unit clothes washers has been updated to reflect the correct savings.

As a result of 2015 True Up adjustments to the New Buildings program, total electric savings from 2012-2014 decreased by almost 150,000 kWh and total gas savings for the same time period decreased by nearly 10,000 therms.

No new freerider rate information was introduced for the New Buildings program in the 2015 True Up. Further, the New Buildings program will not receive any freerider deduction from 2013 forward due to the twin difficulties of free ridership measurement for new construction and the stringent 2010 building code.

Table 6 describes the evaluation results that have been applied to reportable savings in each program year for the New Buildings program;

Table 6: New Buildings Evaluations

Program	Year	Source	Type of Adjustment	Notes
New Buildings	2002-2011	2002-2011 Impact Evaluations	Evaluation Factor	Closed in Previous True Ups
New Buildings	2012-2013	2009-2011 Impact Evaluations	Anticipated Evaluation Factor	Realization Rate: 2009-2011 savings wtd. avg.

Tables 7 and 8 below show the components of the evaluation factors that have been applied to reportable savings for 2012-2014 for the New Buildings program, where blue shaded cells indicate anticipated evaluation results;

Table 7: New Buildings Evaluation Factor Components- Electric

		Market Effects					
New Buildings- Electric	Realization Rate	Freerider Rate	Participant spillover	2007 Code Evaluation Factor	2010 Code Evaluation Factor	Blended Eval. Factor	Evaluation
2012	95%	34%	1%	63%	95%	88%	*Anticipated Results
2013	95%	0%	1%	n/a	95%	95%	*Anticipated Results
2014	95%	0%	1%	n/a	95%	95%	*Anticipated Results

* 2012-2014 realization rates are the average of 2009-2011 impact evaluation results

Table 8: New Buildings Evaluation Factor Components- Gas

		Market Effects					
New Buildings- Gas	Realization Rate	Freerider Rate	Participant spillover	2007 Code Evaluation Factor	2010 Code Evaluation Factor	Blended Eval. Factor	Evaluation
2012	95%	32%	1%	66%	96%	82%	*Anticipated Results
2013	95%	0%	1%	n/a	96%	96%	*Anticipated Results
2014	95%	0%	1%	n/a	96%	96%	*Anticipated Results

* 2012-2014 realization rates are the average of 2009-2011 impact evaluation results

Tables 9 and 10 describe the change in total reportable savings claimed for the New Buildings program for the program years 2012-2013, for electric and gas savings, respectively;

Table 9: New Buildings Savings Change- Electric

Year	Savings Pre True Up (kWh)	Trued Up Savings (kWh)	Change in Savings
2012	68,920,652	68,539,250	-0.55%
2013	86,759,958	86,798,755	0.04%
2014	46,012,882	46,205,621	0.42%

Table 10: New Buildings Savings Change- Gas

Year	Savings Pre True Up (therms)	Trued Up Savings (therms)	Change in Savings
2012	514,292	514,292	0.00%
2013	460,795	455,426	-1.17%
2014	675,940	672,219	-0.55%

Production Efficiency

The 2015 True Up introduced adjustments to Production Efficiency program savings based on freerider rate findings from the 2014 Fast Feedback survey of program participants. Final 2014 freerider rate findings had the effect of decreasing both gas and electric savings for 2014 compared to the anticipated freerider rate that was applied initially. No new impact evaluation results were included in the adjustments made to Production Efficiency program savings in this year's True Up.

Reportable gas savings for greenhouse thermal curtains, IR poly film, and under-bench heating from 2010-2014 were adjusted as a result of updates made to the per unit savings estimates for those measures in 2015, which apply retroactively staring in 2010. Savings for greenhouse thermal curtains were decreased from 0.27 to 0.23 therms/sf. Savings for greenhouse IR poly film were decreased from 0.49 to 0.41 therms per/sf and savings for under-bench heating was increased from 1.20 to 1.25 therms/sf.

As a result of 2015 True Up adjustments, reportable electric savings for 2014 alone were reduced by nearly 11 percent (1.98 aMW), and reportable gas savings for 2010-2014 were reduced by 2 percent (89,000 therms).

Table 11 below describes the evaluations which provide results that have been applied to reportable savings in each program year for the Production Efficiency program;

Table 11: Production Efficiency Evaluations

Program	Year	Source	Type of Adjustment	Notes
Production Efficiency	2002-2011	2002-2011 Impact Evaluations	Evaluation Factor	Closed in Previous True Ups
Production Efficiency	2012-2014	2009-2011 Impact Evaluations	Anticipated Evaluation Factor	Realization Rate: 2009-2011 savings wtd. avg.
		2012-2014 Fast Feedback Freerider Rates		Freerider Rate: 2012-2014 savings wtd. avg.

Tables 12 and 13 show the components of the evaluation factors that have been applied to reportable savings for 2012-2014, where shaded cells indicate anticipated evaluation results;

Table 12: Production Efficiency Evaluation Factor Components- Electric

		Market Effects				
Production Efficiency- Electric	Realization Rate	Freerider Rate	Participant spillover	Non-Part. Spillover	Evaluation Factor	Evaluation
2012	94%	16%	1%	1%	81%	*Anticipated Results
2013	94%	20%	1%	1%	77%	*Anticipated Results
2014	94%	32%	1%	1%	66%	*Anticipated Results

* 2012-2014 realization rates are the average of 2009-2011 impact evaluation results

Table 13: Production Efficiency Evaluation Factor Components- Gas

		Market Effects				
Production Efficiency- Gas	Realization Rate	Freerider Rate	Participant spillover	Non-Part. Spillover	Evaluation Factor	Evaluation
2012	97%	26%	1%	1%	74%	*Anticipated Results
2013	97%	23%	1%	1%	77%	*Anticipated Results
2014	97%	21%	1%	1%	79%	*Anticipated Results

* 2012-2014 realization rates are the average of 2009-2011 impact evaluation results

Tables 14 and 15 describe the change in total annual savings claimed for the Production Efficiency program as a result of 2015 True Up adjustments, for electric and gas savings, respectively ;

Table 14: Production Efficiency Savings Change- Electric

Year	Savings Pre True Up (kWh)	Trued Up Savings (kWh)	Change in Savings
2014	161,762,637	144,385,863	-10.74%

Table 15: Production Efficiency Savings Change- Gas

Year	Savings Pre True Up (therms)	Trued Up Savings (therms)	Change in Savings
2010	589,814	585,776	-0.68%
2011	1,118,507	1,104,930	-1.21%
2012	720,068	707,371	-1.76%
2013	1,014,179	993,963	-1.99%
2014	1,015,456	976,563	-3.83%

Existing Homes

Electric savings for heat pump water heaters (HPWHs) were updated for the 2014 program year to align with the most up-to-date savings estimates for HPWHs, which are slightly higher than the previous estimates. This lead to a small increase in 2014 electric savings for the Existing Homes program of roughly 6,000 kWh.

Gas savings from fireplaces (hearths) claimed in 2014 were also updated in the 2015 True Up in order reflect an update to fireplace unit savings that came as a result of a 2013 study of the fireplace market that provided updated baseline efficiency information. The result was a decrease in gas savings for 2014 of 3.55 percent, or about 39,000 therms.

Tables 16 and 17 below describe the change in total savings claimed for the Existing Homes program for the 2014 program year, for electric and gas savings, respectively:

Table 16: Existing Homes Savings Change- Electric

Year	Savings Pre True Up (kWh)	Trued Up Savings (kWh)	Change in Savings
2014	44,816,295	44,822,017	0.01%

Table 17: Existing Homes Savings Change- Gas

Year	Savings Pre True Up (therms)	Trued Up Savings (therms)	Change in Savings
2014	1,085,454	1,046,896	-3.55%

New Homes and Products

The 2015 True Up revised 2014 electric savings for refrigerator recycling measures downwards slightly in order to reflect the actual weighting of pre/post 1993 vintage units that was observed during the 2014 program year, rather than the *anticipated* pre/post 1993 weighting that was applied initially in 2014, and which was based on older 2013 data. No adjustments were made to gas savings in the New Homes and Products program during the 2015 True Up.

In total, 2015 True Up adjustments decreased reportable electric savings for the New Homes and Products program by 266,000 kWh.

Table 18 below shows the change in total electric savings claimed for the New Homes and Products program for 2014 as a result of True Up adjustments;

Table 18: New Homes and Products Savings Change- Electric

Year	Savings Pre True Up (kWh)	Trued Up Savings (kWh)	Change in Savings
2014	74,383,498	74,117,386	-0.36%

NEEA

2013 and 2014 savings for NEEA were revised in the 2015 True Up as a result of updated savings estimates reported by NEEA for those years. Savings for all NEEA sectors were increased for 2014, with the total increase amounting to more than 3.6 aMW. However, 2013 savings in commercial and industrial initiatives increased, while savings for residential initiatives decreased compared to initial estimates. NEEA savings for 2013 were increased by 0.1 aMW in total.

According to NEEA internal savings reports, increases in 2014 savings were driven by better-than-expected results from Oregon's battery charger standards initiative, a revision to the service territory allocation for Drive Power and updates to the local program share of the CFL lighting savings estimate. 2013 updates were reported to be driven by additional television savings from small screen TVs, an updated service-territory allocation for the drive-power motors initiative that increased savings for the industrial sector, and a decrease in savings from multifamily codes as a result of changes to the methodology and data sources used to calculate multifamily code savings.

NEEA's savings revisions for 2013 and 2014 also included, as always, updated savings estimates for other NEEA initiatives based on final market data and updated service-territory allocations.

Tables 19 and 20 below shows the change to total reportable electric savings claimed for NEEA market transformation initiatives by sector for 2013 and 2014, respectively;

Table 19: 2013 NEEA Electric Savings Change

Sector	Savings Pre True Up (kWh)	Trued Up Savings (kWh)	Change in Savings
Commercial	20,332,939	20,949,023	3.03%
Industrial	6,701,620	7,424,719	10.79%
Residential	36,799,799	36,354,517	-1.21%

Table 20: 2014 NEEA Electric Savings Change

Sector	Savings Pre True Up (kWh)	Trued Up Savings (kWh)	Change in Savings
Commercial	11,017,332	12,135,586	10.15%
Industrial	1,526,879	3,224,918	111.21%
Residential	33,963,212	44,822,017	31.97%

Results: Impacts by Sector

The following tables summarize the changes in total annual electric and gas savings for 2002-2014 as a result of 2015 True Up adjustments. In tables below, an average megawatt (aMW) means that loads are reduced by an average of one megawatt or 8760 MWh during each year of a measure's estimated useful life. Where units are listed as MM therms, this reflects the annual therm savings achieved in each year of a measure's useful life, stated in millions of therms.

Tables 21 and 22 below describe the change to total annual reportable savings claimed by Energy Trust of Oregon for the years 2002-2014;

Table 21: Electric Savings Impact 2002-2014

Sector	Savings Pre True Up (aMW)	Trued Up Savings (aMW)	Change in Savings (aMW)	Percent Change
Commercial	165.24	165.06	-0.18	-0.11%
Industrial	150.49	148.78	-1.71	-1.13%
Residential	154.71	157.95	3.24	2.09%
Total	**470.45**	**471.79**	**1.35**	**0.29%**

Table 22: Gas Savings Impact 2002-2014

Sector	Savings Pre True Up (MMtherms)	Trued Up Savings (MMtherms)	Change in Savings (MMtherms)	Percent Change
Commercial	16.68	16.48	-0.20	-1.20%
Industrial	4.71	4.62	-0.09	-1.90%
Residential	17.74	17.70	-0.04	-0.22%
Total	**39.14**	**38.81**	**-0.33**	**-0.84%**

Results: Impacts by Utility

Lastly, the following tables show final reportable annual savings and generation totals, for each of the utilities in Energy Trust's service territory, after the 2015 True Up adjustments were implemented;

Table 22: Portland General Electric savings (aMW), 2002-2014

Year	Commercial	Industrial	Renewables	Residential	Total
2002	3.95	1.81	0.00	3.61	9.37
2003	4.03	0.89	0.02	3.84	8.78
2004	4.24	1.17	0.01	5.32	10.75
2005	5.18	14.22	0.42	5.01	24.84
2006	3.92	2.85	0.03	6.94	13.74
2007	3.78	3.75	46.84	8.37	62.74
2008	5.57	2.86	1.84	8.22	18.50
2009	7.11	4.49	0.55	5.71	17.86
2010	10.47	8.77	0.96	7.31	27.50
2011	10.98	8.92	1.08	8.51	29.49
2012	14.24	10.16	2.51	10.48	37.39
2013	13.25	12.76	1.87	9.24	37.13
2014	13.97	10.93	0.72	12.30	37.91
Total	**100.69**	**83.59**	**56.86**	**94.87**	**336.01**

Table 22: Pacific Power savings (aMW), 2002-2014

Year	Commercial	Industrial	Renewables	Residential	Total
2002	1.94	1.62	0.00	2.11	5.67
2003	1.73	2.68	14.27	2.64	21.32
2004	3.14	8.66	0.08	3.61	15.49
2005	2.41	5.96	0.04	3.36	11.77
2006	1.69	4.98	1.96	4.60	13.23
2007	2.05	4.00	0.08	6.31	12.45
2008	2.74	3.83	31.47	5.51	43.55
2009	3.10	3.51	2.12	3.57	12.30
2010	8.12	7.06	2.42	5.29	22.88
2011	7.95	6.55	0.40	5.33	20.24
2012	10.46	5.68	2.37	6.45	24.96
2013	11.45	4.73	1.00	5.82	22.99
2014	7.60	5.92	1.67	8.48	23.66
Total	**64.37**	**65.19**	**57.88**	**63.08**	**250.53**

Table 22: NW Natural savings (MMtherms), 2002-2014

Year	Commercial	Industrial	Residential	Total
2003			0.61	0.61
2004	0.08		0.92	1.00
2005	0.44		0.95	1.39
2006	1.29		0.95	2.24
2007	1.15		1.13	2.28
2008	1.10	0.01	1.34	2.45
2009	1.10	0.19	1.20	2.49
2010	2.01	0.54	1.39	3.94
2011	1.89	1.01	1.58	4.47
2012	2.19	0.61	2.52	5.32
2013	1.89	0.94	2.12	4.95
2014	2.21	0.94	1.97	5.11
Total	**15.34**	**4.24**	**16.68**	**36.25**

Table 22: Cascade Natural Gas savings (MMtherms) 2002-2014

Year	Commercial	Industrial	Residential	Total
2006	0.05		0.02	0.08
2007	0.02		0.13	0.15
2008	0.05		0.12	0.17
2009	0.07	0.05	0.13	0.25
2010	0.20	0.05	0.07	0.32
2011	0.22	0.09	0.11	0.42
2012	0.15	0.10	0.15	0.40
2013	0.16	0.06	0.12	0.33
2014	0.23	0.04	0.14	0.41
Total	**1.15**	**0.38**	**1.00**	**2.53**

Tab 8

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	