

Energy Trust Board of Directors

November 8, 2017

154th Board Meeting

Wednesday, November 8, 2017

421 SW Oak Street, Suite 300, Portland, Oregon

Agenda		Tab	Purpose
10:30 a.m.	Board Meeting—Call to Order (Debbie Kitchin) <ul style="list-style-type: none"> Approve agenda 		
	General Public Comment <i>The president may defer specific public comment to the appropriate agenda topic.</i>		
	Consent Agenda <i>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.</i> <ul style="list-style-type: none"> September 27, 2017 Board meeting minutes Economic Development Policy 4.18.000-P–R818 Methodology for Evaluating Above-Market Costs of Renewable Resource Projects 4.07.000-P–R819 	1	Action
10:35 a.m.	President’s Report		Info
10:45 a.m.	Energy Programs <ul style="list-style-type: none"> McKenzie Hydroelectric Facility Project Review (Dave Moldal)..... <ul style="list-style-type: none"> Authorize a 300-kW Hydropower Project Funding Agreement–R820 	2	Action
11:20 a.m.	Committee Reports <ul style="list-style-type: none"> Audit/Compensation Committees (Ken Canon)..... Evaluation Committee (Alan Meyer)..... Finance Committee (Susan Brodahl) <ul style="list-style-type: none"> Authorize Use of Contingency Funds Up to \$100,000–R821 Bank Signing Resolution–R822 Policy Committee (Roger Hamilton)..... 	3 4 5 6	Info Info Action Info
12:00 p.m.	Lunch Break		
12:30 p.m.	Draft 2018 Annual Budget & Draft 2018-19 Action Plan (Michael Colgrove)		Separate Document Info
2:00 p.m.	Staff Report <ul style="list-style-type: none"> Highlights (Mike Colgrove) <ul style="list-style-type: none"> ACEEE Rankings 		
2:30 p.m.	Adjourn		

**The next meeting of the Energy Trust Board of Directors will be
Friday, December 15, 2017 at 10:30 a.m.
at Energy Trust, 421 SW Oak, Suite 300, Portland, OR 97204**

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Tab 1

Board Meeting Minutes—153rd Meeting

September 27, 2017

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

Board members absent: Anne Root

Staff attending: Shelly Carlton, Sarah Castor, Mike Colgrove, Amber Cole, Tara Crookshank, Hannah Cruz (by phone), Phil Degens, Michael Fritz, Corey Kehoe, Judge Kemp, Debbie Menashe, Alex Novie, Pati Presnail, Dan Rubado, Lizzie Rubado, Sarah Schouten, Kate Scott, Cameron Starr, Julianne Thacher, Jay Ward, Peter West, John Volkman

Others attending: JP Batmale (OPUC), Brian Loughran (Evergreen), Susan Stratton (NEEA), Anne Snyder-Grassman (Portland General Electric), Bob Stull (Ecova)

Business Meeting

Debbie Kitchin called the meeting to order at 10:34. Reminder that consent agenda items can be changed to regular agenda items at any time. There were no changes to the agenda.

General Public Comments

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.

MOTION: Approve consent agenda

Consent agenda includes:

1. July 26, 2017 Board meeting minutes
2. Policy on Information Submitted by Utilities, Program Participants, Contractors and Bidders 4.17.000-P-816

Consent agenda was approved with two changes to the July 26, 2017 board meeting minutes.

Moved by: Ken Cannon

Seconded by: Roger Hamilton

Vote: In favor: 9

Abstained: 0

Opposed:

President's report

In August, Debbie attended a farm-to-table dinner at Stahlbush Island Farms near Corvallis. Stahlbush was one of the first farms to install a biodigester. The farm is a family-owned grower of organic produce. Since installing the biodigester, energy prices have dropped significantly. However, the farm owners have discovered that the residue from the biodigester provides valuable fertilizer, offering unexpected benefits like increased pest resistance and better growth of crops.

The board asked about the source of feedstock. Debbie responded that it is mostly from Stahlbush Island Farms. The farm is using the electricity to power some of its operations.

NEEA Annual Report

Susan Stratton, executive director of Northwest Energy Efficiency Alliance, presented Northwest Energy Efficiency Alliance's 2017 Annual Report.

NEEA is funded in five-year cycles, and is in the middle of the 2015-2019 budget cycle. The budget is stable over these five years. For the first time, Energy Trust has a natural gas portfolio. Spending for natural gas efforts are growing each year.

Energy Trust represents 20 percent of NEEA's electric funding and is the second biggest electric funder. Energy Trust is the largest funder of natural gas and represents 34 percent of natural gas funding. Natural gas work is only in Oregon and Washington. Mike Colgrove serves on advisory board and Fred Gordon serves on Regional Portfolio Advisory Committee.

Market transformation is a long-term investment. Investments made in 1997 are still providing significant savings today. The organization is just starting to see savings results from current investments, and those will grow in future years. Since 1997, NEEA has achieved 1,500 aMW of savings—more than produced by the Bonneville Dam.

NEEA's natural gas portfolio started with gas dryers, gas fired heat pump water heaters, combination space and water heaters, rooftop HVAC and hearth products. NEEA completed a mid-cycle natural gas program assessment to determine if mid-course corrections are needed. The organization found that the overall value proposition for the portfolio is strong and the portfolio is well managed. However, the portfolio funding is at risk. Electric and natural gas efforts are currently conducted separately. Further buy-in from funders is needed for full integration of NEEA's gas and electric portfolios.

The board asked if 34 percent of the natural gas customers are in Energy Trust territory, and noted that seems high? Susan responded that's correct. Bonneville Power Administration is not a funder.

The board asked if any entities in Washington comparable to Energy Trust are contributing funding for natural gas efforts. Susan responded that there is no comparable entity in Washington. Utilities have efficiency goals.

The board asked if California talking about creating an Energy Trust analogous entity? Susan responded that California is talking about this, and NEEA has been involved in some of these conversations. NEEA would like California to develop a market transformation approach with which NEEA could align and coordinate. The California Public Utilities Commission's method of evaluation does not value market transformation activities, so California would need measures of success that align with the Pacific Northwest.

NEEA expected some early wins and short-term savings for natural gas market transformation in 2016, however the product did not perform as expected. However, NEEA has found natural gas products with long-term promise and has seen incremental progress in advancement of the portfolio.

Next steps are to resolve disagreement between funders on pre-commercial efficiency measure development activities, pursue additional sources of value including uncaptured gas savings from the electric portfolio, begin conversations with stakeholders on approach to integrating electric and natural gas efforts, revisit the business plan with stakeholders to ensure buy-in, develop an exit strategy for some initiatives, and pursue and secure additional funding. Additional funding will likely come from outside the Pacific Northwest.

The board asked how an electricity and natural gas integration strategy would work. Susan responded that initiatives would include outcomes of both electric and natural gas savings. An example is commercial new construction. If an initiative could be jointly funded by electricity and natural gas

funders, the electric funders can claim electric savings and the gas funders can claim natural gas savings. This could be a source of efficiencies and early savings for natural gas customers.

The board asked if there's a free ridership issue for natural gas. Susan responded that NEEA is not claiming natural gas savings. It is measuring and capturing them. Energy Trust and Puget Sound Energy and the other gas funding utilities will claim the gas savings.

The board asked about next steps for recommendations and if they will be incorporated into the current Strategic Plan or the next Strategic Plan. Susan responded that NEEA's board decided to form an ad-hoc committee to incorporate some of these recommendations into NEEA's current Strategic Plan.

The board asked if current natural gas savings are not being counted, and if integration would mean better accounting. Susan responded that NEEA would create programs that have both electricity and natural gas participation. NEEA does not have any programs for which they claim both electric and natural gas savings now. (Note: Energy Trust does claim the gas savings for some building code improvements that NEEA and Energy Trust helps foster where NEEA claims the electric savings).

The board asked about the product that did not perform. It was a super-efficient natural gas dryer that did not dry the clothes all the way.

Susan summarized the current electric portfolio, which has three buckets: scanning and concept development, program development and market development. Extended motor products, rooftop units and air nozzles for industrial use are in the scanning and concept development stage, and will move into program development. Program development initiatives include Next Step Homes, retail product portfolio, manufactured homes, super-efficient dryers, window attachments and luminaire lighting controls. The Regional Portfolio Advisory Council provides guidance on which products are ready to move from program development to market development. Products currently in market development are heat pump water heaters, reduced wattage lamp replacements, ductless heat pumps, commercial real estate, commercial code enhancement, codes and standards, Strategic Energy Management, industrial technical training, integrated design lab and top tier trade allies.

Susan summarized results for 2016, which are measured in average megawatts for the region and in total resource cost for products in market development. Total resource cost was 2.9 cents/kWh, which is under the goal of 3.5 cents/kWh. NEEA delivered 41 aMW in 2016, well over the target of 32 aMW.

Total Energy Trust investment for electric and gas was \$8.1 million, which delivered 7.02 aMW. NEEA is 5 percent of Energy Trust's budget and comprised 12 percent of Energy Trust's savings.

In 2017, NEEA's electric forecast is on track to exceed goals. Four programs make up about 80 percent of savings: codes and standards, ductless heat pumps, heat pump water heaters and reduced wattage lamp replacement.

Susan described market progress in 2016 and 2017. There are three new market transformation programs: commercial code enhancement, manufactured homes and windows. NEEA is working with all major manufacturers for heat pump water heaters. Floor space has been secured for Whirlpool compact heat pump dryers at 36 Lowes locations. Another achievement is approval by the Regional Technical Forum of a new home modeling process, which replaces a deemed savings approach. Another big win is adding a company called Nationwide Marketing to the retail product portfolio to ensure products are available at retail, especially in rural areas and outside of the I5 corridor.

The board asked about the result of the Next Step Homes program. Next Step Homes is an above-code program.

NEEA is helping create a modeling protocol that can support achievement of any home rating program. It increases technical assistance to help builders adopt new energy-efficient approaches.

Mark Kendall arrived at 11:18 a.m.

The board noted the TV initiative a few years ago that saved considerable energy, and asked if electric car chargers are in NEEA's pipeline. Susan responded that NEEA's role could be to support ratings of vehicle charging stations. NEEA's board is thinking about it but not ready to commit because it is outside of NEEA's scope. The board responded that electric vehicles chargers are essentially appliances and should be within NEEA's scope.

The board asked about other chargers, like for computers. Susan responded that it's been hard to collaborate with some manufacturers, and NEEA is not doing anything in this area now. However, new TVs have very high energy use, so NEEA may take on another TV initiative.

Steve Bloom left at 11:23.

Focus areas for 2018 include continuing to fill the energy efficiency pipeline, accelerating efficiencies across the organization, leveraging and/or supporting access to market data, launching significant new research efforts and 2020-2024 business planning. Two noteworthy 2018 initiatives are very high efficiency dedicated outdoor air systems, which are HVAC systems that delivers heating and cooling separately from ventilation. This is projected to save 50-70 percent of energy compared to current systems.

The board asked if dedicated outdoor air systems can be a retrofit, and Susan responded yes. They are efficient because they move less outside air.

The other exciting initiative for 2018 is extended motor products, including establishing energy rating labeling for motor driven systems and leveraging upstream distributor relationships.

Steve Bloom returned at 11:26

Other new 2018 projects are end-use load research, commercial code evaluation and market research of online communities.

The board asked if end-use load research includes residential, commercial and industrial. First it will include residential and then commercial. It will not include industrial.

The board asked if NEEA is looking at national studies to broaden its data set. Susan responded that NEEA has looked but didn't find resource robust or rigorous enough. The data from this research will only be available to NEEA's current funders.

In 2018, NEEA will conduct stock assessments for residential and commercial building stock, but not for industrial building stock.

The board asked about a former presentation to use infrared technology to evaluate buildings, and asked if that technology can be applied to industrial buildings. NEEA has not pursued this approach.

Roger Hamilton left at 11:33 a.m.

Debbie thanked Susan for NEEA's partnership and the informative presentation.

Roger Hamilton returned at 11:35 a.m.

Free Ridership Study Presentation

Phil Degens presented results of a study of methods for free ridership and participant spillover estimation. Free riders are participants who would have implemented a measure in the absence of the program. There are two types of spillover. Participant spillover represents the additional energy savings achieved when a participant installs energy efficiency outside of the program after having participated. Non-participant spillover represents the additional energy savings that are achieved when a non-participant implements energy efficiency measures as a result of the program's influence, but the savings are not accounted for in the program. Free ridership and spillover adjustments are included in forecasted savings and in budgets, and are used to true up Energy Trust's reported energy savings on an annual basis.

In 2016, Energy Trust contracted with PWP, Inc. and Evergreen Economics to explore what other organizations are doing to evaluate free ridership and spillover and what methods are used to estimate them.

The board noted this is a frequent discussion topic for the evaluation committee. Free ridership savings are not counted toward Energy Trust savings.

The board asked why Energy Trust would not claim savings for which it spent money. Energy Trust's existence has influenced people and the market.

Phil noted the OPUC looks at net savings, which are discounted for spillover and free ridership. The board recommended Energy Trust should claim the savings even if participants are determined to be free riders.

Phil continued that the study found that participant self-report (which is used extensively by Energy Trust) is standard practice for determining free ridership and spillover. The best practice is triangulation using a mix of methods so that results from different methods can be used to validate one another and enhance confidence in estimates. Other methods are available, but they are costly and not necessarily more accurate than self-reports. Deemed values are acceptable as a placeholder for spillover in some states. California uses a deemed five percent non-participant spillover adder. Many jurisdictions use a net-to-gross factor of one, where spillover effects cancel out free rider effects; this choice is based more on policy than on evidence that the effects are of the same magnitude.

The board asked if the Regional Technical Forum recommends any best practices. Phil responded the Northwest Power and Conservation Council focuses only on gross savings.

The board noted this issue is related to market transformation. Energy Trust is able to measure market transformation, so why can't it better measure spillover using similar methods? Phil responded that Energy Trust programs are not set up as market transformation programs, so the organization can't measure them as market transformation programs. Free ridership is not calculated for market transformation programs like new construction.

Phil continued that study recommendations are that Energy Trust maintain current self-report methods. Energy Trust should consider trying an alternative self-report instrument alongside the current instrument; adding clarifying and additional questions, including open-ended questions; and reducing the time between the customer's investment decision and the survey. Energy Trust will retain the self-report method using Fast Feedback surveys. There is no cost-effective method to evaluate non-participant spillover.

The board noted that Energy Trust could apply some suggestions from the study on a case-by-case basis where customer responses are ambiguous.

The board observed there are two purposes for evaluating free riders and spillover, which are reporting results and refining programs. Energy Trust counts free riders because it is easier to calculate than spillover, but it has a negative impact on Energy Trust's net savings. Energy Trust does not use self-reports to estimate spillover because it is more difficult to ask about and to calculate, but it would have a positive impact on Energy Trust's net savings. Energy Trust is taking into account the negative influences but not the positive influences. The board suggested Energy Trust report gross savings. The board noted that people self-report that they would have done something anyway because they want to feel like a good person. The board observed that spillover could cancel out free ridership. The board also noted that free ridership and spillover impact Energy Trust's program staff because they need to exceed their savings goals in gross savings in order to achieve them in net savings, because their gross savings will be discounted by free ridership. Phil noted we use a three-year moving average of prior years' free ridership to forecast free ridership, in order to smooth year-to-year variations.

The board asked if these changes would go to the audit or evaluation committees for discussion. Phil offered the spillover rate could go to the policy committee. Phil's recommendation would be to align with California's five percent spillover adder.

The board reiterated that Energy Trust would not need to worry about spillover if the organization reports in gross. JP Batmale responded that there is language in the grant agreement requiring Energy Trust to evaluate and report market impacts.

The board recommended the evaluation committee could look at this and identify what the requirement is rooted in and how it could be changed.

The board took a break for lunch at 12:06 p.m.

Oregon Department of Energy Update

The board reconvened at 12:37.

Steve Bloom did not return to the meeting. Melissa Cribbins and Lindsey Hardy were no longer on the phone.

Janine Benner provided an overview of Oregon Department of Energy. The agency was established in 1975, with a statute to prioritize energy efficiency, sustainability and state leadership. Oregon was the first state in the nation to set carbon dioxide emission standards for new energy facilities. The Small-scale Energy Loan Program is considered one of the nation's first green lending programs. The energy sector is now facing some fundamental changes.

The board added that the Oregon Department of Energy's energy siting council was an innovative offering.

Oregon Department of Energy's mission is to lead Oregon to a safe, clean and sustainability energy future. It has 88 employees with five divisions. Janine directs the energy planning and innovation division, which provides expertise on Oregon's energy resources from energy resiliency to connectivity to efficiency and conservation. One example of this is management of public purpose charge funding for K-12 schools. The energy facility siting division ensures that proposed energy facilities meet specific statewide and local standards, and are considered with public input and participation. The nuclear safety and emergency preparedness division oversees Oregon's interest in the Hanford nuclear facility cleanup and prepares for nuclear and energy-related emergencies. The division is responsible for Hanford cleanup, other oversight and inspection, emergency preparedness and emergency response.

The board pointed out that all fuel storage is located in North Portland on subduction liquefaction zone. In a major earthquake, that fuel will go into the river. The board asked if Oregon Department of Energy

could direct fuel companies to store fuel outside of the subduction zone. Janine responded that Oregon Department of Energy doesn't have the authority to tell companies where to store their fuel.

The board acknowledged that in a cost-benefit analysis, moving the fuel could pose a higher cost to customers than the cost an event that may not happen.

Eddie Sherman arrived at 12:53 p.m.

Janine continued that the energy development services division provides incentives for renewable energy and energy efficiency to Oregon residents, public agencies and schools, nonprofits, businesses and tribes. The division is responsible for grants, loans, tax credits and other incentives, and technical assistance and resources. While Residential Energy Tax Credit will sunset in 2017, Renewable Energy Development Grants will remain available

The Oregon Department of Energy's main source of funding is the Energy Supplier Assessments from utilities. Some programs rely on fees, and the agency receives a small amount of federal funds. ODOE's budget has declined over the years. The board discussed the level of Energy Supplier Assessments funding.

The Oregon Department of Energy is remembered by issues faced in July 2014 when Business Energy Tax Credits ended, as well as failed loans and tax credit mismanagement. There has been director and other staff turnover and budget challenges.

In 2016, a joint interim committee on Oregon Department of Energy was convened. Following a hearing, recommendations were drafted but not agreed on by the whole committee. Oregon Department of Energy saw this as an opportunity to communicate its value. Another committee convened by the governor ultimately recommended a critical need for Oregon Department of Energy.

In February 2017, staff stability and engagement has improved. There is a culture of accountability and continuous improvement. The agency is now planning for the future. Most incentive programs will sunset in 2017 or have moved to other agencies. The Oregon Department of Energy has reinvigorated some programs, such as regional and national resiliency work. The agency is working to help Oregon meet enhanced rules for Renewable Portfolio Standard, and has created a renewable natural gas inventory of biogas producers.

The Oregon Department of Energy passed some legislation in 2017 session, including new framework for a biennial energy report (HB 2343), senate confirmation for director of Oregon Department of Energy (SB 99) and a State Home Oil Weatherization Program (SB 100). This session, the agency is working to propose a cap and invest program for the state. The Oregon Department of Energy's emergency preparedness programs have been successfully tested, including work to ensure Oregon didn't run out of fuel during the eclipse. The Oregon Department of Energy's current challenge is to demonstrate the value we bring to the state.

The board applauded Oregon Department of Energy for understanding its role.

The board asked how the carbon price was determined with the Climate Trust and how carbon price related to the IRP adder. The carbon price was \$1.27 per ton and was just raised to \$1.91 per ton. This is the first time the price was updated in 10 years, and this was the maximum allowable increase. Rulemaking is still underway to reduce the requirement for maximum allowable emissions.

The board asked if Oregon Department of Energy has any jurisdiction over the liquefied natural gas pipeline from Coos Bay to the Willamette Valley. Janine believe the pipeline is under federal jurisdiction.

The board asked if the carbon emission tax is on fuel and power plants. It's on any energy facility that applies for a certificate from the energy facility siting council.

The board added that Energy Trust and the Climate Trust would not be here today without the leadership from the Oregon Department of Energy. Oregon has enjoyed three decades of leading residential and commercial energy codes, and Oregon Department of Energy was critical in coaching both codes division and legislature on setting those standards.

Committee Reports

Compensation Committee, Dan Enloe

The compensation committee reviewed Energy Trust's retirement plans. Employees have benefited from good markets, and the balance of retirement funds has increased from \$11 million to \$12 million. Participation levels are high. The committee looked at expense ratios for the socially responsible fund, which are high. The 401k plan was audited in 2016, and auditors found a few minor issues that are being corrected. Healthcare benefit costs are expected to increase next year, and Energy Trust will conduct an RFQ for a retirement plan administrator.

Evaluation Committee, Alan Meyer

Fast Feedback results show that customer satisfaction levels remain above 90 percent. Billing analysis shows realization rates are above 80 percent and improving.

The board noted that 90 percent and higher satisfaction rates are remarkable compared to other utility run programs.

Finance Committee, Susan Brodahl

Finances look good, and actual revenue above budget by 5 percent. Incentive demand is high, and we are watching use of reserves.

Policy Committee, Roger Hamilton

The equity policy is a work in progress. Staff are considering putting together a diversity advisory council. A report and recommendation are expected at the November board meeting. The committee also approved the appointment of Liz Jones from the Citizens' Utility Board to the Conservation Advisory Council.

Staff Report

Highlights, Mike Colgrove and Staff

Lean Training Team Report (Mike Colgrove and staff)

Mike provided an update on Energy Trust's pilot implementation of the lean startup method. The purpose of the lean startup course was to assess whether lean startup methodology will add value to Energy Trust. The lean startup method is the application of the scientific method to product design. Tools for the lean startup method are the business model canvas, the customer development model and Agile design. Through Agile Design, you quickly develop a minimum viable product to test with customers and receive immediate feedback. The lean startup method was developed for tech startup companies, so it needs to be modified slightly to be useful for Energy Trust.

Mike invited the Efficiency Street lean startup team to present on their project. The team includes Shelly Carlton, Michael Fritz, Kate Scott and Tara Crookshank. The group developed an idea for K-12 education. The team developed desired impacts, including a higher energy IQ among Oregonians, short-term energy savings and long-term energy savings. The team interviewed 18 teachers and five experts primarily in Portland, but also in Central Oregon.

Talking to customers was a great way to learn about the impact Energy Trust could have on customers. The timing for the project was March through June, which did not align well with teachers' busy year-end schedules.

The board asked if staff considered interviewing students. Staff considered it but selected adults because of fewer barriers.

The team started with about 20 hypotheses, such as "teachers care about saving time when developing curriculum" and "field trips would be of interest," and tracked the hypotheses against interview feedback. The team learned that teachers are time and budget constrained. They like hands-on activities. In-class activities are preferred over take home activities to ensure kids had equitable opportunities to complete assignments. The team developed a make-or-break hypothesis: Teachers would consider teaching energy efficiency and renewable energy curriculum if we demonstrate that it is meaningful and can be fun, show that the content meets standards and make it easy to implement.

The team developed a value proposition: For elementary teachers that need engaging education resources that meet standards and have real life applicability for students, an in-class energy kit provides options for teaching standards-based clean energy lessons, unlike teaching prescribed curriculum or cobbling together resources.

The team looked into existing education resources to find a minimum viable product. They found a kit through the National Energy Education Development Project, and tested it with two teachers. The team is considering testing the kit during the 2017-2018 school year.

The team also evaluated surveys from teachers that had implemented Energy Trust's LivingWise Kits and curriculum, which was focused on 6th grade and discontinued in 2017 due to cost-effectiveness challenges. From survey results, the team selected roughly 20 teachers to conduct a small field test.

The board asked about ages. The team focused on grades four through six, because they are old enough to understand complex concepts. The elementary grades in this range specifically were of interest because students have one teacher for the whole school day.

The board asked how staff plan to measure results of the field test. Staff will measure results based on surveys and energy use and participation in the zip codes near participating schools. We are also working with an administrator at the Black Butte School District to test whether there is a viable companion SEM component.

The board asked if staff considered working with an educational service district. Staff considered them as potential stakeholders, but not as the target audience.

Staff added that the selected kit also provides information on how activities align with Oregon educational standards.

The board asked if the kits cover both math and science curriculum. Staff responded yes and more, for example teachers said they could also use it to develop vocabulary. Teachers liked the cross-curriculum benefits of the kits.

The board noted that photo of the kit included 120-watt LED light bulbs, and recommends smaller LED bulbs be used for safety. A small solar panel could also be added.

The second lean startup team presented, including Cameron Starr, Lizzie Rubado, Sarah Schouten and Sarah Castor. Juliet Eck also participated and is currently on leave.

The team's original target customer segment was low-income customers, but their customer development work led them to adjust that focus to moderate-income homeowners.

The team began by assessing the target market, and then researched and evaluated potential market segments. They considered both market opportunity and Energy Trust's ability to reach each target segment in an impactful way. Ultimately, the team selected moderate-income homeowners with fixer homes that need upgrades.

The board asked how moderate-income was defined. The team focused on people who self-identified as moderate-income using Energy Trust's Savings within Reach guidelines as a baseline. Financial information was collected but not used to exclude interview participants.

The board noted the recent feedback that Energy Trust should seek ways to better serve low-income customers. The team will address this later in the presentation.

Energy Trust has financing options for moderate-income customers, including Savings Within Reach, which offers an on-bill financing solution. Staff learned through interviews that customers were averse to taking out loans to finance energy projects.

The team noted it was challenging and time-consuming to recruit interviewees who met their target criteria and were willing to volunteer their time to be interviewed.

The board asked if interviews were one-on-one or in groups. Each interview had two interviewers—one to take notes and one to ask questions. These interviews, called "Voice of Customer interviews," are conversations, not surveys.

Questions were designed to be open ended. Interviewing customers is an iterative process, so you can change questions and adjust your hypothesis as you learn. Interviews took place primarily in the Portland Metro area, but also on the Northern Oregon Coast and in the Roseburg area. The team heard very different answers from people in Portland compared to at the coast and near Roseburg.

One of the key discoveries was that customers were averse to taking out loans. Customers tended to save for projects and then tackle them. Competing priorities for limited savings is one of the top reasons customers weren't following through on projects they were interested in. The team also found that customers are comfortable with online banking and shopping. Many were motivated by rewards programs.

The team developed a web-based online savings tool as a minimum viable product. The tool provides project cost estimates, a way for customers to select and save for an energy home improvement projects, incremental incentives to drive participation, contractor bid and referral service and an engaging and easy-to-use interface. Staff wanted to use cash incentives in a new and different way, so they broke traditional incentives down into smaller, reward-based incentives that matched and rewarded customer contributions to their energy savings accounts. The tool is designed to help customers determine monthly savings goals to accomplish a project in a specified timeframe. Other benefits are visibility for program staff into how close customers are to making an upgrade and an ongoing relationship with customers.

This team did not get to the stage of testing the product with customers and revising the solution.

The board was pleased to see Energy Trust conducting market research, and asked if incentives would be provided to customers before they install upgrades. The team responded that the concept was that Energy Trust's contributions would not be vested until the customer completed a project.

The board asked if staff consulted with any affordable housing organizations. Staff did speak with a few community organization staff in Roseburg, but as individuals not as organizational representatives.

The board asked approximately how many interviewees were people of color. Staff responded that it was a missed opportunity. Staff relied on personal and work connections. If staff had more resources to arrange interviews and identify the targeted segment, discussions with moderate-income participants and participants of color would be easier to arrange.

The board applauded cross-organizational innovation and thinking. As markets are harder to penetrate, Energy Trust will need to do more of this kind of teamwork. The asked what aspects of the projects were most fun and informative. Cameron responded that the project challenged pre-conceived notions. Sarah Schouten found the exercise of mapping hypotheses to interviews most useful, and she enjoyed conducting and evaluating the interviews. Sarah Castor enjoyed conducting interviews and developing that skillset. Lizzie enjoyed learning about how people think about and make financial decisions.

Mike acknowledged the work and innovation from staff, and shared feedback from staff who participated in the lean startup projects. Staff reported that greater customer understanding was one of the biggest benefits of the work. This methodology could be applied to Energy Trust's efforts to develop and refine offerings for targeted customer groups, such as small businesses and communities of color.

Mike reviewed next steps, which are to pursue a partnership with the lean startup company to develop a nonprofit version of the method. The organizational review team is exploring these approaches.

The board asked if Energy Trust will use any of the data from the interviews to help meet our expanded participation goals. Mike responded that the interview notes are available but targeted to specific questions.

2017 Q2 Results (Mike Colgrove)

Mike briefly reviewed Energy Trust's Q2 results. He shared a story about the YellowHawk Tribal Health Center in Pendleton, which he visited this spring for the groundbreaking of construction of this new facility. Energy Trust hoping to schedule a ribbon cutting this fall and would be happy to invite board members.

As of Q2, Energy Trust is on track to achieve savings and generation goals.

The board asked if Residential Energy Tax Credit expiration is impacting solar demand. Peter West responded that competitive prices drove increased demand through Q2, not RETC.

Energy Trust is slightly ahead of budgeted revenues due to the cold winter and strong economy. Spending for efficiency is slightly ahead of budget and spending for renewable energy is slightly below budget.

In Q2, Energy Trust advanced our Diversity, Equity and Inclusion Initiative, with more information to be shared in the November or December board meeting. Staff are developing a Diversity, Equity and Inclusion Lens and a Diversity, Equity and Inclusion Operations Plan, including goals and objectives. In addition, Margie Harris has been contracted to meet with people and organizations representing diverse communities. Mike has also met with and building relationships with a variety of organizations.

The board asked if we Energy Trust compares quarterly results to a hockey stick or a linear budget. Mike responded that Energy Trust uses a hockey stick for budgeting.

The board appreciated the Q2 handout, and would like Energy Trust to use that format to show the financial reporting.

2018 Budget: Draft Action Plans (Peter West)

Peter West provided a preview of 2018 program action plans. There are three things to keep in mind. First, the budget will shift based on initial feedback. Second, this update is only about program activities, and does not include Communications and Customer Service, Planning and Evaluation, Finance, IT and Management. Third, there are no numbers in the presentation. Numbers will be part of the next presentation.

This presentation will focus on program changes, but about 85 percent of programs are not changing. Staff are still working to ensure Diversity, Equity and Inclusion work is integrated in all program action plans. Staff are using recent trend and participation analyses to develop budgets. Staff are working to better target moderate- and low-income customers without overlapping with Oregon Housing and Community Services. The budget will be presented in October to Conservation Advisory Council and Renewable Energy Advisory Council in November to the board in November.

Peter reviewed context for action plan development. It will be the fourth year of the current five-year strategic plan. The stable economy is driving high activity in some program areas. Energy Trust has aggressive goals, and is on track to meet those goals. Oregon's population is diversifying and staff are seeing more interest from community organizations and social justice advocates, which is a benefit to Energy Trust's work. Staff have completed the easiest and cheapest projects in the market, and the next deeper savings are harder to acquire and more expensive. This is a product of our success. LED costs continue to decline, and staff expect to transition out of the residential LED market in 2018. Changing policies, such as expiration of RETC, will disrupt the market. RETC will impact solar and also efficiency, bringing challenges to cost-effectiveness. In 2018, staff expect to see more projects but less savings per project.

Staff identified three high level areas of emphasis driving program action plans, all of which support our goal of benefiting customers and ratepayers by achieving energy goals and operating effectively. These are to diversify participation, manage change and prepare for the future, and enhance program strategies and tools.

Peter reiterated that core strategies are not changing. Energy Trust will still engage with customers through market actors to provide incentives and support. However, how we deliver on these strategies may change. Every year, Energy Trust makes incremental improvements that add up to significant changes over several years.

To diversify participation, we will apply the DIE lens, support and expand energy efficiency advancements in moderate-income and rental homes including a potential Solarize for furnaces pilot in a targeted area, expanding use of solar in low-income setting, launch the first combined commercial and industrial SEM cohort to better engage customers in Eastern Oregon.

The board asked how a low-income customer would participate in community solar. The offerings are not developed yet, but a customer could purchase a piece of a community system and receive a portion of that energy generation. The board added that there's a requirement that community solar efforts serve low-income customers. Peter noted that how this part is to be administered has not been determined at this time.

Janine Benner and John Reynolds left at 3:15.

Peter continued to describe plans to diversify participation, enhance program methods and strategies, and manage change and prepare for the future. We will transition residential program management and delivery structure.

Peter asked the board several discussion questions.

The board requested that information and questions be sent in advance so that board members can prepare to answer questions.

The board asked why Energy Trust plans to transition away from activities, and asked if it is due to lack of success. Peter responded that Energy Trust plans to shift activities in areas where the organization has successfully achieved the savings in that market.

A board member noted attending a meeting on resource potential, and requested similar information for Energy Trust's sectors. Peter responded that a separate presentation on resource potential by sector could be provided by the Planning staff.

The board appreciated the questions, but would like more time to review the content before responding. Mike responded that board members can respond at the November board meeting.

The board requested a timeline on milestones for upcoming community solar activities.

The board appreciates hearing the budget summarized by each program, and also likes the action plans by program provided in past years.

The board would like to connect budget goals to strategic plan goals. Mike responded that staff can provide this information for the next meeting.

Mike shared that staff are exploring learning topics, and will provide information back to the board in the next month. To clarify, these are pertinent topics and important for the board to have a basic understanding about. These are not necessary strategic areas for Energy Trust.

Mike congratulated Jessica Iplikci, New Buildings program manager, for being selected to receive the Daily Journal of Commerce's Women of Vision Award in October. He also congratulated Debbie Kitchin for receiving the Portland Business Alliance's William S. Naito Outstanding Service Award.

Adjourn

The meeting adjourned at 3:30 p.m. **The next meeting of the Energy Trust Board of Directors** will be on Wednesday, November 8, 2017, at 10:30 a.m. at Energy Trust, 421 SW Oak, Suite 300, Portland, Oregon.

Alan Meyer, Secretary

PINK PAPER

Board Decision

Amending Policy on Economic Development

November 8, 2017

Summary

Authorize editorial amendments to the Board's economic development policy.

Background

- The board adopted the economic development policy in 2004 to recognize that economic development is a significant side benefit of Energy Trust programs, and that Energy Trust wishes to support economic development projects by providing timely responses to public entities and utilities that are seeking to convince businesses to come to, expand in, or stay in Oregon.
- The policy authorizes staff to commit to projects with economic development potential under certain circumstances. In fact, these are the same circumstances that apply to other, similar Energy Trust projects.
- While the policy has not played an active role in project selection, staff believes it helps clarify how Energy Trust interacts with these projects.

Discussion

- Staff recommends three editorial revisions to the policy. The first is in the policy's second "Whereas" clause, which states that cooperating with economic development agencies and utilities "is consistent with Energy Trust's strategic plan and vision and purpose." In fact, Energy Trust's interest in furthering economic development is not tied to specific provisions of Energy Trust's strategic plan. Staff recommends clarifying this.
- The second change would remove superfluous language from the policy's third "Resolved" clause. Staff already has the ability to bring in consultants if warranted, and there is nothing unique in this respect about economic development projects.
- The third change, in the policy's third "Resolved" clause, clarifies that staff's authority to commit to economic development projects is subject to the same standards as other projects.
- The Policy Committee reviewed these revisions and recommended they be put on the consent agenda for this board meeting.

Recommendation

Authorize editorial amendments to the Board's economic development policy, as shown below.

**RESOLUTION 818
ECONOMIC DEVELOPMENT POLICY**

WHEREAS:

- 1. Energy Trust recognizes that economic development is a significant side benefit of Energy Trust programs, and wishes to support economic development projects by providing timely responses to public entities and utilities that are seeking to support business activity in Oregon.**
- 2. Since 2004, the Energy Trust has had a policy recognizing this interest, and clarifying that support for such projects is also subject to the requirements that apply to other, similar Energy Trust projects.**
- 3. The Policy Committee’s review of this proposal concluded that, while the policy has not played an active role in project selection, it does help clarify Energy Trust interactions with these projects.**
- 4. Staff recommended three changes: (a) in the policy’s second “Whereas” clause, clarifying that Energy Trust’s interest in furthering economic development is consistent with its mission, and not tied to specific provisions of Energy Trust’s strategic plan; (b) removing superfluous language from the policy’s third “Resolved” clause, recognizing that staff already has the ability to bring in consultants if warranted; and (c) in the policy’s third “Resolved” clause, clarifying that staff’s authority to commit to economic development projects is no different than for other projects.**

It is therefore RESOLVED that the Energy Trust Economic Development policy on is amended as shown in Attachment 1.

Moved by:

Seconded by:

Vote: In favor:
 Opposed:

Abstained:

ATTACHMENT 1

4.18.000-P Economic Development Policy

History			
Source	Date	Action/Notes	Next Review Date
Board Decision	April 7, 2004	Approved (R265)	June 2004
Board	June 9, 2004	Econ. Dev. Initiative (R277)	June 2007
Policy Committee	October 3, 2007	No changes	October 2010
Policy Committee	October 12, 2010	No changes	October 2013
Board Decision	October 1, 2014	Revised (R714)	October 2017

RESOLUTION AUTHORIZING ENERGY TRUST INVOLVEMENT IN ECONOMIC DEVELOPMENT INITIATIVES

WHEREAS:

1. Economic development is a significant side benefit of Energy Trust energy efficiency and renewable energy production, helping to make Oregon businesses more competitive by lowering production costs and increasing operating reserves and profits.
2. It is consistent with Energy Trust's ~~strategic plan and vision and purpose mission~~ to cooperate with public entities and utilities that are seeking to convince businesses to come to, expand in, or stay in Oregon.

It is therefore RESOLVED:

1. Energy Trust staff should make available information to help economic development entities understand how Energy Trust programs support new and existing commercial and industrial facilities;
2. Staff should provide a contact person to coordinate quick responses to inquiries on economic development matters from the State of Oregon or others ~~); such responses to be reviewed by Energy Trust staff or a designee. Staff is authorized to contract with an outside consultant to provide a back-up source of information-gathering and analysis.~~
3. ~~For projects with high economic development potential, s~~Staff is authorized to make commitments to ~~cost-effective energy efficiency~~ projects with economic development potential consistent with existing the same program standards, board policies, and up to \$500,000 per project for renewable energy projects, consistent with SB 1149's above-market legal requirements that apply to other projects of the same kind.

PINK PAPER

Board Decision

Amending Policy on Methodology for Evaluating Above-market Costs of Renewable Energy Projects

November 8, 2017

Summary

Authorize housekeeping amendments to the Board's policy on evaluating above-market costs of renewable energy projects for consistency with our shared understanding of the definitions of technical terms with Oregon Public Utility Commission staff.

Background

- A technical issue has arisen regarding staff's calculation of above-market cost for certain renewable resources called qualifying facilities (or "QFs"). QFs are renewable or cogeneration projects developed by non-utilities. Federal law requires utilities to buy power from QFs at the same cost the utility would pay from another source ("avoided cost").
- State rules define how above-market costs are calculated. The most Energy Trust can pay for a renewable energy project is (a) the cost of energy from the project, minus (b) the cost the utility would pay for "power from a non-differentiated source."
- Current board policy defines a "non-differentiated source" as a non-renewable resource. When the policy was developed, a standard, avoided cost QF power purchase agreement (PPA) did not distinguish renewable and non-renewable sources.
- In recent years, however, OPUC proceedings have developed different PPAs and QF avoided cost prices for renewable and non-renewable resources. This complicates Energy Trust calculation of above-market cost.
- Energy Trust staff consulted with OPUC staff on this issue. OPUC staff view any utility avoided cost rate, renewable or non-renewable, as a "non-differentiated source" for the purposes of calculating above market costs.

Discussion

- Staff proposes to modify the board policy to clarify that "non-differentiated" refers to power from any avoided resource. This will clarify and reinforce staff's calculation of above-market cost using the QF price in the power purchase agreement applicable to the QF project under evaluation.
- The Policy Committee reviewed this proposal and recommended it be put on the consent agenda for this board meeting.

Recommendation

Authorize amendments to the Board's policy on above-market costs to eliminate the requirement that staff compare the cost of project energy to power from a non-renewable energy source, as shown below.

**RESOLUTION 819
ABOVE-MARKET COST POLICY**

WHEREAS:

1. The most Energy Trust pays for a renewable energy project is (a) the cost of energy from the project, minus (b) the cost the utility would pay for “power from a non-differentiated source.” A technical issue has arisen involving what “non-differentiated source” means.
2. When the policy was developed, a standard, avoided cost QF power purchase agreement (PPA) did not distinguish renewable and non-renewable sources. Current board policy defines a “non-differentiated source” as a non-renewable resource.
3. OPUC proceedings have developed QF avoided cost prices for renewable and non-renewable resources, complicating the calculation of above-market cost under the current policy.
4. Staff consulted with OPUC staff, who interpret “non-differentiated source” to include any utility avoided cost rate, renewable or non-renewable.
5. Staff recommended that the policy be amended to eliminate the requirement that staff compare the cost of project energy to power from a non-renewable energy source.

It is therefore RESOLVED that the Energy Trust policy on Methodology for Evaluating Above-Market Costs of Renewable Energy Projects is amended to eliminate the requirement that staff compare the cost of project energy to power from a non-renewable energy source, as shown in Attachment 1.

Moved by:

Seconded by:

Vote:

In favor:

Abstained:

Opposed:

ATTACHMENT 1

4.07.000-P Methodology for Evaluating Above-Market Costs of Renewable Resource Projects

History			
Source	Date	Action/Notes	Next Review Date
Board Decision	April 3, 2002	Approved (R95)	April 2005
Board Decision	May 25, 2006	Revised (R390)	May 2009
Policy Committee	May 19, 2009	Reviewed, no changes	May 2012
Board Decision	Sept 19, 2012	Amended (R645)	Sept 2015
Board Decision	Sept 30, 2015	Amended (R754)	Sept 2018

Procedures for Evaluating the Above-Market Cost of a Renewable Resource Project

The Energy Trust will evaluate medium and small-scale renewable resource projects that are submitted under the Energy Trust programs.

- 1. Review Project Proposals:** The Energy Trust will review the costs, net of tax benefits, government incentives and income streams, submitted by project sponsors. Whether through standard processes or RFPs, proposals must provide sufficient information to evaluate the project, including at least technical specifications, resource characteristics, energy delivery, integration, transmission, development timelines, operating plans, financial detail, tax benefits, risks, and personnel. The Energy Trust will evaluate the responses and compare these to the usual and customary net costs and specifications for similar resources. For complex projects, independent consultants may be used to help with this review and due diligence. Information requirements will vary by program.
- 2. Definition of Market Cost:** Based on the OAR definition of above-market cost, for projects delivering power to the utilities, the Energy Trust will compare the renewable resource costs to the market value that is used by the utility to acquire resources, provided the market value was developed using methods consistent with the utility's latest Integrated Resource Plan and the Commission-approved acquisition process. The market value will typically be an updated forward price curve, QF tariff, Commission-approved avoided cost filings, or marginal resource selected through a competitive bidding process. The market price will be adjusted to match the expected daily and seasonal delivery schedule of the renewable resource if necessary. In the case of on-site and net metered use, the market cost will be the retail rates for the customer under filed tariffs with the OPUC.
- 3. Calculate the above-market cost:** The defined market costs will be compared to the delivered price for the renewable resource for each year of operation. The difference between the two will define the above or below market cost for that year. The net-present value for these costs over the life of the project (or the contract term in the case of a Power Purchase Agreement) will be calculated using industry-standards to determine the maximum above-market payment, if any, from the Energy Trust. The Energy Trust staff will document these assumptions as part of the review and the Energy Trust's approval processes, which will include a review of what was used in

the developer's bid compared to what is standard in the industry for rates of return and competitive cost of capital. If the net present value is positive, then this amount would define the maximum above-market cost that the Energy Trust could pay. If the net present value is zero or less, then there would be no above-market cost payments.

- 4. Payment:** The Energy Trust can pay up to 100% of the above-market cost. The actual amount of the payment is determined on a case-by-case basis after considering the amount of funding available, the funding needed to develop the project, the benefits of the project, and the potential of the project to reduce renewable resource costs, provide replicable benefits, address a resource with significant potential, or meet other considerations related to achieving the objectives of the Energy Trust Strategic Plan. Payments to applicants for projects generating for own-use may be capped at the calculated net present value when comparing the cost of the project to the proposer's retail rate, if this results in a lower above-market funding from the Energy Trust than provided in step 3 above. Payments may be made up-front or on a periodic basis over time based on production or other factors. Payments made over time may reflect the discounted time-value of those funds.

Standard-Offer Resources: The Energy Trust will have some programs that require a standard offer for all projects of a similar type. Standard offers can be necessary for market development to signal consistency for long range planning and investment, or because projects tend to have uniform costs. In such instances re-calculating the incentive for each project would be a barrier to the market development and unnecessary.

For programs that have been authorized by the board to offer a standard incentive, staff will follow the procedures outlined for mid to small-scale projects. The calculation will be based on the latest available data on average costs for projects in Oregon. This calculation will be updated at least once per year with incentives adjusted, if necessary.

Other Considerations:

- 1. Implementation of the Above-Market Methodology:** The procedures and analyses will determine the above-market cost based on the best information available at the time of the decision; the payment will be fixed based on this information and will not be adjusted for future changes. The Energy Trust will work with the utility and others to include the most current information in the calculation of the above-market costs.
- 2. Energy Trust Payments:** The payment can be made to the developer, investors, lenders, utility or other parties. The Energy Trust may make a one-time payment, establish escrow accounts, or structure other arrangements.
- 3. Modifications to the Procedures:** If the Energy Trust staff determines that these procedures hinder project acquisitions or that it could be in the ratepayers' interest to modify the procedure for evaluating above-market costs, the staff may request that the board make an exception to the procedures. Prior to doing this, Energy Trust staff will consult with the utilities, the Commission staff and, within the constraints of confidentiality and timing, also with the Renewable Advisory Council. The rationale for any case-specific modifications would be documented as part of the evaluation process for board approval.

- 4. Utility master agreements.** Energy Trust has had master agreements with PGE and PacifiCorp for several years. These agreements were negotiated with the above-market cost methodology in mind, and are consistent with this methodology, but have somewhat different procedural requirements. If utilities submit funding requests pursuant to master agreements, those procedural terms will apply.

Tab 2

Board Decision

Authorize a 300kW Hydropower Project Funding Agreement

November 8, 2017

Summary

Authorize incentives of up to \$640,000 to offset the above-market cost of the 300kW McKenzie hydroelectric facility of the Three Sisters Irrigation District (District) near Sisters, OR.

Energy Trust Goals

- The McKenzie project supports Goal 2 of the 2015-2019 Strategic Plan: to accelerate the rate at which renewable energy resources are acquired. The project also supports Strategic Plan Strategies focused on building relationships with outside organizations around projects with multiple benefits that support and enable collaborative investments.
- This project will add to the portfolio of 15 operational hydropower projects Energy Trust has supported, currently representing 8.1 MW of capacity and 3.3 average megawatts (aMW) of generation.

Background

- In May, 2017 Energy Trust began a competitive process to allocate up to \$3.0 million in incentives for renewable energy facilities in Portland General Electric service territory and \$1 million in Pacific Power territory. Three applications were received, all hydropower, including the McKenzie project. Staff has selected two projects whose incentives are less than \$500,000. One of these other projects is a 200kW Three Sisters Irrigation District facility, awarded \$360,000 in incentives.
- The District is an agricultural water provider working to modernize its delivery system. By replacing irrigation canals with pressurized pipe, the District can conserve water by eliminating seepage and evaporation. Pressurized water eliminates on-farm pumping and allows the District to generate hydropower with excess pressure.
- Energy Trust has funded projects with the District in the past: a 700kW hydroelectric turbine in 2014. The piping in that project restored 21.6 cubic feet per second (cfs) of water to Whychus Creek, a tributary of the Deschutes River. The 700kW turbine has performed well, meeting generation expectations even during drought years.
- The proposed McKenzie project will take advantage of a new 5.25-mile long pressurized penstock pipeline that discharges into the McKenzie Reservoir. Water savings from the new pipeline permanently restores 7 cfs of flow to Whychus Creek, benefiting threatened and endangered fish species.
- The pipeline creates 101-134 feet of head, providing flows through the pipes from 10-40 cfs during the irrigation season (March to November). Irrigation season flows tend to follow a bell curve, ramping up and down at the beginning and end of the season.
- The District intends to construct a 30'x30' concrete powerhouse and install a 300kW horizontal Francis turbine with an estimated generation of 922,400 kWh, annually. Power generated by the project would be wheeled through Central Electric Coop (CEC) and

Bonneville Power Administration (BPA) for delivery to Portland General Electric (PGE) or Pacific Power.

- The District would like to deliver project power to PGE because its power rates are better than Pacific Power's at present, but if this is infeasible the District will deliver the power to Pacific Power. Above-market costs for the project, as is noted below, are similar for either utility.
- Project construction is expected to begin in spring 2019, commissioning and testing to start in winter 2019, and commercial operation in spring 2020.

Staff Evaluation

Energy Trust staff evaluated the following before performing an above-market cost analysis:

- Site control
- Development and operational team expertise
- Resource assessment
- Energy conversion technology and estimated generation
- Permitting
- Interconnection
- Power purchase agreement
- Project capital costs and operational and maintenance expenses
- Financing
- Project revenues

The evaluation found the following:

Site control, Development Team, Resource and Generation Estimates, and Permitting

- The District has site control, a proven team capable of executing on project development, and the experience to operate the project when complete.
- The head, flows and chosen turbine technology are a good fit for the resource.
- The District has successfully engaged local, state, and federal permitting processes. We have no concerns about the District's ability to timely complete permitting activities.

Interconnection

- The District has submitted an interconnection application with CEC and met with BPA and CEC staff to discuss interconnection. A CEC systems impact study is underway to evaluate any changes in the distribution or transmission system related to the project. The District will be responsible for paying for any upgrades that are necessary.
- Because the interconnection study is incomplete, interconnection costs are engineering estimates, not utility quotes. The interconnection cost estimate of \$115,000 seems reasonable in comparison to the interconnection costs of the District's 700 kW unit's in 2014 (approximately \$250,000), but there is risk associated with an estimate.
- CEC will charge the District a flat rate of \$6.24 per kW per month to wheel power, an annual cost of \$22,464. The 12-month charge is an industry standard even though the project will only be online during the irrigation season.
- The District also has to move power through BPA. If the District delivers to PGE this requires firm, point-to-point transmission services, which they have secured. These services entail an

annual charge of approximately \$21,600. If, instead, the District delivers to Pacific Power, the fees would be \$6,000 because Pacific and BPA share a substation interconnection in the local area. Delivering power to Pacific would also result in a reduction in power rates, discussed below.

Project Costs, Expenses, and Financing

- Total capital costs are about \$1.43 million, the largest single cost being the hydro turbine.
- To be conservative and bring the project into compliance with industry standards, staff added a 10% contingency in case interconnection or other costs run higher than expected. Past experience has shown, for myriad reasons, that most projects experience higher-than-expected final costs.
- The wheeling charges, regardless of the final delivery utility, are a large part of the project's annual cost. Day-to-day maintenance and operation will be performed by in-house contractors. Therefore, the estimated operations cost is relatively low. The O&M estimate also includes \$5,000 for insurance and a \$5,000 capital reserve accrual beginning after year 10 of operation.
- The District intends to utilize a \$125,000 loan from the Clean Water State Revolving fund to cover upfront costs that are not being paid for with equity or grants. The loan has an interest rate of 1.94% and includes 50% forgiveness. Due to the 50% loan forgiveness, staff considered \$62,500 as a grant and treated only the other half as a standard loan.
- The cost for construction of TSID's penstock, which has already been paid for and installed, is not considered in the Above Market Cost calculations.

Capital Costs

<u>Engineering</u>	
Electrical	\$ 60,000
Structural	\$ 25,000
Hydro Plant	\$ 50,000
<u>Materials</u>	
Powerhouse	\$ 200,000
Turbine and Generator Package	\$ 395,000
Turbine inlet, Bypass valves, Interconnection valves	\$ 35,000
Interconnection (transformer, line, physical)	\$ 115,000
Controls	\$ 80,000
Security	\$ 25,000
<u>Labor</u>	
Powerhouse Construction	\$ 175,000
Electrical Installation	\$ 80,000
Turbine Generator Installation	\$ 10,000
<u>Miscellaneous</u>	
Legal, Permits, and Insurance	\$ 35,000
Fuel, Supplies, and Materials	\$ 10,000
NEPA processes - Environmental Impact	\$ 5,000
<i>Contingency (Added by Energy Trust)</i>	\$ 130,000
Total Estimated Cost	\$ 1,430,000

Estimated Annual Operations & Maintenance Costs

Operations/Maintenance/Repairs	\$	2,500
Materials/Supplies	\$	600
Transmission scheduling	\$	1,200
Wheeling and Transmission Charges		
BPA	\$	21,600
CEC	\$	22,464
Insurance	\$	5,000
Capital Reserves	\$	5,000
Total	\$	57,164

Grants and Revenues (including Power Purchase Agreement)

- The District has received grants for this project, including \$175,000 for a Renewable Energy Development Grant (RED) from the Oregon Department of Energy (ODOE) and a \$400,000 WaterSmart grant from the Bureau of Reclamation (BOR).
- The project is outside PGE and Pacific Power service territories. Avoided cost rates available to wholesale Qualifying Facilities are low for both utilities but, at present, PGE rates are about 25% more favorable. There is a budget benefit for Energy Trust if the project delivers to PGE because there is typically higher demand for incentives in Pacific territory.
- Using the expected 922 MWh of generation annually and PGE's current Schedule 201 rates, the project's revenue range from \$20,722 in year one to \$100,503 in year twenty. Without an incentive from Energy Trust, the project will not pay back within 20 years.
- If the project delivers to Pacific Power, the beginning and ending revenue streams are similar to PGE. The difference is that PGE's rates go up starting in 2025 while Pacific Power's rates stay low until 2028. The three years of lower rates under Pacific Power's Schedule 37 largely offsets the benefit of the reduced BPA wheeling fees.

Staff's overall evaluation:

- The project is viable but has above-market costs due to the low power rates.
- The project has completed its design phase and faces no significant permitting challenges.
- The project has significant strengths: it will be constructed by an entity with an existing hydropower project; it is municipally owned; and the District has secured grants.
- Three Sisters is a returning customer, has a proven track record as a successful hydropower operator.
- Overall, the project has few risks.

Staff also contracted with Evergreen Energy to provide an independent evaluation of the project. Evergreen has broad experience in renewables and has provided many similar reviews for Energy Trust in the past. Their review concurred with staff's assessment and recommended supporting the project.

Above-Market Cost Analysis and Proposed Incentive

- The above-market cost is calculated as the difference between the cost to produce the power over a specific term, and the market value of the power. Above-market costs are calculated on a present-value basis: all costs and revenues over the project term are discounted to their current value as if they existed today.
- Staff evaluated this project over a 20-year term. The length of the term was chosen to match similar projects.
- The project was evaluated at an 8% discount rate, consistent with the 8-10% range of discount rates Energy Trust has applied when evaluating other municipally or government-owned projects.
- The table below assumes the project delivers power to PGE. There are minor differences if the project delivers to Pacific Power, but the overall financial picture is similar.

Project Financial Summary - Present Value Basis - Evaluated over 20 years	
Project Cost	
Total Design & Construction	\$ 1,430,000
Expense	
NPV Total Project Expense	\$ 444,674
NPV of interest payments	\$ 8,064
NPV of principal payments	\$ 29,247
	\$ 481,985
Total cost: Cost + Expenses	\$ 1,911,985
Revenue	
NPV Total Revenues (including avoided O&M)	\$ 1,133,126
Above Market Cost: Total Cost - Revenues	\$ (778,859)

- Above-market costs are \$778,859 (NPV) if the project delivers to PGE, or \$729,917 if it delivers to Pacific Power.
- Staff proposes an incentive of \$640,000 in several payments. The first payment would be \$440,000, payable on commercial operation. If the project delivers to PGE, additional payments of \$40,000 would be triggered over five years as the project meets annual generation milestones. If the project delivers to Pacific Power, these additional payments would be \$25,000 a year for eight years. These payments would help the District maintain a positive cash flow during the lean early years of their PPA, when power prices are less than \$30/MWh. With the proposed incentives, the project would pay back in 15 years.
- On a present-value basis, Energy Trust's incentive is worth \$540,431 to \$558,286 (depending on how many additional payments are made), or about 70% of the project's above-market cost. At \$6.1 million/aMW, the incentive is in the upper end of the range for

hydropower projects we have supported in the past. This is due to low power prices, which require larger incentives to enable projects to be financially viable.

- Energy Trust would negotiate 18,448 Renewable Energy Certificates (RECs) from the project, equivalent to 100% of the expected generation produced by the project over 20 years. This REC allocation is more than is strictly required by board policy, which requires Energy Trust to take RECs in proportion to its contribution to above-market costs. We think it is reasonable to take 100% of the RECs Because the project requires an incentive in the upper range of costs.
- Staff proposes to include milestones in the funding agreement with the District, to allow Energy Trust to withdraw funding if the project is unable to move forward.
- Funds for the project are within the 2017 Other Renewables program budget.

Recommendation

Authorize incentives of up to \$640,000 to offset the above-market cost of the 300kW Three Sisters Irrigation District McKenzie hydroelectric facility.

RESOLUTION 820

AUTHORIZING INCENTIVES FOR THE MCKENZIE HYDRO FACILITY

WHEREAS:

- 1. In May, 2017 Energy Trust began a competitive process to allocate up to \$3.0 million in incentives for renewable energy facilities in Portland General Electric service territory and \$1 million in Pacific Power territory. Three applications were received, all hydropower, including the McKenzie project, proposed by the Three Sisters Irrigation District.**
- 2. By replacing irrigation canals with pressurized pipe, the District can conserve water, eliminate seepage, evaporation and on-farm pumping, and generate hydropower with the excess pressure.**
- 3. The proposed project will use a new 5.25-mile long pressurized penstock pipeline that discharges into the McKenzie Reservoir. Water savings will permanently restore 7 cfs of flow to Whychus Creek, benefiting threatened and endangered fish species.**
- 4. The District proposes to construct a 30'x30' concrete powerhouse and install a 300kW horizontal Francis turbine with an estimated generation of 922,400 kWh, annually. Power would be wheeled through Central Electric Coop and Bonneville Power Administration for delivery to Portland General Electric (PGE) or Pacific Power. Project construction is expected to begin in spring 2019, commissioning and testing to start in in winter 2019, and commercial operation in spring 2020.**
- 5. Staff finds that the project has significant strengths in that it will be built by an entity with a proven track record as a hydropower operator, it will be municipally owned, and it has secured grants. Staff sees no significant permitting challenges and few other risks.**

6. Above-market costs are \$778,859 (net-present value) if the project delivers to PGE, or \$729,917 if it delivers to Pacific Power. The choice of utility depends on the resolution of certain power delivery feasibility issues.
7. Staff proposes an incentive of \$640,000. The first payment would be \$440,000, payable on commercial operation. If the project delivers to PGE, additional payments of \$40,000 would be triggered over five years if the project meets annual generation milestones. If the project delivers to Pacific Power, these additional payments would be \$25,000 a year for eight years. With the proposed incentives, the project would pay back in 15 years.
8. On a present-value basis, Energy Trust's incentive is worth \$540,431 to \$558,286 (depending on how many additional payments are made), about 70% of the project's above-market cost. At \$6.1 million/aMW, the incentive is in the upper end of the range for hydropower projects Energy Trust has supported, due primarily to the fact that low power prices require larger incentives.
9. Staff proposes to seek Renewable Energy Certificates (RECs) equivalent to 100% of the project's expected generation over 20 years. This is more than required by board policy, but is reasonable because the project is in the upper range of costs.
10. Staff proposes to include milestones in the funding agreement with the District to allow Energy Trust to withdraw funding if the project is unable to move forward.

It is **RESOLVED** that the Executive Director is authorized to negotiate a funding agreement for up to \$640,000 in incentives to offset the above-market cost of the the 300kW McKenzie hydroelectric facility of the Three Sisters Irrigation District, consistent with the terms outlined above.

Moved by:

Seconded by:

Vote: In favor:

Abstained:

Opposed:

Tab 3



Compensation/Audit Committee Meeting

October 26, 2017 1:45 p.m.

Attending by Teleconference

Melissa Cribbins

Attending at Energy Trust offices

Dan Enloe-*Compensation Committee Chair*, Ken Canon-*Audit Committee Chair*, Mike Colgrove, Debby Diering-Moss Adams, Corey Kehoe, Mark Kendall, Debbie Menashe, Pati Presnail, Laurel Stevens-Moss Adams, Greg Stokes

Review and Approval of August 24, 2017 Meeting Notes

The minutes of August 24, 2017 were reviewed and approved by the Committee as submitted.

Retirement Plan RFQ Update

Debbie Menashe convened a workgroup of six staff members to create a Request for Quote (RFQ) to solicit potential new providers for Energy Trust retirement plan services. The group took an in-depth look at the organization's needs and requirements building on Energy Trust's non-profit culture and focused on energy and environmental themes in order to provide more education for staff. The RFQ was finalized this month and was posted on the website with a three-week turnaround for responses. The workgroup identified a list of 26 possible vendors to target serving companies of similar size.

Ken Canon asked if the workgroup reached out to other non-profit organizations. Debbie affirmed and said they looked closely at the Northwest Energy Efficiency Association (NEEA) and the Vermont Energy Investment Corporation (VEIC) for comparison. Debbie said their suggestions centered on things they didn't find favorable with the companies they are currently working with. Next steps are to identify finalists by December with interviews to follow and a decision by mid-December if possible. The results should roll out to staff by the middle of the first quarter. Debbie will update the committee as the process develops.

Retirement Plan Audit Report

Debby Diering and Laurel Stevens of Moss Adams joined the meeting to provide an update on the Energy Trust audit and results for the plan year ending December 31, 2016. This is the first year an audit was conducted on the financial statements triggered by the amount of the plan's assets and number of participants. Debby explained that the retirement plan financial statements are audited under Generally Acceptable Accounting Principles (GAAP) standards, and that the employee benefit portion of the audit is a compliance audit related conducted at participant level.

Dan Enloe asked if the report is delivered to the Secretary of State's office. Debby responded that the report is a federal requirement of the Department of Labor (DOL) that regulates all employee benefit plan. The DOL requires companies with over 125 employees to conduct an audit and to submit audit findings along with the plan's annual Form 5500. Forms 5500 are public documents available for public review on the DOL's website.

Debby then summarized the audit findings. Moss Adams found the financial statements were fairly recorded. The audit identified a few instances where deferrals transfers from Energy Trust to the plan account were not timely. These delinquencies were discussed with staff, and staff has responded with process to avoid similar situations in the future. Since these were delinquencies not corrected by December 31, 2016, they do appear on the audit report.

Ken asked if the correction would entail setting up different procedures. Debby said that some of the issues were a reflection of staff absences, a lapse in time and therefore an anomaly.

2016 was a good year for all Energy Trust retirement plans. Employer contributions were up due to more enrollment and new hires.

Debby continued to explain that through the audit significant accounting policy adoptions were examined, and the audit did not reveal any no changes year to year. Moss Adams determined that there were no significant difficulties in conducting the audit.

Mark Kendall asked what type of difficulties would be included. Debby said those difficulties are more appropriately seen in a corporate audit or where there is a sensitive issue or where staff is not cooperative.

Moss Adams did not find any corrected or uncorrected misstatements. There were no disagreements with management and they did not discover any significant deficiencies in the internal controls. The DOL examines compensation definitions, making sure all participants are included, and that plan expenses are truly expenses. No issues were detected through the audit.

Dan asked Debby to comment on the affordability of the Energy Trust retirement plan. Debby said that Moss Adams can provide an analysis of the annual administrative expenses. She said that there are investments with fees built inside that are deducted before net income is realized. The retirement plan provides this disclosure, and Moss Adams performs the calculations annually as part of their services to Energy Trust.

In the breakdown of contributions to the plan accounts, Mark inquired on the definition of “employer profit sharing” given that Energy Trust is a non-profit corporation. Debby said that it also could be termed as an “employer non-elective contribution” and that it means that Energy Trust is making a contribution based on an employee compensation not a match of their deferral.

Mark asked whether more explanation could be provided as context in the supplemental schedule that disclosed the untimely, delinquent contributions identified in the audit. Debby replied that the audit document is final now and cannot be changed. Ken suggested that in the future, a draft report be reviewed with staff and the committees.

Though there were no material findings to be reported, Debby explained that it is typical in a first year audit to do some checks on the way payroll has compensation identified as eligible for deferral versus what the plan document has stated. In Energy Trust’s case, this review did reveal some discrepancy. The plan document included in compensation, from which deferrals were to be made, the employer payments for group term life insurance, long-term life insurance and healthcare insurance for domestic partners. However, Energy Trust does not calculate these benefits as types of income in its deferral formula. While these are not representative of many dollars, by not deferring with these amounts calculated, Energy Trust is not deferring in compliance with the plan document. Moss Adams recommended that staff consult with an Employee Retirement Income Security Act (ERISA) attorney, which they did, and provided a response and explanation of steps taken for future plan years in its management response. In that response, Energy Trust explained that its practice was consistent with its intent for the plan and that, after conferring with ERISA counsel, it amended the plan document to be consistent with its intent and practice for deferrals.

Ken asked how Energy Trust compares to similar organizations’ audits in the first year. Debby said that review is often measured in how helpful the staff is to assist in the process and willingness to correct where appropriate. She complimented the financial staff for preparing the records appropriately.

2018 Employee Benefit Renewal

Greg Stokes provided an overview of the employee benefit renewal process. Staff instructed insurance brokers Brown and Brown to solicit proposals for 2018 employee medical and dental benefits. Pacific Source is the current medical provider and quoted a steep rate increase of 25.7%. Proposals and bids were submitted from various insurance companies and as a result, Pacific Source lowered their initial quote to a 13% increase on medical. The current dental plan rates with Lincoln National remained flat for 2018 as did employer paid life insurance. The overall rate increase for employee benefits is 11% next year.

Mike Colgrove noted that Energy Trust came in sixth place in the Best Oregon Large Non-Profit Organizations Survey and was the first year that we purchased the full survey results. The report stated that Energy Trust paid a higher percentage of employee benefits compared to the top 33 in the list of large non-profits. The committee discussed using this statistic as a positive talking point to employees and during the hiring process.

Brown and Brown said that fees are a significant factor driving medical insurance cost increases to all Oregon employers in 2018. The Affordable Care Act (ACA) fees of 3.1%, associated with a waiver that is due next year, and an Oregon insurer fee of 1.5% add up to a 4.6% cost increase being directly passed on to employers.

The first open enrollment meeting for Energy Trust employees is on October 30. Open enrollment will be completed by Thanksgiving.

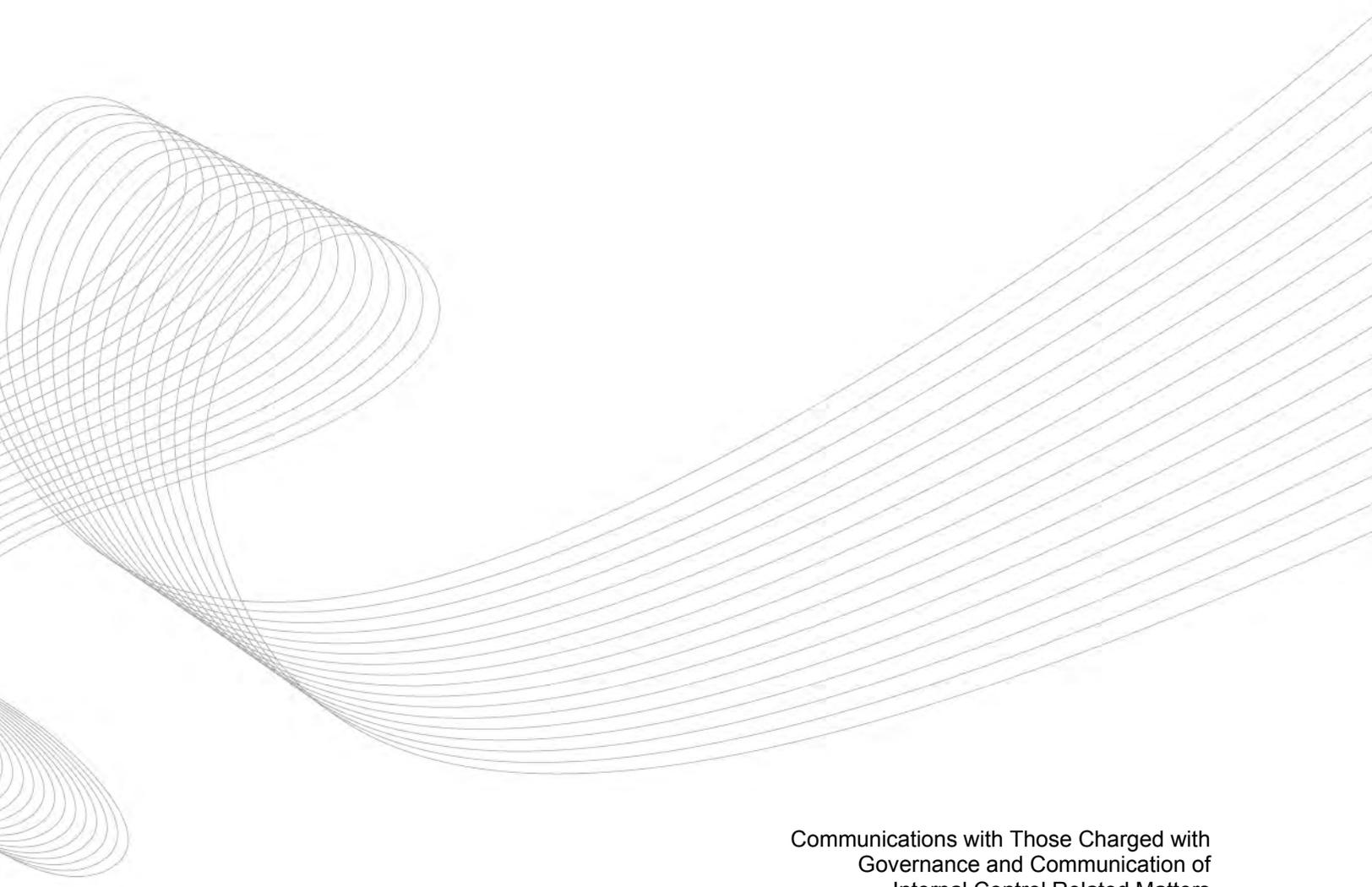
2018 Compensation Committee Meeting Schedule

Greg asked the committee if the 2018 meeting schedule is acceptable and would one and a half hours be sufficient amount of time for meetings. The committee concurred with the schedule and meeting length.

Meeting adjourned at 3:05p.m.

Next meeting date is Wednesday, January 10, 2018 at 3:00 p.m.

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Communications with Those Charged with
Governance and Communication of
Internal Control Related Matters

**Energy Trust of Oregon, Inc.
Retirement Savings Plan**

December 31, 2016

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COMMUNICATIONS WITH THOSE CHARGED WITH GOVERNANCE AND INTERNAL CONTROL RELATED MATTERS

To the Plan Administrator
Energy Trust of Oregon, Inc. Retirement Savings Plan

We have completed a Department of Labor (DOL) limited scope audit of the financial statements and supplemental schedule of Energy Trust of Oregon, Inc. Retirement Savings Plan (the Plan) as of and for the year ended December 31, 2016. As permitted by 29 CFR 2520.103-8 of the DOL's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974 (ERISA), the plan administrator instructed us not to perform, and we did not perform, any auditing procedures with respect to the information summarized in Note 7 to those financial statements. Because of the significance of the information that we did not audit, we are unable to, and have not, expressed an opinion on the financial statements and supplemental schedule taken as a whole. However, our limited scope audit of the financial statements does not relieve you or management of your responsibilities. Professional standards require that we provide you with the following information related to our audit:

- Our responsibility under auditing standards generally accepted in the United States of America
- Other information in documents containing audited financial statements
- Planned scope and timing of the audit
- Significant audit findings
 - ◆ Qualitative aspects of accounting practices
 - ◆ Significant accounting estimates
 - ◆ Financial statement disclosures
 - ◆ Significant difficulties encountered in performing the audit
 - ◆ Corrected and uncorrected misstatements
 - ◆ Disagreements with management
 - ◆ Management representations
 - ◆ Management consultation with other independent accountants
 - ◆ Other significant audit findings or issues
- Communication of internal control related matters



OUR RESPONSIBILITY UNDER AUDITING STANDARDS GENERALLY ACCEPTED IN THE UNITED STATES OF AMERICA

Our responsibility is to plan and perform the audit in accordance with auditing standards generally accepted in the United States of America and to design the audit to obtain reasonable, rather than absolute, assurance about whether the financial statements are free of material misstatement. An audit of financial statements includes consideration of internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Plan's internal control. We considered the Plan's internal control solely for the purposes of determining our audit procedures and not to provide assurance concerning such internal control. Accordingly, we do not express an opinion on the effectiveness of the Plan's internal control. As part of the scope limitation discussed in the first paragraph, we did not consider internal control relating to the information summarized in Note 7 to those financial statements.

We are also responsible for communicating significant matters related to the financial statement audit that, in our professional judgment, are relevant to your responsibilities in overseeing the financial reporting process. However, we are not required to design procedures for the purpose of identifying other matters to communicate to you.

You should understand that our audit is not specifically designed for and should not be relied upon to disclose matters affecting plan qualifications or compliance with the ERISA and Internal Revenue Code requirements.

OTHER INFORMATION IN DOCUMENTS CONTAINING AUDITED FINANCIAL STATEMENTS

The AICPA's Audit and Accounting Guide for Employee Benefit Plans requires that, before an auditor's report on the Plan's financial statements can be included with a filed Form 5500 (including any related schedules), the auditor must review the Form 5500 and consider whether there are any material inconsistencies between the other information in the form and the audited financial statements (including the related schedules) or any material misstatement of fact.

Our responsibility for other information in the Form 5500 does not extend beyond the financial information identified in our report. We do not have an obligation to perform any procedures to corroborate other information contained in the form, except as described above. However, we have read the information contained in the Form 5500 and nothing came to our attention that caused us to believe that such information or its manner of presentation is materially inconsistent with the information or manner of its presentation in the financial statements.



PLANNED SCOPE AND TIMING OF THE AUDIT

We performed the audit according to the planned scope and timing previously communicated to you in the engagement letter dated December 5, 2016, as well as our preliminary discussions with management.

SIGNIFICANT AUDIT FINDINGS

Qualitative Aspects of Accounting Practices

Management is responsible for the selection and use of appropriate accounting policies. The significant accounting policies used by the Plan are described in Note 2 to the financial statements.

No new accounting policies were adopted and there were no changes in the application of existing accounting policies during the year. We noted no transactions entered into by the Plan during the year for which there is a lack of authoritative guidance or consensus. There are no significant transactions that have been recognized in the financial statements in a different period than when the transactions occurred.

Significant Accounting Estimates

Accounting estimates may be an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates may be particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected.

We did not note any significant accounting estimates in the financial statements. Significant accounting estimates are not commonly inherent in a defined contribution plan with investments that are readily marketable.

Financial Statement Disclosures

The disclosures in the financial statements are consistent, clear, and understandable. Certain financial statement disclosures may be particularly sensitive because of their significance to financial statement users.

We did not note any disclosures in the financial statements that we consider sensitive to potential users.

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Significant Difficulties Encountered in Performing the Audit

We encountered no significant difficulties in dealing with management in performing and completing our audit.

Corrected and Uncorrected Misstatements

Professional standards require us to accumulate all factual and judgmental misstatements identified during the audit, other than those that are trivial, and communicate them to the appropriate level of management. None of the misstatements detected as a result of audit procedures and corrected by management were material, either individually or in the aggregate, to the financial statements taken as a whole. We did not note any uncorrected misstatements in the course of the engagement.

Disagreements with Management

For purposes of this letter, professional standards define a disagreement with management as a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditor's report. We are pleased to report that no such disagreements arose during the course of our audit.

Management Representations

We have requested certain representations from management that are included in the management representation letter dated September 19, 2017.

Management Consultation with Other Independent Accountants

In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a "second opinion" on certain situations. If a consultation involves application of an accounting principle to the Plan's financial statements or a determination of the type of auditor's opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.

Other Significant Audit Findings or Issues

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to retention as the Plan's auditors. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our retention.



COMMUNICATION OF INTERNAL CONTROL RELATED MATTERS

Our responsibility under auditing standards with respect to internal control is described above. Had the scope of our audit not been limited as described on page 1, other matters might have come to our attention that would have been reported to you.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct misstatements on a timely basis. A material weakness is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the Plan's financial statements will not be prevented, or detected and corrected on a timely basis.

Our consideration of internal control was for the limited purpose described above and was not designed to identify all deficiencies in internal control that might be material weaknesses. Given these limitations, during our audit, we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

The comments below include references to the Plan sponsor and the Plan's management. The Plan sponsor is defined as the employer responsible for the establishment and maintenance of the Plan; Plan's management are the personnel at the employer who have fiduciary responsibility for the Plan.

During our engagement, the following matters came to our attention that we believe are control deficiencies; however, they do not rise to the level of a significant deficiency or material weakness:

Compensation

The Company should follow the Plan's guidelines with respect to the eligibility of wages for 401(k) deferrals and verify that all wages are being treated consistently.

The Plan Document has established a definition of compensation eligible for elective contributions. During the course of our audit, we noted multiple instances in which the Company did not withhold elective 401(k) contributions from group term life insurance, long-term life insurance, and domestic imputed income, that satisfied the Plan's definition of eligible compensation. The Company should investigate the effects of this with their ERISA counsel.

We also recommend that the Plan's sponsor develop and execute policies and procedures to review the payroll system earnings codes at the beginning of each year to ensure that the proper wage base is being calculated by the payroll system, for purposes of the employee deferral calculation. Additionally, management should periodically review the Plan document's definition of compensation and determine

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if an amendment to the Plan document or a change in policy is necessary.

Management's Response

Energy Trust has worked closely with Moss Adams on the first DOL limited audit of the financial statements and supplemental schedule of the Plan as of and for the year ended December 31, 2016. Through this audit, Moss Adams identified a control deficiency with respect to guidelines for eligibility of wages for 401(k) deferrals. Although the control deficiency is not deemed to be a significant deficiency or a material weakness, we greatly appreciate the recommendation to verify and follow the Plan's guidelines for the eligibility of wages for 401(k) deferrals and to develop and execute policies and procedures to ensure that the proper wage base is being calculated for payroll deductions. Moss Adams has also recommended a periodic review of the Plan document's definition to determine if an amendment or change in policy is necessary.

With respect to eligibility of wages for 401(k) deferrals, we have reviewed the Plan document, specifically the way in which boxes are checked in Section 23. We have discussed the Plan document and our practice with ERISA counsel. We have also surveyed staff to understand their expectations of how we define eligible wages for purposes of calculated 401(k) deferrals. We have considered this information and believe that the way eligible income is defined in the current Plan document reflects a scrivener's error, which omitted the checking of a box to exclude certain non-cash benefits from the deferral calculation. The current documentation is inconsistent with employee expectations. After discussions with counsel, we are currently in the process of amending the Plan document to correct the documentation error. We are also revising our policies and procedures to ensure that Plan documentation is carefully scrutinized on a regular basis to ensure that our practice is in line with Plan definitions. Thank you for bringing this matter to our attention.

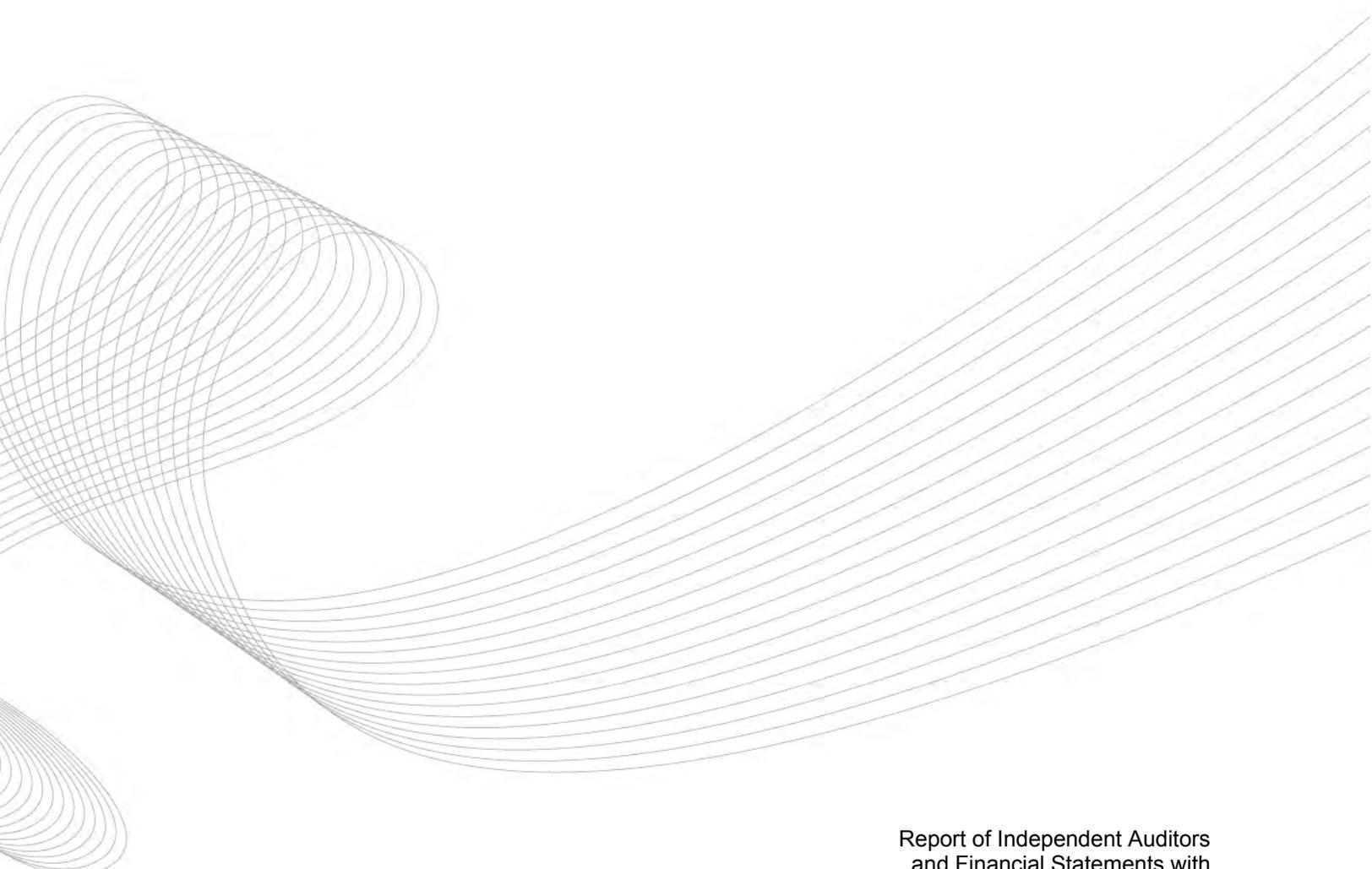
This communication is intended solely for the information and use of management and Plan Administrator, and is not intended to be and should not be used by anyone other than these specified parties.

We were pleased to serve and be associated with the Plan as the independent auditors for 2016. We provide the above information to assist you in performing your oversight responsibilities.

Moss Adams LLP

Portland, Oregon
September 19, 2017

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Report of Independent Auditors
and Financial Statements with
Supplemental Schedules for

**Energy Trust of Oregon, Inc.
Retirement Savings Plan**

December 31, 2016 and 2015

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REPORT OF INDEPENDENT AUDITORS

To the Plan Administrator of
Energy Trust of Oregon, Inc. Retirement Savings Plan

Report on the Financial Statements

We were engaged to audit the accompanying financial statements of Energy Trust of Oregon, Inc. Retirement Savings Plan (the Plan), which comprise the statement of net assets available for benefits as of December 31, 2016, and the related statement of changes in net assets available for benefits for the year then ended, and the related notes to the financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on conducting the audit in accordance with auditing standards generally accepted in the United States of America. Because of the matter described in the Basis for Disclaimer of Opinion paragraph, however, we were not able to obtain sufficient appropriate audit evidence to provide a basis for an audit opinion.

Basis for Disclaimer of Opinion

As permitted by 29 CFR 2520.103-8 of the Department of Labor's (DOL's) Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974 (ERISA), the plan administrator instructed us not to perform, and we did not perform, any auditing procedures with respect to the information summarized in Note 7, which was certified by Reliance Trust Company, the trustee of the Plan, except for comparing such information with the related information included in the financial statements. We have been informed by the plan administrator that the trustee holds the Plan's investment assets and executes investment transactions. The plan administrator has obtained a certification from the trustee as of December 31, 2016, and for the year then ended, that the information provided to the plan administrator by the trustee is complete and accurate.

REPORT OF INDEPENDENT AUDITORS (continued)

Disclaimer of Opinion

Because of the significance of the matter described in the Basis for Disclaimer of Opinion paragraph, we have not been able to obtain sufficient appropriate audit evidence to provide a basis for an audit opinion. Accordingly, we do not express an opinion on these financial statements.

Other Matter

The Schedule H, Line 4(i) – Schedule of Assets (Held at End of Year) as of December 31, 2016 and the Schedule H, Line 4(a) – Schedule of Delinquent Contributions for the year ended December 31, 2016, are required by the DOL's Rules and Regulations for Reporting and Disclosure under ERISA and are presented for the purpose of additional analysis and are not a required part of the financial statements. Because of the significance of the matter described in the Basis for Disclaimer of Opinion paragraph, we do not express an opinion on these supplemental schedules.

Report on Form and Content in Compliance with DOL Rules and Regulations

The form and content of the information included in the financial statements and supplemental schedules, other than that derived from the information certified by the trustee, have been audited by us in accordance with auditing standards generally accepted in the United States of America and, in our opinion, are presented in compliance with the DOL's Rules and Regulations for Reporting and Disclosure under ERISA.

Compilation Report of Independent Accountants on 2015 Financial Statement

Management is responsible for the accompanying statement of net assets available for benefits of the Plan as of December 31, 2015, and the related notes to the financial statements in accordance with accounting principles generally accepted in the United States of America. We have performed a compilation engagement in accordance with Statements on Standards for Accounting and Review Services promulgated by the Accounting and Review Services Committee of the American Institute of Certified Public Accountants. We did not audit or review the 2015 financial statement nor were we required to perform any procedures to verify the accuracy or completeness of the information provided by management. Accordingly, we do not express an opinion, a conclusion, nor provide any form of assurance on the 2015 financial statement.

Mass Adams LLP

Portland, Oregon
September 19, 2017

ENERGY TRUST OF OREGON, INC. RETIREMENT SAVINGS PLAN
STATEMENTS OF NET ASSETS AVAILABLE FOR BENEFITS

	December 31,	
	2016 (Audited)	2015 (Compiled)
ASSETS		
Investments, at fair value		
Registered investment companies	\$ 8,366,761	\$ 7,617,097
Collective trusts	1,104,743	906,521
	9,471,504	8,523,618
Guaranteed investment contract, at contract value	1,393,378	832,887
Total investments	10,864,882	9,356,505
Notes receivable from participants	35,961	35,189
Cash	803	2,767
TOTAL ASSETS	10,901,646	9,394,461
LIABILITIES		
Due to broker	803	2,767
NET ASSETS AVAILABLE FOR BENEFITS	\$ 10,900,843	\$ 9,391,694

ENERGY TRUST OF OREGON, INC. RETIREMENT SAVINGS PLAN
STATEMENT OF CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS
YEAR ENDED DECEMBER 31, 2016

ADDITIONS TO NET ASSETS ATTRIBUTED TO:

Investment income	
Net appreciation in fair value of investments	\$ 519,295
Dividends	264,419
	<hr/>
Net investment income	783,714
	<hr/>
Interest income on loans receivable from participants	1,299
	<hr/>
Contributions	
Participant	762,820
Employer	517,560
Rollovers	48,657
	<hr/>
Total contributions	1,329,037
	<hr/>
Total additions	2,114,050
	<hr/>

DEDUCTIONS FROM NET ASSETS ATTRIBUTED TO:

Benefits paid to participants	601,948
Administrative expenses	2,953
	<hr/>
Total deductions	604,901
	<hr/>

CHANGE IN NET ASSETS 1,509,149

NET ASSETS AVAILABLE FOR BENEFITS

Beginning of year	9,391,694
	<hr/>
End of year	\$ 10,900,843
	<hr/> <hr/>

ENERGY TRUST OF OREGON, INC. RETIREMENT SAVINGS PLAN

NOTES TO FINANCIAL STATEMENTS

Note 1 – Description of Plan

The following description of the Energy Trust of Oregon, Inc. Retirement Savings Plan (the Plan) provides only general information. Participants should refer to the Plan Agreement for a more complete description of Plan provisions.

General – The Plan is a defined contribution plan covering substantially all full-time employees of Energy Trust of Oregon, Inc., and is subject to provisions of the Employee Retirement Income Security Act of 1974 (ERISA). Energy Trust of Oregon, Inc. (the Company) is the Plan’s sponsor and serves as plan administrator.

Eligibility – Employees of the Company are eligible to participate in the Plan after completing three consecutive months of service.

Contributions

Participant contributions – Each year, participants may contribute pretax annual compensation up to the maximum statutory limit. Participants may also elect to make Roth contributions utilizing after-tax contributions. Participants who have attained age 50 before the end of the Plan year are eligible to make catch-up contributions. Participants may also contribute amounts representing distributions from other qualified defined benefit or defined contribution plans. New participants in the Plan are automatically enrolled to defer 3% of their eligible compensation.

Employer matching contributions – The Company may elect to make discretionary matching contributions to the Plan. The matching contributions may not exceed 4% of eligible annual participant compensation. The Company did not approve a matching contribution for the 2016 plan year.

Employer profit sharing – The Company may elect to make discretionary profit sharing contributions to the Plan. Profit sharing contributions are allocated to participants in the same proportion as a participant’s compensation bears to the total of all participants’ compensation. Profit sharing contributions for the year ended December 31, 2016 was \$258,780.

Employer safe harbor – The Company also makes safe harbor contributions equal to 3% of the participant’s eligible compensation, regardless of the employee’s hours of service or employment on the last day of the plan year. The safe harbor contribution for the year ended December 31, 2016 was \$258,780.

Contributions are subject to regulatory limitations.

ENERGY TRUST OF OREGON, INC. RETIREMENT SAVINGS PLAN

NOTES TO FINANCIAL STATEMENTS

Note 1 – Description of Plan (continued)

Participant accounts – Each participant’s account is credited with the participant’s contributions and Company matching contributions as well as allocations of the Company’s profit sharing and safe harbor contributions, and Plan earnings. Participant accounts are charged with an allocation of administrative expenses that are paid by the Plan. Allocations are based on participant earnings, account balances, or specific participant transactions, as defined. The benefit to which a participant is entitled is the benefit that can be provided from the participant’s vested account. Participants direct the investment of their contributions into various investment options offered by the Plan.

Vesting – Participants are vested immediately in their contributions and employer contributions plus actual earnings thereon.

Notes receivable from participants – Participants may borrow from their accounts a minimum of \$1,000 up to a maximum equal to the lesser of \$50,000 or 50% of their vested account balance. The loans are issued by the Plan and secured by the balance in the participant’s account. All loans must be repaid within a period of five years, unless the loan is used to purchase a principal residence, in which case, the loan must be repaid within a reasonable period of time not to exceed fifteen years. Under the terms of the Plan agreement, plan loans will bear a reasonable rate of interest determined by the Plan administrator. Principal and interest is paid ratably through semi-monthly payroll deductions. As of December 31, 2016, the rates of interest on outstanding loans ranged from 3.25% to 3.50% with various maturities through November 2026.

Payment of benefits – On termination of service due to death, disability, or retirement, a participant may elect to receive either a lump-sum amount equal to the value of the participant’s vested interest in his or her account. For termination of service for other reasons, a participant may receive the value of the vested interest in his or her account as a lump-sum distribution. Accounts of terminated participants with balances of less than \$5,000 will be automatically distributed in a lump-sum distribution. The Plan provides hardship distributions which are available only from the participant’s deferrals for the purpose of meeting immediate and heavy financial needs. Participants may elect to take in-service distributions when they reach age 59 ½ or at any time thereafter, even if they have not terminated employment with the Company.

Note 2 – Summary of Significant Accounting Policies

Basis of accounting – The financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America, using the accrual method of accounting.

Use of estimates – The preparation of financial statements in conformity with generally accepted accounting principles requires the use of estimates and assumptions that may affect certain amounts and disclosures. Accordingly, actual results could differ from those estimates.

ENERGY TRUST OF OREGON, INC. RETIREMENT SAVINGS PLAN

NOTES TO FINANCIAL STATEMENTS

Note 2 – Summary of Significant Accounting Policies (continued)

Investment valuation – The investments are reported at fair value and contract value. The Plan’s trustee, Reliance Trust Company, certifies the contract value of the guaranteed investment contract and the fair market value of all other investments. If available, quoted market prices are used to value investments.

Fair value is the price that would be received to sell an asset or paid to transfer a liability (the “exit price”) in an orderly transaction between market participants at the measurement date. See Note 3 for discussion of fair value measurements.

Contract value is the relevant measurement for assets invested in fully benefit-responsive investment contracts because contract value is the amount participants normally would receive if they were to initiate permitted transactions under the terms of the Plan.

Income recognition – Purchases and sales of securities are recorded on a trade-date basis. Dividends are recorded on the ex-dividend date. Interest income is recorded on the accrual basis. The net appreciation in fair value of investments consists of both the realized gains and losses and unrealized appreciation and depreciation of those investments.

Notes receivable from participants – Notes receivable from participants are measured at amortized cost, which represents unpaid principal balance plus accrued but unpaid interest. Delinquent notes receivable from participants are reclassified as distributions upon the occurrence of a distributable event, based on the terms of the Plan Agreement.

Payment of benefits – Benefits are recorded when paid.

Expenses – Certain expenses of maintaining the Plan are paid directly by the Company and are excluded from these financial statements. Fees related to the administration of notes receivable from participants are charged directly to the participant’s account and are included in administrative expenses. Investment related expenses are included in net appreciation of fair value of investments.

Subsequent events – Subsequent events are events or transactions that occur after the statement of net assets available for benefits date but before the financial statements are available to be issued. The Plan recognizes in the financial statements the effects of all subsequent events that provide additional evidence about conditions that existed at the date of the statement of net assets available for benefits, including the estimates inherent in the process of preparing the financial statements. The Plan’s financial statements do not recognize subsequent events that provide evidence about conditions that did not exist at the date of the statement of net assets available for benefits but arose after the statement of net assets available for benefits date and before the financial statements are available to be issued.

The Plan has evaluated subsequent events through September 19, 2017, which is the date the financial statements were available to be issued.

ENERGY TRUST OF OREGON, INC. RETIREMENT SAVINGS PLAN

NOTES TO FINANCIAL STATEMENTS

Note 3 – Fair Value Measurements

The framework for measuring fair value provides a hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (level 1) and the lowest priority to unobservable inputs (level 3).

The three levels of the fair value hierarchy are described as follows:

Level 1 – Inputs to the valuation methodology are unadjusted quoted prices for identical assets or liabilities in active markets that the plan has the ability to access.

Level 2 – Inputs to the valuation methodology include quoted prices for similar assets or liabilities in active markets; quoted prices for identical or similar assets or liabilities in inactive markets; inputs other than quoted prices that are observable for the asset or liability; and inputs that are derived principally from or corroborated by observable market data by correlation or other means. If the asset or liability has a specified (contractual) term, the level 2 input must be observable for substantially the full term of the asset or liability.

Level 3 – Inputs to the valuation methodology are unobservable and significant to the fair value measurement.

The asset or liability's fair value measurement level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Valuation techniques maximize the use of relevant observable inputs and minimize the use of unobservable inputs.

Following is a description of the valuation methodologies used for assets measured at fair value. There have been no changes in the methodologies used at December 31, 2016 and 2015.

Registered investment companies (mutual funds): Valued at the daily closing price as reported by the fund. Mutual funds held by the Plan are open-end mutual funds that are registered with the U.S. Securities and Exchange Commission. These funds are required to publish their daily net asset value (NAV) and to transact at that price.

Collective trusts: Units held in collective trusts (CT) are valued using the net asset value practical expedient (NAV practical expedient) of the CT as reported by the CT managers. The NAV practical expedient is based on the fair value of the underlying assets owned by the CT, minus its liabilities, and then divided by the number of units outstanding.

ENERGY TRUST OF OREGON, INC. RETIREMENT SAVINGS PLAN
NOTES TO FINANCIAL STATEMENTS

Note 3 – Fair Value Measurements (continued)

The following table provides additional information for investments in certain entities that calculate net asset value per share (or its equivalent):

	Fair Value 12/31/16	Fair Value 12/31/15	Redemption Frequency	Redemption Notice Period	Redemption Restrictions
Collective Trusts	\$ 1,104,743	\$ 906,521	Daily	N/A	None

The following tables disclose the fair value hierarchy of the Plan's assets by level as of December 31, 2016 and 2015:

	Fair Value Measurement at December 31, 2016			
	Level 1	Level 2	Level 3	Total
Assets in the fair value hierarchy				
Registered investment companies	\$ 8,366,761	\$ -	\$ -	\$ 8,366,761
Investments measured at NAV (practical expedient)				1,104,743
Investments at fair value				\$ 9,471,504
	Fair Value Measurement at December 31, 2015			
	Level 1	Level 2	Level 3	Total
Assets in the fair value hierarchy				
Registered investment companies	\$ 7,617,097	\$ -	\$ -	\$ 7,617,097
Investments measured at NAV (practical expedient)				906,521
Investments at fair value				\$ 8,523,618

The valuation methods used by the Plan may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair values. Furthermore, although the Plan believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different fair value measurement at the reporting date.

Note 4 – Guaranteed Investment Contract with The Standard Insurance Company

The Plan entered into a fully benefit-responsive investment contract (FBRIC) with The Standard Insurance Company (Standard). Standard maintains the contributions in a general account. The account is credited with earnings on the underlying investments and charged for participant withdrawals and administrative expenses. The contract issuer is contractually obligated to repay the principal and a specified interest rate that is guaranteed to the Plan. The crediting rate is based on a formula established by the contract issuer but may not be less than 1%. The crediting rate is reviewed on a quarterly basis

ENERGY TRUST OF OREGON, INC. RETIREMENT SAVINGS PLAN

NOTES TO FINANCIAL STATEMENTS

Note 4 – Guaranteed Investment Contract with The Standard Insurance Company (continued)

for resetting. The FBRIC does not permit the insurance company to terminate the agreement prior to the scheduled maturity date.

The contract meets the FBRIC criteria and therefore is reported at contract value. Contract value is the relevant measure for FBRICs because this is the amount received by participants if they were to initiate permitted transactions under the terms of the Plan. Contract value, as reported to the Plan by Standard, represents contributions made under the contract, plus earnings, less participant withdrawals and administrative expenses. Participants may ordinarily direct the withdrawal or transfer of all or a portion of their investment at contract value.

The Plan's ability to receive amounts due is dependent on the issuer's ability to meet its financial obligations, which may be affected by future economic and regulatory developments.

Certain events might limit the ability of the Plan to transact at contract value with the issuer. Such events include the following: (1) amendments to the plan documents (including complete or partial plan termination or merger with another plan), (2) changes to the Plan's prohibition on competing investment options or deletion of equity wash provisions, (3) bankruptcy of the plan sponsor or other plan sponsor events (for example, divestitures or spin-offs of a subsidiary) that cause a significant withdrawal from the plan, or (4) the failure of the trust to qualify for exemption from federal income taxes or any required prohibited transaction exemption under ERISA, (5) premature termination of the contract. No events are probable of occurring that might limit the Plan's ability to transact at contract value with the contract issuer and that also would limit the ability of the Plan to transact at contract value with the participants.

Note 5 – Tax Status

The plan document is a volume submitter profit sharing plan with cash or deferred arrangement (CODA) that received a favorable opinion letter from the Internal Revenue Service on March 31, 2014, which stated that the plan, as then designed, was in accordance with applicable sections of the Internal Revenue Code (IRC). The plan administrator believes that the Plan is designed and is currently being operated in compliance with the applicable requirements of the IRC.

In accordance with guidance on accounting for uncertainty in income taxes, the plan administrator has evaluated the Plan's tax positions and does not believe the Plan has any uncertain tax positions that require disclosure or adjustment to the financial statements. The Plan is subject to routine audits by taxing jurisdictions; however, there are currently no audits for any tax periods in progress.

ENERGY TRUST OF OREGON, INC. RETIREMENT SAVINGS PLAN

NOTES TO FINANCIAL STATEMENTS

Note 6 – Risks and Uncertainties

The Plan invests in various investment securities. Investment securities are exposed to various risks, such as interest rate, market volatility, and credit risks. It is reasonably possible, given the level of risk associated with investment securities, that changes in the values of the investments in the near term could materially affect a participant's account balance and the amounts reported in the financial statements.

Note 7 – Information Certified By the Trustee

The plan administrator has elected the method of compliance permitted by 29 CFR 2520.103-8 of the Department of Labor's Rules and Regulations for Reporting and Disclosure under ERISA. Accordingly, Reliance Trust Company, the trustee of the Plan, has certified to the completeness and accuracy of:

- Investments reflected on the accompanying statements of net assets available for benefits as of December 31, 2016.
- Net appreciation in fair value of investments, dividends, and interest reflected on the accompanying statement of changes in net assets available for benefits for the year ended December 31, 2016.
- Investments reflected on the schedule of assets (held at end of year), except for participant loans.

Note 8 – Party-in-Interest Transactions

Plan investments include shares of registered investment company funds managed by Reliance Trust Company. Reliance Trust Company is the trustee of the Plan; therefore, transactions with this entity qualifies as exempt party-in-interest transactions. Fees paid by the Plan for investment management services to Reliance Trust Company were \$2,952 for the year ended December 31, 2016.

Note 9 – Plan Termination

Although it has not expressed any intention to do so, the Company has the right to terminate the Plan and discontinue its contributions at any time.

Note 10 – Reconciliation to Form 5500

The Form 5500 has certain items that differ from amounts shown on the accompanying financial statements. These differences relate to classification only and have no effect upon net assets available for benefits for either period.

ENERGY TRUST OF OREGON, INC. RETIREMENT SAVINGS PLAN
NOTES TO FINANCIAL STATEMENTS

Note 11 - Delinquent Contributions

As disclosed in the accompanying supplemental schedule, certain employee deferrals were not remitted to the Plan within the timeframe required by the Department of Labor. The Company has determined the amount of related lost earnings and has remitted these amounts to participants' accounts subsequent to year end.

SUPPLEMENTAL SCHEDULES

ENERGY TRUST OF OREGON, INC. RETIREMENT SAVINGS PLAN

EIN: 93-1313663

PLAN #: 001

SCHEDULE H, LINE 4(i) – SCHEDULE OF ASSETS (HELD AT END OF YEAR)

DECEMBER 31, 2016

(a)	(b) Identity of issue, borrower, lessor or similar party	(c) Description of investment, including maturity date, rate of interest, collateral, par or maturity value	(d) Cost	(e) Current value
*	Standard Stable Asset Fund A	Guaranteed Investment Contract	**	1,393,378
	Vanguard 500 Index Admiral	Registered Investment Company	**	1,295,286
	Vanguard Balanced Index Adm	Registered Investment Company	**	1,074,901
	American Beacon LG Cap Value Institutional	Registered Investment Company	**	954,478
	PIMCO Total Return Institutional	Registered Investment Company	**	911,111
	American Funds Europacific R6	Registered Investment Company	**	606,158
	Vanguard Mid Cap Index Admiral	Registered Investment Company	**	595,707
	Vanguard Small Cap Index Admiral	Registered Investment Company	**	544,840
	Vanguard Star Investment	Registered Investment Company	**	510,157
	Mainstay Large Cap Growth R6	Registered Investment Company	**	505,812
	Neuberger Berman Socially RSPNS Institutional	Registered Investment Company	**	356,461
	PIMCO Total Return ESG Fund Institutional	Registered Investment Company	**	295,778
	JPMorgan Mid Cap Value	Registered Investment Company	**	198,257
	Tiaa-Cref Social Choice Equity Institutional	Registered Investment Company	**	150,538
	Hartford Mid Cap	Registered Investment Company	**	126,417
	Vanguard Developed Markets Index Admiral	Registered Investment Company	**	75,904
	Green Century Balanced Fund	Registered Investment Company	**	65,667
	Oppenheimer Developing Markets	Registered Investment Company	**	43,825
	Templeton Global Bond R6	Registered Investment Company	**	29,262
	Wells Fargo Advantage Special Mid Cap Value	Registered Investment Company	**	26,202
*	Reliance Advisory Trust Investment 80 Portfolio	Collective Trust Fund	**	330,832
*	Reliance Advisory Trust Investment 40 Portfolio	Collective Trust Fund	**	326,893
*	Reliance Advisory Trust Investment 70 Portfolio	Collective Trust Fund	**	175,221
*	Reliance Advisory Trust Investment 99 Portfolio	Collective Trust Fund	**	167,779
*	Reliance Advisory Trust Investment 60 Portfolio	Collective Trust Fund	**	104,018
	Participant loans	Interest rates range from 3.25% to 3.50%, maturing through November 2026	-0-	35,961
				<u>\$ 10,900,843</u>

* Indicates party-in-interest.

** Information is not required as investments are participant directed.

ENERGY TRUST OF OREGON, INC. RETIREMENT SAVINGS PLAN

EIN: 93-1313663

PLAN #: 001

SCHEDULE H, LINE 4(a) – SCHEDULE OF DELINQUENT CONTRIBUTIONS

DECEMBER 31, 2016

Participant Contributions Transferred Late to Plan	Total that Constitute Nonexempt Prohibited Transactions			Total Fully Corrected Under VFCP and PTE 2002-51
	Contributions Not Corrected	Contributions Corrected Outside VFCP	Contributions Pending Correction in VFCP	
Check here if Late Participant Loan Repayments are included: <input checked="" type="checkbox"/>	<u>\$ 66,278</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>

Tab 4

Evaluation Committee Meeting

October 3, 2017 12:00 pm-3:00 pm

Attendees

Evaluation Committee Members

Alan Meyer, Board Member, Committee Chair

Susan Brodahl, Board Member

Lindsey Hardy, Board Member (phone)

Jennifer Light, Expert Outside Reviewer

Ken Keating, Expert Outside Reviewer

Jamie Woods, Expert Outside Reviewer

Dulane Moran, Expert Outside Reviewer

Janine Benner, Board Member and Oregon Department of Energy Special Advisor (phone)

Energy Trust Staff

Michael Colgrove, Executive Director

Steve Lacey, Director of Operations

Fred Gordon, Director of Planning and Evaluation

Mike Bailey, Engineering Manager

Jackie Goss, Sr. Planning Engineer

Kenji Spielman, Planning Engineer

Phil Degens, Evaluation Manager

Sarah Castor, Evaluation Sr. Project Manager

Dan Rubado, Evaluation Project Manager

Erika Kociolek, Evaluation Project Manager

Andy Griguhn, Planning & Evaluation Operations Analyst

Spencer Moersfelder, Planning Manager

Andy Eiden, Planning Project Manager

Andy Hudson, Planning Project Manager

Peter Schaffer, Planning Project Manager

Sue Fletcher, Sr. Manager, Communications and Customer Service

Shelly Carlton, Strategic Marketing Manager

Peter West, Director of Energy Programs

Thad Roth, Residential Sector Lead

Marshall Johnson, Sr. Residential Program Manager

Mark Wyman, Residential Program Manager

Scott Leonard, Residential Sr. Project Manager

Susan Jamison, Residential Marketing Manager

Amanda Potter, Industry and Agriculture Sector Lead

Other Attendees

Rabi Hassan, Portland State University

Marc Wasserman, CLEAResult

Bruce Manclark, CLEAResult

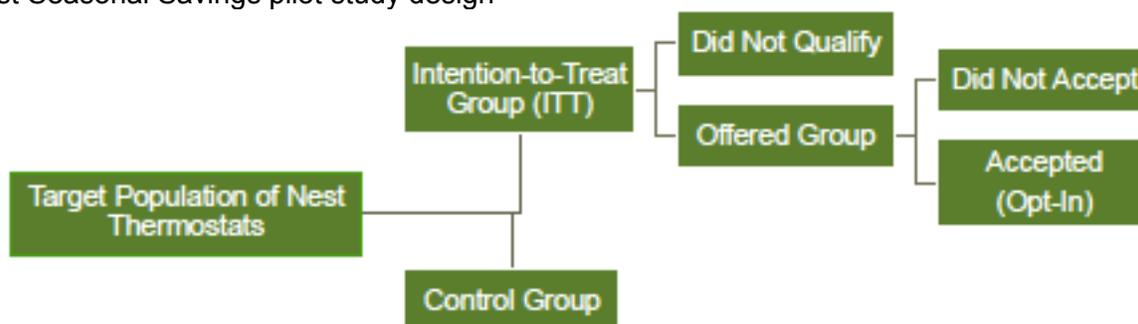
Brien Sipe, CLEAResult

1. Nest Seasonal Savings Pilot Evaluation

Presented by Dan Rubado

Background: The Nest Seasonal Savings pilot started in 2016. Seasonal Savings is a product offered by Nest to utility programs. It is an automated thermostat optimization service developed for existing Nest customers. The service involves Nest sending out notifications during the heating and cooling seasons, asking customers to participate. Customers can opt-in if they wish. Nest then analyzes the schedule of customers opting-in and makes small adjustments to scheduled setpoints over a three-week period as it figures out what setpoints customers will accept; note that adjustments made by Nest can be overridden. The theory is that small changes to setpoints do not significantly impact customer comfort, but can produce energy savings in aggregate. The Existing Homes program implemented a pilot with Nest to test a summer and winter deployment of Seasonal Savings starting in 2016 and continuing into 2017. Energy Trust paid Nest \$3 per opt-in participant per season – there was no cost to participants. Alan asked why Energy Trust paid Nest for this service. Marshall responded that Energy Trust hired Nest to engage customers with a Nest thermostat with an energy efficiency offering. Nest's business model is not providing energy efficiency to customers beyond the features included in the device itself, which we found does provide energy savings. Energy Trust is paying Nest \$3 per opt-in participant, in addition to a setup fee, to take the time to engage a customer who may not otherwise be engaged in our programs, to obtain energy savings. Dan added that Seasonal Savings is a service Nest markets to utilities as generating energy savings. Alan commented that it seems somewhat unusual for us to pay a for-profit company to develop a service. Dan noted that the Service was only delivered to existing Nest customers, and Sarah clarified that Energy Trust did not pay for the development of the service; we are taking advantage of it. Ken commented that paying for data in order to do analysis is something we often wish we could do on the commercial side. Dan continued, noting that Energy Trust worked with Nest to test a summer and winter deployment, and Nest set up the pilot as a randomized encouragement design (RED) study so that we could analyze impacts based on runtime data collected by Nest (runtime of heating and cooling systems connected to a Nest thermostat). Nest handled the randomized assignment to study groups, analyzed thermostat data, and reported energy savings for each season to Energy Trust. The RED study design is shown in the graph below.

Nest Seasonal Savings pilot study design



As the graph shows, Nest started out with a target population of Nest thermostats installed in a list of zip codes in Energy Trust's service territory that were connected to forced air furnace heating and cooling systems. Nest then randomly assigned thermostats to treatment and control groups. Thermostats assigned to the treatment group were screened to ensure that they were

connected to forced air heating or cooling systems, that heating or cooling schedules were operating, that online accounts were set up, and that they were connected to the internet. Thermostats not meeting these screening criteria were deemed not to qualify, and the ones that did qualify received an offer to participate in Seasonal Savings. Of those that qualified, some opted-in and some did not.

Evaluation Goals: The main research questions were: what are heating and cooling savings of Seasonal Savings, what is the persistence of savings, and are there high opt-in rates and customer acceptance?

The evaluation objectives were to document the implementation of the pilot, including successes and lessons learned; assess customer satisfaction and the comfort of their home; assess the validity of Nest's reported energy savings and persistence; independently estimate energy savings using utility data; and determine if Seasonal Savings can achieve cost-effective, non-equipment HVAC savings.

Evaluation Methods: Energy Trust hired Apex Analytics to evaluate the pilot. They conducted in-depth interviews with staff, and conducted two online customer surveys (one for the summer deployment, and one for the winter deployment). We did not receive any identifying customer information, so we had to rely on Nest to recruit survey participants by e-mail. We provided Nest with e-mail content and a survey link unique to each of the four study groups (opt-in, opt-out, do not qualify, and control) so that we could track which group each person was in and ask tailored questions. The survey collected home address (which allowed us to gather billing data), as well as feedback on customers' experience with Nest in general, satisfaction with the Seasonal Savings pilot, comfort, and reasons for opting out of the pilot. For the summer survey, we also included an interval data release for PGE customers; this enabled us to get additional data from PGE for a subset of customers. It was not as useful as we had hoped, but we got it and used it. The last step was to validate Nest savings for the summer and winter deployments.

The idea behind a RED study is to have randomized treatment and control groups and compare them. However, not everyone in the treatment group gets treated, so we have to adjust the savings based on the percentage of people that actually did get the treatment.

Nest provided a memo documenting methods and findings, as well as a de-identified dataset and analysis code. All of this was reviewed to understand what Nest did and how they did it, and any assumptions they made. We checked the randomization as best we could with the variables they provided, as well as the structure of the data and the variables in it. We also reviewed key assumptions (the major one was average HVAC capacity, which was used to convert runtime savings into energy savings) and then using the de-identified Nest data, we independently re-estimated summer and winter savings after making a few tweaks to the methods and updating assumptions. Lastly, we conducted a billing analysis to estimate AC and furnace capacity and gas savings. We didn't try to estimate summer electric savings, since they ended up being too small to analyze using billing data.

The billing analysis involved obtaining monthly utility usage data for the subset of homes for which address was collected through the surveys, and obtained interval data for a subset of PGE customers that signed a data release as part of the summer survey. We also gathered weather data from 13 weather stations across the state. Using billing and runtime data, we estimated the average AC connected load and average furnace capacity.

The estimated summer cooling usage came from regression models analyzing monthly electric utility data and electric interval data against weather data. The estimated average winter gas heating savings came from regression models analyzing monthly gas utility data, weather data, and treatment group information. Using monthly gas utility data was less precise than using runtime data to estimate energy savings, but provided a check on the runtime analysis performed by Nest that was independent. We likely won't base savings on this analysis, but it is a good way to validate the savings from the runtime analysis.

The table below shows the sample sizes for the summer and winter deployments. As you can see, the size of the control and treatment groups is large in both deployments, although there are slightly more in the winter deployment. In the summer deployment, there is a big drop; only 59% of the treatment group qualified to participate, because many of them never activated their AC that summer, and so were never asked if they wanted to participate. On the other hand, most people turned on their heating system in the winter, which is why the qualification rate is so much higher (94%). Fred asked if the reason for the low qualification rate in the summer deployment was due to a lack of AC or more room AC instead of central AC. Dan responded that it could have been both, although Nest supposedly screened for people that had a central cooling system before they randomized the study groups. Marshall commented that the summer deployment occurred during a mild summer in Oregon; there was one initial heat wave, but otherwise the weather during the deployment was relatively mild and many people may not have needed to use their AC.

Among the people that did qualify, the opt-in rate was high; around 80% for both the summer and winter deployments. The effective opt-in rate (which includes folks that did not qualify) was 47% for the summer deployment and 73% for the winter deployment.

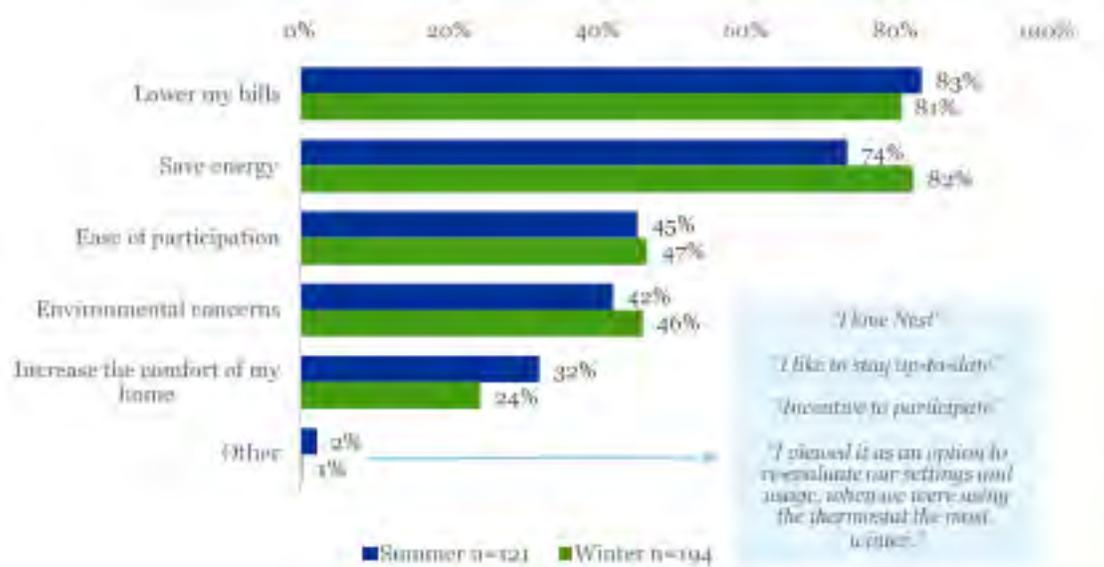
Staff Feedback: Staff reported that the pilot implementation ran smoothly and from their perspective, the pilot was a success. The package service that Nest provided made implementation simple, but limited customization (e.g., of messaging and branding). Nest provided transparent and accurate information about the pilot status (e.g., the number of opt-ins, the pricing for each opt-in, and ultimately the energy savings and the data and methods used to estimate energy savings). Staff noted that the service was affordable; they mentioned that it seemed that Nest built the value of the energy savings into their pricing and felt that the service would be cost-effective by default if it worked. One issue that came up is that Nest is unable to individually identify Energy Trust customers (they do not collect data on customers' exact locations), so the program couldn't target people that were known to be Energy Trust customers. The program provided Nest with a list of zip codes where most customers are likely served by Energy Trust, but we were not able to confirm that assumption. There was also a slight mix-up in messaging between PGE's demand response project, which they are working on with Nest, and Energy Trust's Seasonal Savings pilot, which occurred simultaneously.

Survey Results: Surveys were conducted for the winter and summer deployments; surveys were completed with just over 600 customers in each deployment. The response rate to the summer survey was 8% and the response rate to the winter survey was 5%. Surveys were completed with respondents from each of the four study groups, although Nest did not send out survey recruitment e-mails to the treatment – do not qualify group in the summer (they did in the winter).

The survey asked opt-ins about their motivations for participating. The graph below shows the results; note that blue represents summer and green represents winter. Most respondents

indicated that they were motivated by lowering their energy bills and saving energy. Further down the list were ease of participation and environmental concerns.

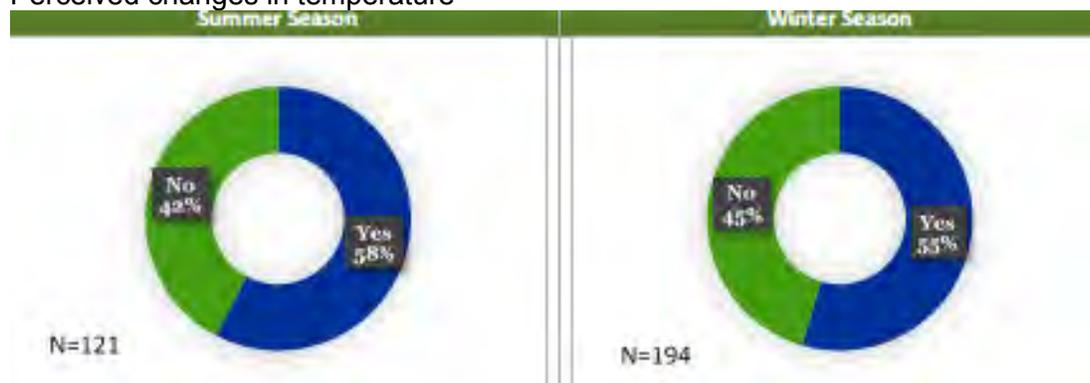
Motivations for participating



Shelly asked about the geographic distribution of pilot participants. Dan commented that pilot participants were spread across the state. Marc commented that pilot participants were concentrated in dual-fuel areas, mostly the Willamette Valley, although the summer season included electric-only territory such as Southern Oregon, the coast, and Eastern Oregon.

The survey also asked respondents about perceived changes in temperature after enabling Seasonal Savings. The graph below shows the results. A majority of respondents reported that they noticed a change in temperature. Those people who noticed tended to make changes to their thermostat settings and override the Seasonal Savings setpoints more frequently than people that did not notice. The effect was slightly stronger among winter participants.

Perceived changes in temperature



Another question in the survey asked respondents about the perceived comfort of their home after enabling Seasonal Savings. The graph below shows the results. Over half of respondents said that they were somewhat less comfortable or much less comfortable after enabling the

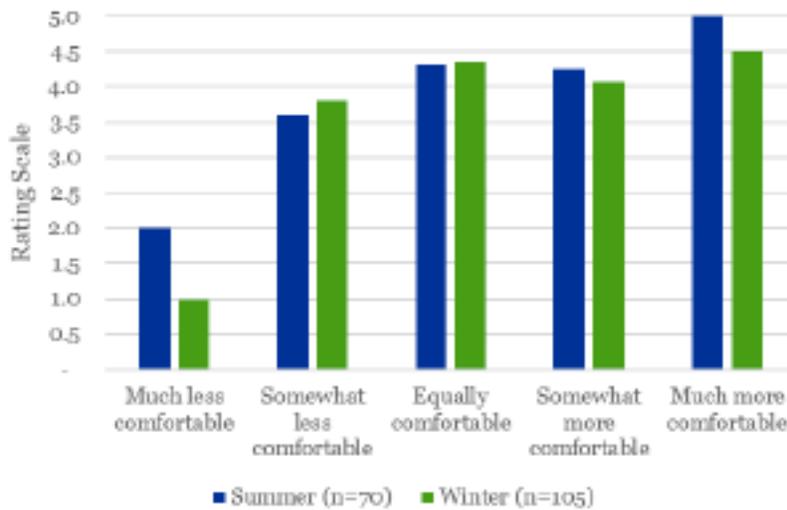
service, with the majority saying that they were somewhat less comfortable. This could potentially be an issue.

Perceived comfort of home



The graph below shows respondent satisfaction with Seasonal Savings by how comfortable respondents said they were after enabling the service. Overall average satisfaction with Seasonal Savings was 4.1 in summer and 4.2 in winter, using a 5-point scale where 1 is not at all satisfied and 5 is very satisfied. People that reported being much less comfortable were generally not satisfied with the service. We can see that there is a positive correlation between perceived comfort and satisfaction.

Satisfaction with Seasonal Savings by perceived comfort



The survey asked respondents in all four study groups about their satisfaction with the Nest overall. Average satisfaction with Nest overall is quite a bit higher than average satisfaction with the Seasonal Savings service.

The survey also asked people who opted out why they opted out. A large majority did not recall opting out. This could be due to another person in the household opting out, never seeing the

invitation to participate, not remembering opting out, or opting out in error. Of the people that did remember opting out, the primary drivers were not wanting Nest to make changes to thermostat settings, not wanting to make changes that would impact the comfort of their home, and not wanting to receive solicitations on their thermostat. Alan asked what action was needed to opt out. Dan responded that selecting “no” in response to the invitation to participate was all that people needed to do to opt out. Marshall commented that it is very easy to opt out, so people may not remember. Kenji asked about the differences between what Nest does as part of Seasonal Savings versus what Nest does as part of the basic unit. Dan responded that the base Nest software allows customers to select the setpoints and creates heating and cooling schedules based on their preferred setpoints. When the thermostat notices no one is home, it will set back the temperature to the “away” settings. With Seasonal Savings, Nest makes automatic adjustments to the values of setpoints in an attempt to reduce energy consumption further without noticeably affecting comfort.

Energy Savings Results: Dan noted that the report contains a lot of analysis regarding energy savings; today we’ll be discussing the results and highlighting what is important and what’s not important.

For the summer season runtime analysis, the evaluator reviewed the analysis performed by Nest and then re-ran the analysis, making some small changes to assumptions and a few tweaks. The report goes into detail about the differences between Nest’s analysis and the analysis performed by the evaluator; we won’t go into detail about those differences here. The runtime regression models estimated a 0.38% reduction in cooling runtime for the treatment group overall; this was adjusted based on the opt-in rate to get the opt-in reduction in cooling runtime, which was 0.81%. We took the AC run hours for the treatment period (168 hours) to estimate the average runtime reduction for the opt-in group, which was 1.4 hours (not a whole lot). The estimated AC equipment size was 3 kW per thermostat. Using all of that information, the average kWh savings for the summer season per thermostat was estimated to be 4.1 kWh, which is very small, and may not be statistically significant.

Given that the pilot occurred during a mild summer, we looked at the association between runtime and weather, and weather-normalized the data, to see what savings might be in a more typical year. The bottom line is that when we did this, average kWh savings for the summer season per thermostat were estimated to be as much as 7.7 kWh, which is still very low. The other analysis performed was looking at savings by quartile of cooling use, with the thought being that on average, savings may be low, but perhaps customers with more AC use saw larger savings. There was not a clear trend indicating that higher AC use translated to higher savings.

For the summer season billing analysis, we had 572 homes with monthly electric billing data and of those, 140 also had electric interval data. Since the runtime analysis found that savings were so low, we didn’t attempt to do analysis using billing data, which would yield less precise savings estimates. Instead, we focused on validating the estimates of AC equipment size and cooling loads. We calculated the average connected AC load as the ratio of kWh per CDD and runtime per CDD; the average connected kW load turned out to be 3 kW, which aligned with what we found using interval data as well. This was used as an input for the runtime analysis savings estimate. We looked at the AC loads around the state and estimated a population-weighted, weather-normalized average, which was 581 kWh per year; this varied substantially around the state. Electrically-heated homes use, on average, around 16,000-17,000 kWh per year; 580 kWh is a very small piece of the overall pie, suggesting that the savings potential is very small. Again, this does vary around the state, and some areas have more cooling loads

and more savings potential. It's worth noting that this study was heavily weighted towards the Willamette Valley.

Marshall asked if cooling savings are included in the thermostat measure. Dan responded that they are not included in the measure. Marshall asked if it is worth considering including cooling savings in the measure moving forward. Dan responded that there could be cooling savings from Nest installations; such savings have been detected in other climate zones, but we haven't been able to detect that in our smart thermostat evaluations, although that's not to say that they aren't there. Marshall commented that at \$3 per participant, the pilot savings are not cost-effective, but if we thought that there was some level of cooling savings for the base thermostat, that might be a way to support cooling savings in a cost-effective manner. Dan responded that programs and Planning and Evaluation can talk more about quantifying cooling savings from smart thermostat installations. Peter asked what level of cooling savings are needed to make Seasonal Savings cost-effective? Dan responded that he didn't know offhand. Fred added that we currently don't know the value of summer savings. Peter noted that some customers in our service territory have warmer summers than the Willamette Valley; this may be a useful tool for targeted areas with warmer summers. Dan responded that in warmer parts of the state, savings may be greater than what we observed through this pilot. Jackie asked if the \$3 fee per opt-in was per deployment, or per year. Dan responded that it is per deployment.

Alan asked if the program needs to continue to pay Nest \$3 per opt-in moving forward if it has been proven to work, and for turning on an algorithm. Marshall commented that the \$3 fee is very low for this type of service. The program is working on a second study that engages other types of devices and the fee is more like \$10. Nest has a proprietary product and is selling a service with a one-year measure life. They are providing reporting, data, and analysis in addition to that service. Alan noted that it seems strange that Nest would not provide this service to all of their customers, and instead turn it on for a fee.

Jamie commented that he is not sure there is any cooling effect. For randomized encouragement design studies, instrumental variable regressions are often used. Without them, results may be biased up; the numbers presented likely represent the upper bound. Ken noted that earlier in the presentation, it was mentioned that summer savings may not be statistically significant. The point estimate is above zero; it would be useful to see the distribution of savings to see if that is positive. Jamie commented that instrumental variable regressions remove bias. Dan responded that the entire randomized treatment and control groups are included in the analysis.

Fred commented that the participants in the study are likely representative of people who will participate. Mike B. agreed, noting that the pilot was a test of who would likely participate in a program; we would not claim savings for those outside of the program. Dulane commented that the savings may not be an upper bound because the study randomly assigned people; it may be that those people have more to gain versus people that opt-in because they are price sensitive or environmentally minded. Jamie noted that we don't know the direction of the bias, but these types of models typically make savings look better, as compared to instrumental variable regressions.

The winter season runtime analysis estimated that the heating hours for gas furnaces was 577 on average, and the heating hours for electric heating equipment (mostly heat pumps and some electric furnaces) was 848 on average. The average runtime reduction per opt-in was derived from regression analysis on runtime, and found to be 4.7% for both gas and electric. Using assumptions about equipment size (for gas furnaces and fans, 65 kBtu/hour and 0.56 kW and

for electric heating systems, 3 kW) we found savings of 18 therms and 15 kWh for gas furnaces, and 121 kWh for electric heating systems (primarily heat pumps). Ken asked if the 3 kW represents the size of the equipment including fans. Dan responded that it includes fans; we aren't able to distinguish the fan from other aspects of the heating system. Thad asked for clarification about how we came up with estimates of equipment size. Dan responded that those estimates come from billing data, and align closely with what we understand to be in the field from other sources. However, the estimated equipment size in this analysis is specific to the study population. Marshall asked if the electric savings of 121 kWh includes fan savings. Dan confirmed that it does.

For the winter season billing analysis, we had 571 homes with monthly gas billing data that were put into a panel regression model to estimate the impact. The model found 0.1 therms per day per home over the winter deployment. The opt-in correction factor of 72% was applied, and the daily impact was extended to the entire heating season to obtain savings of 21.5 therms per opt-in thermostat. A PRISM model, which weather-normalizes usage data and allows for each site to have its own reference temperature, was also used to estimate savings, and found 32.8 therms per opt-in thermostat. These estimates confirm the runtime results, but are not as precise because for the billing analysis monthly data is being used and we have a lower sample size, whereas for the runtime analysis, we used five-minute data for thousands of people.

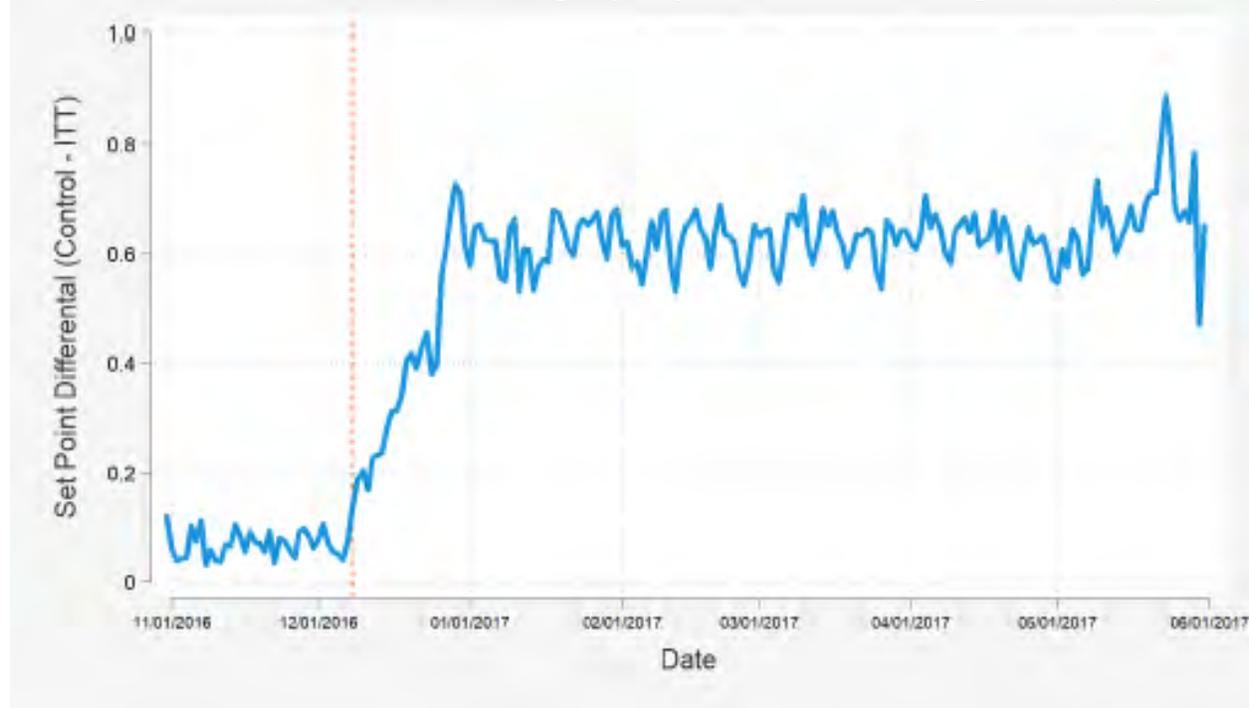
We used information from the surveys to do a bit of subgroup analysis. We found that an increase in the number of occupants in the house had a negative impact on Seasonal Savings, an increase in the square footage of the house had a negative impact on Seasonal Savings, as did an increase in the amount of time the Nest thermostat had been installed. We also found that if the Nest thermostat controlled all heating systems in the home (as opposed to a portion of the heating systems), savings tended to be higher. If the respondent remembered signing up for Seasonal Savings, savings tended to be higher. And if a respondent reported overriding the setpoint, savings tended to be lower.

Jamie asked about the relationship between square footage and savings, and commented that it seemed counterintuitive. Dan commented that larger homes tend not to do as well with Nest; occupancy detection doesn't work quite as well. That could be at play. Also, in some larger homes, there may be multiple thermostats; in this study, there were an average of 1.07 thermostats per home. More occupants in larger homes may also override the adjustments made through Seasonal Savings more frequently.

The last piece of the analysis was estimating average furnace capacity, which we won't go into due to time.

We wanted to explore the persistence of savings over time. At the time the analysis was conducted, we did not have the service out in the field long enough to analyze year over year persistence. The graph below shows, for the winter deployment, the average difference in setpoints between the treatment and control groups. The red line marks the start of the deployment ramp-up period. The right-most portion of the graph contains more variation because people are not heating at the end of the season.

Difference between control and treatment group setpoints before and during winter deployment



The graph shows that the effect of Seasonal Savings does not degrade over time, as measured by what people's setpoints are and how they compare to the control group. Within a given deployment, savings do appear to persist across the entire season. Theoretically, setpoints do not change unless people override them, and when heating schedules are reactivated in the subsequent heating season, these setpoints will still be in effect the following year, unless people change or override them. We will have to do additional analysis to confirm persistence.

Conclusions and Recommendations: The pilot ran smoothly and participants opted-in at a high rate (80%) and attrition was low. The recruitment process was imperfect; it is possible that non-Energy Trust customers were included in the pilot. The evaluator recommended more targeted recruitment strategies. Participants showed high satisfaction with Nest thermostats overall and lower comfort due to Seasonal Savings. The evaluator felt that highlighting energy savings and lower bills in customer communications would help downplay the potential negative effects on comfort. The evaluator validated Nest's runtime savings. Cooling savings were very low, and cooling usage was estimated to be less than 1,000 kWh per home for a typical year in Oregon. The evaluator recommended being selective in pursuing measures that target residential AC, because they may not be cost-effective. Winter season runtime savings were found to be precise, robust, and substantiated by billing analysis. The evaluator recommended using the runtime analysis results for winter season gas savings, which amount to 17.8 therms. The evaluator suggested that runtime analysis should be the primary impact evaluation method, unless billing data can be obtained for all participants in the future. Finally, the evaluator recommended continuing winter Seasonal Savings in the future to capture additional heating savings. The study found that savings persisted throughout the season and may continue into the following year. They recommended conducting a follow-up analysis of the next winter season.

Energy Trust Take: Staff feel that the program needs to keep an eye on reduced participant satisfaction and comfort levels. While cooling savings are not there, heating savings were impressive and are likely cost-effective, even with one-year persistence. Nest's analysis methods, which use runtime data, appear to be robust and can be relied on to get the savings estimates we need to claim savings. Given these results, the program can roll-out winter Seasonal Savings at full scale.

Marshall noted that there are a number of installed Nest thermostats in Energy Trust's service territory, and asked if the program could offer this to any customers that want to opt-in, rather than randomly assigning thermostats into treatment and control groups. Dan responded that we probably still want to have a control group for each individual season, however, the control group could be smaller, to maximize the number of customers to whom the service is provided. Shelly asked if there was any other method for measuring Seasonal Savings participants' comfort, noting that web surveys may not be the best way to capture this information. Dan responded that we cannot reach these customers any other way; we have to go through Nest and use e-mail. Dan noted that when asked about their experience with Nest in general, comfort was greater than when we asked them about their experience with Seasonal Savings. There is not a huge difference, but there is a difference. Alan asked how "opt-in" is defined. Dan responded that if a customer opts-in, they are considered to be an "opt-in", even if they later opt-out. Customers can easily choose to opt out at the beginning, but once you opt in, you can either opt out by going into the thermostat settings, or by overriding the changes Nest makes to your thermostat manually. Either way, once you opt in, you are considered to be an opt-in for the length of the deployment.

Jamie asked if we compared responses from those customers who forgot that they opted in to those that remembered they opted in; that may provide a better comparison.

Jennifer commented that the fact that we see persistence of savings over time means that people are not too uncomfortable. Dan commented that the theory behind the service is that small changes to setpoints are made during unoccupied hours, when people are not in their homes and will not notice. Changes during occupied hours are not the main changes being made through Seasonal Savings. Ken commented that participants may come home to colder homes. Dan noted that the average changes being made are less than 1 degree Fahrenheit. These are not large changes. Kenji asked about the customers that reported increased comfort due to Seasonal Savings. Dan hypothesized that one person may have opted-in to the program while a different person responded to the survey.

Dulane asked if Nest provided information about participants' existing settings. Dan responded that the report contains information about an analysis we performed regarding participant setpoints and changes made via Seasonal Savings.

Dan noted that the Existing Homes program will embark on a new pilot effort for the upcoming heating season, with the same idea and concept as the Nest Seasonal Savings pilot, but using a different vendor. PGE is doing a demand response project with the vendor, and Energy Trust had the opportunity to piggyback on PGE's demand response effort; we will be using the same customer group, and testing out the vendor's thermostat optimization service while the demand response effort is occurring. We will be doing our own randomized study on the same group of people, leveraging PGE's demand response effort. The study will be a randomized controlled trial rather than a randomized encouragement design because the terms and conditions signed by participants that opted-in to PGE's demand response project allow Energy Trust permission

to turn on the thermostat optimization service for a random group of participants in the demand response project.

Susan B. asked if it makes sense for the service to make larger changes in temperature to drive more savings – increasing setpoints by one degree seems very subtle. Dan responded that the service is intentionally making very small changes; the goal is to make the changes acceptable to participants. Sarah commented that the service has to balance making meaningful changes that save energy with making sure that a sufficient number of people do not opt-out of the program. Phil agreed, noting that small savings that are sustainable are better than large savings that are not sustainable. Marshall commented that this service is a unique tool for the program, allowing it to obtain 125,000-150,000 therms at a low cost. It offsets measures that cost more, such as insulation. It also provides gas savings that are much cheaper than OPower, which is a similar tool, but focuses more on behavioral savings and requires more direct communications with participants. Fred noted that programs are looking more and more at controls and software-as-a-service providers, and seeing a lot of growth potential in this area to help maintain savings volume.

2. Short Take: Heat Pumps in Manufactured Homes Pilot Billing Analysis

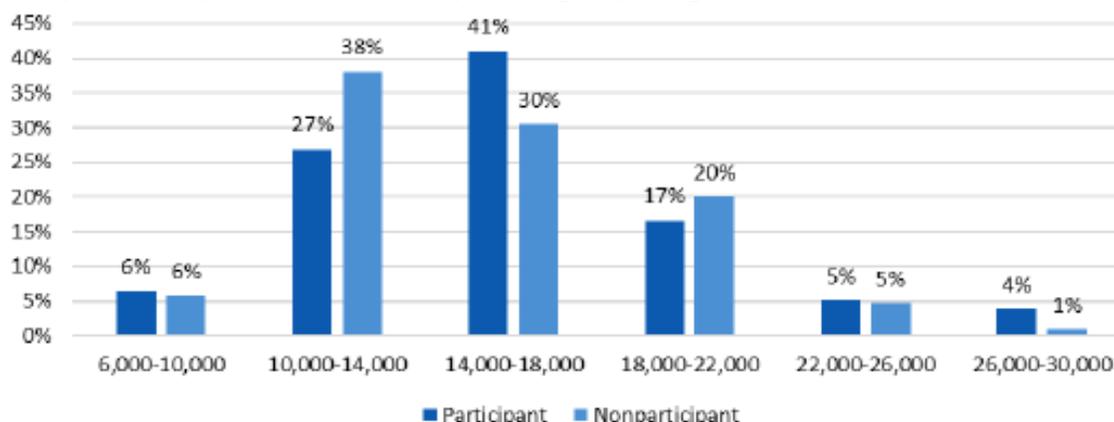
Presented by Dan Rubado

Background: The Existing Homes program completed a pilot focused on heat pumps installed in manufactured homes. The pilot involved using an RFP to select contractors to install mid-efficiency heat pumps for a fixed fee (\$1,000) regardless of the capacity of the heat pump. The contractors were then reimbursed by Energy Trust based on an agreed upon rate schedule. The Evaluation Committee already reviewed the process evaluation results. This presentation focuses on the billing analysis, now that more than a year has gone by since this equipment was installed.

Remote QC Findings: Part of the pilot involved testing whether or not using Nest thermostats could assist in remotely identifying performance problems. This worked well; by examining the ratio of compressor to auxiliary heat runtime, the program could identify issues that could reduce savings, which were mostly thermostat programming issues. This underscored the need to train contractors on how to properly install and program thermostats.

Billing Analysis Findings: We started with 109 homes, and performed pre/post models, including 12 months of data prior to equipment installation and 12 months of data following equipment installation. We ended up being able to analyze data from 78 homes. The comparison group was comprised of 105 manufactured homes that previously received duct sealing, and were heated with electric furnaces. Electric billing data was weather-normalized.

Comparison of participant and comparison group usage



The graph above shows a comparison of pre-equipment installation usage for the participant and comparison groups. The distribution of usage was similar, but it was not as good of a match as we had hoped.

The table below shows estimated energy savings. At the end of the day, we found just over 3,200 kWh, with 14% relative precision at 90% confidence. This translates to a 21% reduction in electric usage, which is really good.

Summary of energy savings

Group	n	Pre-Usage	Average Savings (kWh)	Relative Precision at 90%	Savings Pct. of Pre-Usage
Comparison	105	15,171	-834	±39%	-6%
Participant	78	15,825	2,398	±14%	15%
Savings	78	15,825	3,269	±14%	21%

We also analyzed savings for several different subgroups. We first looked at savings by climate zone, and found slightly higher savings for heating zone 2, although this difference was not statistically significant. We then looked at savings by electric usage prior to equipment installation. There did not appear to be a linear correlation between electric usage prior to equipment installation and absolute energy savings. Regardless of how we sliced it, savings were consistently near 20%.

Conclusions: The evaluator found the pilot to be successful, with significant and consistent electric savings of 21%. They recommended transitioning to a full-scale offering if the offering is cost-effective. The remote QC was effective, and proved to be a valuable way to check thermostat settings and monitor system performance over time. The evaluator recommended incorporating remote QC using smart thermostats into programs and working with the thermostat manufacturer to ensure access to data.

Energy Trust Take: Evaluation staff feel that 21% savings of whole-home use is very good; when we looked at the weather-sensitive component of usage, savings were approximately 50-

60%. The realization rate of 75% was primarily driven by lower-than-expected pre-installation energy consumption (approximately 15,000 kWh per year, which is low for an electrically-heated home). Jamie commented that the savings seem quite high – is this reasonable from an engineering perspective? Fred responded that the difference in efficiency is 100% versus 200-250%, so it is reasonable. Dan continued, noting that the savings potential is large, given the large reduction in usage. However, based on installation costs, which are very low and competitive, the savings do not appear to be cost-effective. The Existing Homes program has been working with various housing agencies in Oregon, and they may be interested in cost sharing on this type of service for low income households, which could influence the cost-effectiveness equation and potentially enable retrofits in a subset of the market. Alan asked if the savings were not cost-effective using the total resource cost test. Dan confirmed that is the case. Alan asked if the \$1,000 incentive is included in the equation. Fred responded that the invoice costs are included in the equation – it doesn't matter who pays them. Dan commented that the incentive got contractors to do a high volume of installations, which lowered the total cost. The average we saw through the pilot was \$4,500, which for a heat pump retrofit is very low.

Peter W. asked what the benefit-cost ratio for this measure is. Jackie responded that it is 0.7. Peter asked if there are any non-energy benefits included. Brien responded that currently, there are not, but the program anticipates using methods from the Regional Technical Forum for avoided future AC purchases, and incorporating that into the measure may result in a cost-effective measure. Ken commented that the comparison group was comprised of homes that already received duct sealing, and asked if all participating homes had duct sealing as well. Dan responded that yes, all participating homes received duct sealing; that was part of the screening criteria to participate in the pilot. The screening criteria were designed to ensure that we had participating homes that were in decent shape to begin with. Ken asked if the participating homes were mostly single- and double-wides. Dan responded that it was a mix of single, double, and triple, but almost all were double-wides. Fred asked if the participating homes that received a Nest thermostat for remote QC influenced savings. Dan responded that we can't tell if the remote QC influenced savings, since it was implemented in the latter part of the last heating season, and any effect it had on the subset of homes that received a Nest would not be possible to detect. However, it is definitely possible that if remote QC had been done on all 109 participating homes, and enabled the program to identify issues and correct those issues, savings could have been higher.

Fred commented that if the offering was available in the general market, contractors may be able to find homes in poor shape and with higher loads than we observed through this pilot. Presumably, adding a compressor to such homes would result in higher savings. Ken noted that there would only be more savings if the ducts are in good shape. Dan commented that based on participation data, Energy Trust has sealed many ducts in manufactured homes in Oregon. Marshall added that in addition to Energy Trust's programs, low income agencies have performed duct sealing on a large number of manufactured homes. Marshall commented that the residential sector is seeing significant reductions in electric savings due to the transformation of the lighting market. The results of this pilot fit into the larger picture of how the program is seeking to invest in cost-effective electric savings and address homes that are lagging in participation. Market-based contractors are not going and selling heat pumps to manufactured homes; this allows us to treat this customer type differently than market-based programs. In the future, we are seeking more trade ally-driven ways of addressing measures challenged by the total resource cost test and getting savings that might not otherwise be obtained. We are also looking for ways to partner with other sources of funding that can serve these homes (e.g., low income home energy assistance program, or LIHEAP, funds through

Oregon Housing and Community Services or other entities). Fred commented that funding coming from other entities doesn't change the outcome of the total resource cost test. Marshall noted that the program is proposing to treat funds coming from other entities as residential energy tax credit (RETC) has been treated; these funds are removed from the total cost. Fred commented that Planning and programs need to further discuss that proposal.

3. Short Take: Strategic Energy Management Modeling

Presented by Phil Degens

Background: This presentation is based on a paper and presentation that was given at the International Energy Program Evaluation Conference this past summer. Energy Trust's industrial strategic energy management (SEM) program has been implemented since 2009, and at the time the study was done, the industrial SEM program had about 188 participating sites. Between 2009 and 2016, SEM has accounted for about 18% of the industrial program's electric savings and 5% of the gas savings.

SEM programs typically involve longer-term customer engagement to train and embed energy efficiency practices within participating organizations. A key element of SEM programs is regular analysis of actual performance against modeled performance; this has typically entailed the development of energy models for each SEM participant. Significant resources are used to develop and maintain such models over time, and a wide range of model specifications and inconsistent explanatory variables leads to difficulties developing and maintaining program databases, maintaining models, and evaluating models. The purpose of this study was to understand if there are ways to simplify and streamline model development and to understand how simple and standardized models do at estimating savings relative to models that are more customized.

We think that a simple model should have estimated coefficient with a clear interpretation (e.g., a one unit increase in production will lead to a β increase in usage) – this makes it easier to explain to customers. Reducing the number of explanatory variables means fewer datapoints to collect – this makes it easier to develop and maintain. In addition, correlated explanatory variables lead to estimated coefficients that have large variances and meaningless coefficients. Requiring the estimated coefficients to have the correct expected sign will reduce spurious regression results.

Simple Model Definition: The simple models used for this study are of the form:

$$\text{energy/day} = \alpha + \beta(\text{production/day}) + \sum \beta_i(\text{other}) + \beta_{\text{post}} \text{Post}$$

These are pre/post, ordinary least square regression models. The coefficient on the "post" dummy variable represents estimated savings per day. A recent study by Bonneville Power Administration did a similar comparison of simple and complex models, and showed that they yield similar estimates of savings.

Methods: Initially, there were 59 sites that participated in SEM between 2009 and 2013 in the analysis dataset. This dropped to 46, which correspond to 98 energy models. Seventy-one models are electric; of these, 44% are monthly, 24% are weekly, and 32% are daily. Twenty-seven models are gas; of these, 80% are monthly.

Results – Electric: Two outliers were removed from the analysis of electric models. When we compare the number of explanatory variables in program-estimated versus simple models, we find that the simple models had a median of 2 fewer variables. The average R^2 of program models was 0.8 while the average R^2 of the simple models was 0.75. The program models estimated mean daily SEM savings of 3.9% compared to 3.1% estimated by the simple models. These savings estimates are statistically different from zero at the 95% confidence level, but are not statistically different from each other at the 95% confidence level.

Alan asked if we looked at actual savings as part of the analysis. Phil commented that both the program-estimated and simple models are based on three to six months of post-participation, actual usage data; the difference is in the model specification. The program-estimated models are CUSUM models; those models use baseline data to forecast future energy consumption and calls the difference between forecast energy consumption and actual energy consumption savings, whereas the simple models are pre/post models.

Results – Gas: One outlier was removed from the analysis of gas models. When we compare the number of explanatory variables in program-estimated versus simple models, we find that the simple models had a median of 1 fewer variable. The explanatory power of both models (in aggregate) was about the same: the average R^2 of program models was 0.86 while the average R^2 of the simple models was 0.83. Fred asked about why outliers were excluded – was there a category or situation where the models didn't make as much sense? Phil responded that the outliers had very large savings (or increases in energy consumptions) that greatly influenced the average. They appeared to be non-typical sites.

The program models estimated mean daily SEM savings of 1.7% compared to 3.1% estimated by the simple models. Although these are different, these savings estimates are not statistically different from zero at the 95% confidence level and not statistically different from each other at the 95% confidence level; this indicates a high level of uncertainty about the savings from gas models.

Energy Trust Take: The results of this analysis suggest that simple models appear to contain the major drivers of energy consumption. The more complex program-estimated models, which had more explanatory variables, did improve explanatory power, but only marginally. Other than production, the explanatory variables in the simple models are easy to obtain and update, and can be used to make decisions about investing in further model development.

Phil noted that for the non-residential sectors, one of the key issues is how to move forward with a large volume of data and models. In the past, these have been built and maintained in Excel spreadsheets; customers are interested in a simple way to see energy models for large volumes of buildings, which may require a different approach moving forward.

Amanda asked if the program modeling guidelines prescribe simple models. Phil responded that he would prefer not to specify that the programs develop only simple models. They can still develop more complex models; the point is that they can develop simple models to begin, and then make informed decisions about whether and how to invest time and effort to improve the models. Currently, implementers are focused on getting customers the best possible models, with the lowest error, so that the customer trusts the model and the resulting savings. They are always focused on individual models. However, when looking at models in aggregate, and the savings from models in aggregate, refining individual models is less important.

Jamie commented that simplifying models is in line with current econometric practice. Alan asked what we plan to do with the results of this study. Phil commented that we currently have energy modeling guidelines for industrial and commercial programs. The results of this study suggest that simple models are “good enough” if looking at models in the aggregate. We would like to see incremental changes made – e.g., generating simple models using data from our systems as a starting point; analyzing data on an aggregate basis, rather than looking at individual models; creating dashboards for customers and for Energy Trust program managers to monitor energy savings. This would reduce the time and resources spent on energy model development and maintenance, and be useful to both customers and implementers.

Alan asked how if there are any additional actions that should be taken as a result of the study findings. Phil commented that on the commercial side, the move to simple models is already happening. We don't want to constrain the program by always requiring simple models; we are recommending developing simple models as a starting point, and if an implementer sees an opportunity for a more complex model and has good reason for such a model, they can and should move forward. Peter W. commented that the managers of the commercial and industrial SEM programs will not require simple models, but will encourage their development as a starting point. Phil noted that the results will also be used for evaluation; moving forward, we may have evaluators focus on models in aggregate. Jamie commented that a common practice in the machine learning community is to leave out some data and then use that to see how well models that have been developed fit the data that has been left out. Often, simpler models are better by this metric. Fred noted that encouraging simple models is a tool to combat the tendency towards complexity among consultants. Dan noted that the commercial SEM program recently released a set of energy modeling guidelines; the underlying goal is to streamline and simplify the creation of models, and to reduce the number of variables in models (beyond weather). The impact of those guidelines is more standardized, simpler models, and a move away from overfitting models, which we saw in the past. Ken commented that R^2 may not always be the best judge of model quality or accuracy. Ken asked why the 95% confidence threshold was used, rather than 90%. He noted that in most cases Energy Trust has used 90%. Phil responded that there is no particular reason for using 95% as the threshold.

4. Discussion: Role of Evaluation Committee

Fred noted that the committee has not talked for some time about what the board Evaluation Committee does for staff and for the board; this was the impetus for this discussion.

Alan commented that when he originally joined the Evaluation Committee, he saw it as an opportunity to become familiar with Energy Trust's programs and obtain information for his role as a board member. It is extremely valuable for new board members, since it is a place where board members can see the inner workings of programs. Alan noted that when he became the committee chair, he didn't make any changes to how the committee works. Alan also noted that when he went to the official documents of Energy Trust (e.g., bylaws), none of them have any detail about the committee purpose. The only description was on the website, which says, that the Evaluation Committee, “oversees all energy program evaluations, and includes external experts.” Alan commented that the one thing that we don't do currently, and that he would like to see the committee have some perspective about, is reviewing the full scope of evaluation work. At each meeting the committee reviews three or four evaluations, but the committee doesn't know for a given program when we last evaluated or when we plan to evaluate it in the future. And although a list of current evaluation projects is occasionally reviewed, it doesn't provide context or a timeline regarding when a program was last evaluated, when a program will be

evaluated in the future, if a program has never been evaluated, or what pilots are coming up. Without that perspective, it is difficult for the committee members to provide input on what they want to see.

Susan B. said that she feels that she does get a holistic look at programs – the committee sees things as a pilot, and then sees the impact and process evaluations cycle through. She noted that she has seen at least two impact and process evaluations of most major programs, and having seen that cycle, the evaluation process makes more sense now. She commented that she isn't as concerned about what she isn't seeing. She is more concerned about how the results being discussed in the committee are impacting the organization as a whole and how programs are moving forward based on evaluation results. The committee serves as a "sniff test" for the organization. Susan B. noted that she was happy to see the discussion about gross and net savings happen at the board level. The committee meetings are a valuable use of time.

Lindsey commented that she sees committee meetings as a valuable use of time; they provide good insight into programs and into Energy Trust as a whole. The meetings help board members see more of the work that goes on behind the scenes.

Alan asked the expert outside reviewers if they had worked on any similar committees, and if so, what those committees do differently.

Ken commented that having board members on the committee means that they can go to the full board and say, "we've taken the time to look at this, received comments from outside expert reviewers, and have held the evaluation team's feet to fire, and believe that good information is being provided so that the rest of the board doesn't have to get into the details, except on policy issues." That's the value of the committee – staff doesn't have to sell the whole board, or have every board member involved. The board knows that competent board members are involved, and that staff, through the meetings, are giving them a good feel for the core results of the organization, which are the savings. Ken noted that the RTF involves outside experts, but it's a slightly different situation. If board members attend meetings, listen to staff and listen to outside experts, care about the results, understand that the review process isn't simply a rubber stamp, and decide if the results are something that the organization can use and are valuable, the process is working well. In terms of the role of outside expert reviewers, Ken commented that when he was recruited to participate, he understood the role to be providing advice to staff and providing insight and advice to the board as an independent entity.

Alan commented that he sees the role of the board members as messengers between the committee and the board. There is value in having outside expert reviewers here; it helps board members gain confidence in what staff are telling us, and they contribute a different perspective. Alan also noted that he is happy to see program managers attend meetings and provide commentary, as it gives him confidence that staff across the organization are working together as a unit and that the evaluation results are being used for their intended purpose.

Fred commented that people often ask why Energy Trust is evaluating its own programs. He commented that having evaluation staff in-house provides a lot of value, and he feels that the evaluation results are used more because in-house staff are involved. The organization takes steps to ensure independence, including: most evaluation work is contracted out; contractors have the last word on the reports; outside experts review work that's completed by in-house staff; and the Evaluation Committee is comprised of board members and outside expert reviewers, who serve as advisors to the committee. The combination of these things ensures independence and integrity in the work. This is in contrast to other places in the country, where

the work is split between utilities and public utility commissions, where the work is far from programs and context is lost.

Jennifer noted that she did not have anything to add to what Ken had to say. Having a better sense of the bigger picture – in terms of what we are evaluating and where there may be gaps in what's being evaluated – would be very useful. Alan agreed, noting that having a sense of what is not being done would be helpful.

Jamie commented that this subcommittee of the board seems to function to educate members by cycling through what is getting done. It is a good idea to make sure other people are coming in to provide other points of view; the energy efficiency community is somewhat insular to outside perspectives. Jamie noted that he is attending to find out what's going on in energy efficiency and evaluation, and will be bringing in students to learn from the work being done. Digging into the “weeds” of the evaluation reports is of interest to him. Alan commented that getting into the details helps keep staff and evaluation contractors honest and makes sure board members aren't missing something.

Dulane noted that NEEA engages funders and board members in committees, which can be a challenge because they can be quite technical and in the weeds. The motivation behind NEEA's committees is similar to Energy Trust's motivation for this committee: ensuring transparency and building confidence that what the organization is doing is in the public interest. In addition, hearing what Energy Trust is working on is valuable and aids in ensuring the work Energy Trust does integrates with the work that NEEA is doing.

Fred commented that in the past, board committee members have requested to see the first legible draft of evaluation reports – before staff makes too many changes. We strive for this, although sometimes we do need to make changes in order to assure a coherent report. Fred asked if this policy was still working for committee members. Alan commented that it is important to see early results – in the past, there have been a few studies completed that the board wasn't aware of until it became controversial. Seeing the big picture would allow for discussions about any evaluations it would be beneficial to hear about early. Ken commented that he had advocated for seeing draft evaluation results; getting results earlier ensures that staff don't get attached to the work, and are open to making changes and open to feedback. The committee should have an opportunity to provide feedback early; it is more transparent. Alan commented that there was a time when staff did not want bad news; however, it's important to remember that bad news is good news – it's good to know something isn't working. Ken noted that the committee has reviewed evaluations where program staff are extremely interested in the results and in having the evaluation work done.

Susan B. commented that she would like to see reports in draft form; she doesn't want to see final products. Analyzing assumptions and leaps that are made is important and that comes out in drafts. Sarah commented that she hopes the committee will allow staff to apply judgment in what draft we present and what changes we ask contractors to make prior to committee meetings; in some cases, the timing may make it difficult to provide the first draft report. We can summarize what we think about the quality of the work and what changed between drafts when we present the study to the committee.

Sarah asked if this discussion should be formalized in a charter; this might be nice for newer board members to reference, and could clarify expectations. Alan commented that would be useful; perhaps staff could draft a charter and then distribute to board members for review and comment. Mike C. commented that staff do not need to move forward on drafting a charter

immediately; he would like to ensure consistency across committees in terms of having a charter.

Phil commented that evaluation committee meetings are also important for a stakeholder not present at this meeting: the Oregon Public Utilities Commission (OPUC). His sense is that OPUC staff are pleased that these meetings happen on an ongoing basis, and they can drop in as needed or as they wish. They have trust in the evaluation process and that staff and board members are reviewing and discussing the evaluations.

Susan B. commented that certain board members attend on a regular basis and others do not; she noted that some board members aren't present at the meeting, and wondered if their needs are getting met. Alan responded that he would reach out to other board members and discuss.

Wrap-Up & Next Steps

The next evaluation committee meeting is scheduled for November 14th.

Tab 5

Board Decision

Authorize Use of Contingency Funds Up to \$100,000

November 8, 2017

Summary

Authorize staff to use up to \$100,000 from the Energy Trust Organization Contingency Reserve account to respond to a Request for Proposals (RFP) from the Oregon Public Utility Commission (OPUC) to administer a Community Solar program.

Background

- Among other things, SB 1547, which the Oregon legislature adopted in 2016, directed the OPUC to develop a Community Solar program.
- Community solar is meant to respond to people who want to use solar power, but face barriers to putting panels on their own roof because they are renters, live in places where installation isn't allowed or isn't feasible, or cannot afford their own system. Community solar projects allow people like this to receive some or all of their power from solar panels located anywhere within their utility's service area. Community solar projects can be placed in many locations — vacant lots and brownfields; rooftops of parking lots, apartment complexes and other large buildings; even on out-of-use landfills.
- Community solar customers, a mix of residential, industrial and commercial users, buy or lease part of the project and are credited through their bills for their portion of the energy generated. Community solar also offers an economy of scale that rooftop solar on residences do not, making it more affordable to take part.
- The OPUC is inviting proposals for a Community Solar Program administrator (responsibilities are outlined in Attachment 1) to develop and administer a fee-for-serve program. The costs required to fund the administrator for starting up the program will be funded through rates collected from all customers; once the program is operational, start the administrator will be funded from program revenues collected from participants.
- Energy Trust would like to submit a proposal to the OPUC to administer the program. We believe this is consistent with Energy Trust's mission, the skill set of Energy Trust's renewable energy program staff, and would help broaden Energy Trust's funding base.
- We estimate the cost of developing such a proposal at less than \$100,000.

Discussion

- The question arises how proposal development should be funded for opportunities like this, which require funds that have not been authorized in a Board-approved budget or other established funding mechanisms.
- Energy Trust has several reserve accounts available to meet contingencies. These are comprised of accrued interest on Energy Trust deposits of revenues from SB 1149, SB 838 or utility funding agreements: (1) emergency contingency reserves, for use in catastrophes and emergencies; (2) organization contingency reserves, to meet contingencies for efficiency or renewable energy opportunities or other organization purposes; and (3) program reserves, whose use is restricted to programs.
- The Board has a Policy on Using Reserve Accounts (5.05.010-P, attached). When the board adopted the policy, it established an \$8 million target for the two contingency reserve accounts (emergency and organization contingency reserves) overall: \$5 million for emergency contingency reserves and the rest for the organization contingency reserve. Program reserves are established annually in funding negotiations with utilities.

- Staff believes that the organization contingency reserves are the most appropriate source of funds for purposes such as this. In adopting the policy, the board specified that “Board action shall be required before staff is permitted to utilize the organization contingency pool to respond to unusual circumstances, such as a shortfall in program reserves, *advantageous renewable projects requiring funds beyond those available or budgeted* and other unanticipated organizational needs consistent with our mission.” (Board Resolution R677, Sept. 25, 2013.)
- The organization contingency reserve currently has a balance of \$4.5 million; therefore, using funds for this purpose would not deplete it below the board’s target.
- Even if Energy Trust is not selected as the program administrator, there will be valuable learnings gained as part of this effort that will help inform our current renewable program implementation:
 - Energy Trust will still be an important stakeholder and contributor to the community solar process, providing information to the various community solar sub-committees regarding consumer protection, project standards, customer communication and other topics over the coming nine months and during the rollout and operation of the program. Our having submitted an RFP response will enable us to more effectively provide support and information, and will provide us with key knowledge about the program’s details.
 - Our work on low-to-moderate income (LMI) solar deployment will continue regardless of the community solar administrator role. The relationships we develop with utilities and with groups that work with the LMI community as part of the RFP process will assist in our LMI solar work.
 - Community solar will be an important part of the solar market in Oregon, bringing new developers and participants to the table. This is likely to grow the solar market as a whole, including non-community solar projects. This will be an opportunity to familiarize ourselves with the needs and concerns of those parties, many of whom may end up being involved in our standard program.
 - There may be interaction between community solar projects and our program, but the exact nature of that involvement is unclear. Our work on the RFP will help us prepare for that future.

Budget Considerations

- Staff have estimated, and Management Team have reviewed, the budget needed to respond to this RFP. Responding to this RFP includes the following:
 - Research and analysis
 - Proposal development and submittal
 - Participation in the selection process, e.g. interviews and responding to inquiries
 - Contracting, if selected
- The budget for research and analysis and proposal development and assistance is estimated to be about \$65,000 and includes the following:
 - Approximately 855 hours of lead project staff time (across 2 staff)
 - Approximately 216 hours of subject matter expert staff time (across 15 staff)
 - Additional professional services support for project management, research, and/or consultation
 - 15% contingency
- The request to spend up to \$100,000 covers the difference between the cost of research and analysis and proposal development and submittal and reflects the uncertainty of the selection process that the OPUC will employ as well as the uncertainty of whether we will be selected

Recommendation

Authorize the use of up to \$100,000 from Energy Trust Organization Contingency Reserve account for staff to respond to a Community Solar Program RFP, which includes planning, preparing, and submitting a response as well as participating in the selection and subsequent contracting process.

RESOLUTION 821 AUTHORIZING USE OF CONTINGENCY RESERVES TO DEVELOP A COMMUNITY SOLAR PROGRAM PROPOSAL

WHEREAS:

1. SB 1547, which the Oregon legislature adopted in 2016, directed the OPUC to develop a Community Solar program.
2. Community Solar helps people who want to use solar power, but face barriers to putting panels on their own roof because they are renters, live in places where installation isn't allowed or isn't feasible, or cannot afford their own system.
3. The OPUC is inviting proposals for a Community Solar Program administrator to develop and administer a fee-for-serve program. The costs required to fund the administrator for starting up the program will be funded through rates collected from all customers; once the program is operational, start the administrator will be funded from program revenues collected from participants.
4. Staff estimates the cost of developing such a proposal at less than \$100,000.
5. Staff believes that the Energy Trust organization contingency reserve fund is the most appropriate source of funding for purposes such as this. In adopting a Policy on Use of Reserves, the board specified that "Board action shall be required before staff is permitted to utilize the organization contingency pool to respond to unusual circumstances, such as a shortfall in program reserves, *advantageous renewable projects requiring funds beyond those available or budgeted* and other unanticipated organizational needs consistent with our mission."
6. The contingency reserve currently has a balance of \$4.5 million; using funds for this purpose would not deplete it below the board's target.

It is therefore **RESOLVED**: Staff is authorized to use up to \$100,000 from the Energy Trust Organization Contingency Reserve account to respond to a Community Solar Program proposal to the OPUC, which includes planning, preparing, and submitting a response as well as participating in the selection and subsequent contracting process.

Moved by:

Vote:

In favor:

Opposed:

Seconded by:

Abstained:

Attachment 1: Tasks of Administrator

- Data/record-keeping
 - Facilitate the exchange of data and information between utilities and project managers and between the Commission and project managers
 - Verify participant eligibility using utility data
 - Manage data related to projects, project managers, project participants, contracts between program managers and participants, and program performance
 - Obtain information from project managers to calculate monthly bill credit for each participant's share of project output
 - Calculate participants' monthly bill credits and convey bill credit information to electric companies and project managers
 - Implement best practices for data and information security, confidentiality, and privacy
- Financial/budgeting
 - Manage a Commission approved, program administrator budget, and report actual expenditures and carryover
 - Assist the Commission in identifying and scoping administrative start-up costs that can be recovered in electric companies' rates
 - Receive from electric companies fees and subscription payments collected from participants on their bills, allocating these monies to the appropriate recipients, and maintaining monthly reports of receipts and allocations to submit to the Commission upon request.
- Reporting
 - Aid the Commission in producing status and legislative reports
- Communications/documents
 - Create and maintain a program implementation manual, in collaboration with OPUC staff, with opportunities for public comment
 - Maintain an informational website for community solar program and project information
- Customer service
 - Resolve participant disputes that cannot be resolved by the Project Manager
- Management of participating projects and project managers
 - Register project managers on an ongoing basis
 - Review applications for project pre-certification and final certification for compliance with application criteria.
 - Establish and maintain a project queue for each electric company.
 - Monitor Project Managers' compliance with the standard of conduct set forth in the Program Implementation Manual
- Manage the performance of the low-income facilitator
 - Coordinate to meet 10 percent low-income capacity requirement

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Board Decision

Corporate Authorization (Bank Signing Authority)

November 8, 2017

RESOLUTION 822 AUTHORIZING APPROVED BANK SIGNERS

WHEREAS:

1. Umpqua Bank and Bank of the Cascades provide general banking services to Energy Trust (collectively, the “Banks”).
2. Section 7.3 of the Energy Trust bylaws requires that the board of directors authorize officers or agents to sign checks, drafts, or other orders for the payment of money, notes and other evidences of indebtedness (“authorized bank signers”) by way of resolution from time to time.
3. Effective February 22, 2017, Dan Enloe’s term as Energy Trust Board Treasurer ended, and Susan Brodahl was elected Energy Trust Board Treasurer.
4. Effective August 11, 2017 Mariet Steenkamp resigned as Chief Financial Officer of Energy Trust.
5. Effective August 14, 2017 Pati Presnail was appointed Interim Chief Financial Officer of Energy Trust by Executive Director Michael Colgrove.

It is therefore RESOLVED that,

1. Dan Enloe is to be removed from the list of authorized bank signers for the Banks.
2. Susan Brodahl is to be added to the list of authorized bank signers for the Banks.
3. Mariet Steenkamp is to be removed from the list of authorized bank signers for the Banks.
4. Pati Presnail is to be added to the list of authorized bank signers for the Banks.
5. The resulting list of authorized bank signers for the Banks is as follows:
 - A. Debbie Kitchin, Board President
 - B. Susan Brodahl, Board Treasurer
 - C. Michael Colgrove, Executive Director
 - D. Pati Presnail, Interim Chief Financial Officer
 - E. Peter West, Director of Programs
 - F. Steve Lacey, Director of Operations
 - G. Debbie Goldberg Menashe, General Counsel
6. The General Counsel is authorized to execute all required documentation to implement this resolution.

Moved by:

Seconded by:

Vote: In favor:

Abstained:

Opposed:

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Finance Committee Meeting

October 26 3:30 p.m.

Attending by Teleconference

Susan Brodahl, *Chair*, Anne Root

Attending at Energy Trust offices

Mike Colgrove, Dan Enloe, Alison Ebbott, Mark Kendall, Corey Kehoe, Steve Lacey, Pat Presnail, Mark Wyman

Community Solar RFP Authorization to Use Unrestricted Fund

Mike Colgrove and Steve Lacey presented a draft resolution for the Community Solar Request for Proposal (RFP) Authorization to Use Unrestricted Funds. They asked for committee approval on the resolution in order to bring before the board at the November 8 meeting. Mike said that Senate Bill 1547 provides a directive for a community solar program. The Oregon Public Utilities Commission (OPUC) is in the process of engaging stakeholders and conducting workshops and is now ready to release the RFP in mid to late November. There is an expected 30-day turnaround time. The program is not ratepayer funded, but rather an investor paid project. The goal is to provide 160 megawatts savings in the first round. The Energy Trust management team recommends that the proposal should be pursued as it is a relatively new concept and there aren't a lot of existing models to build upon. There seems to be a significant amount of stakeholder support and the assumption is that we would submit a proposal. Mike spoke with the utilities and said that they are supportive of our intent to respond. Public Purpose Charge (PPC) funds cannot be utilized for this type of project; however, the Reserve Policy would allow use of the organizational contingency funds for this type of use if approved by the board of directors. Steve spoke with JP Batmale of the OPUC who did not see any issue with using those contingency funds for this purpose. There is significant overlap with our current ratepayers and the Community Solar benefits align nicely with with our current activities. Since we are over our target goal for organizational contingency funds, there are excess dollars available.

Susan Brodahl spoke with board chair Debbie Kitchin about the resolution and said that Debbie has a significant concern. Even though these are contingency dollars, we are using ratepayer funds, which are derived from both electric and gas ratepayers that would be used in support of an electric-only program. The other concern is whether we will recoup the money spent on the RFP should we be awarded the project. With regard to process concerns, Susan said we should solicit comments from the Policy Committee before the board meeting. Mike mentioned to Debbie in a previous conversation that this particular funding doesn't represent a blank check to prepare for other proposals that may come up and that the current budget for this RFP is well below \$100,000.

Susan asked how the total budget was calculated. Mike said it was factored against the staff time of about 12 people. There will be a full-time program person and co-lead on the budget side working on the proposal for a solid 30 days. The remainder of the staff will be devoting substantial time to the project. There is also outside analysis and project management work with agency staff. A new payroll code is in place to track time so that nothing will be charged to the PPC. Mike said he is happy to share the detailed budget if that is helpful. A selection process and interviews occur after the proposal has been submitted and if we are selected, there is also a contract process.

Susan inquired about other development opportunities. Mike responded that part of the idea is to learn lessons from writing the proposal. There will also be a debrief with the project team at the end of the process.

Dan Enloe asked how much authority the state has in the community solar area and whether contractor expenditures could be viewed as a state-owned body of work similar to building a highway. Mike said that this is not state-owned capital. The way a community solar program operates is that the developer acquires a location and assumes their own costs. The state authority rests with the

regulator in requiring utilities to allow a developer to get subscribers to the output and the transactions occur on the utility bill. It is through this mechanism that the developers recoup their costs. Energy Trust would act as the overseer of the program. Dan said he would be more comfortable on the board resolution if there is a way to recover the money that we've spent on the proposal should we not be awarded the project. Susan believes that a repayment provision isn't appropriate for this proposal and should be viewed as the cost of doing business.

Anne Root asked if we are aware of other competitors in the RFP selection. Mike responded that there is a bidders' conference coming up next week and we will have a better idea of who those companies are.

Susan asked to strike the second bullet point in the discussion part of the resolution that pertains to identifying funding for similar development opportunities, expand the statement on the amount of staff time and then send to Debbie Menashe to email to the Policy Committee for comments. Mike will add a budget considerations section to the resolution that will include more of that information.

Anne asked if the research that we perform during the RFP process will help us to better understand the solar market. Mike confirmed that to some extent, there will be some ancillary learning to gain. Steve Lacey said that this project is in Energy Trust's wheelhouse and it's just a different funding source in execution.

Mike will update the memo with Susan's comments so that she can inform Debbie Kitchin and send to the Policy Committee for their feedback.

Savings Within Reach Loan Program

Mark Wyman provided an overview of the program. Energy Trust initiated the Savings Within Reach (SWR) On Bill Repayment (OBR) financing as a pilot in 2014 and as a capital partner of Craft 3. Over the last few years, we have steadily improved the delivery of the program and ramped up to where we have fully subscribed all of the first round of capital and are now moving to the second round.

Mark explained the strategy behind the program and where it is headed. Unique to the project is the financial model in that it is serviced through customer utility bills. There is a greater regularity of payments on energy costs compared to other lines of credit. The other aspect is that these are loans for energy efficiency projects that create a return on investment in the form of avoided energy costs.

The program has been able to issue \$730,000 in loans for 175 projects and distributed evenly throughout our service territory. There are three outstanding agreements with Craft 3 and in order to move to the second round, we need to either amend or issue an updated agreement. As we issue new loans and accrue more performance data, we want to gradually draw down our role. The first step is to reduce the amount of loss protection as the portfolio grows and also provide for a long term vision to create a model that is self-sustaining in order for private capital to come in and assume the funder role.

Mark said that we have operating, loss reserve and loan agreements with Craft 3. The operating agreement is being updated to reflect process improvements. The loan and loss reserve agreements need to be examined at this meeting. We are looking to replicate many of the terms of the first loan in the next round. Since Energy Trust is a capital partner with Craft 3 in the first round, we would like to continue this model. Craft 3 is the noteholder of the loan. Energy Trust has a 10-year loan to Craft 3 to provide half of the capital for each round and has negotiated a sum amount of loss reserve of what we would guarantee. That is where our exposure resides.

We would like to combine the loss reserve established for round one and supplement that so that when you combine the rounds there would be a 10:1 return ratio, reduced from the original 6:1 return ratio.

The other revision would be to enter into another 10-year loan agreement with Craft 3 in round two, but this time the maturation date would extend beyond 2025. We have been discussing this internally and with OPUC staff to include language that provides for the 10-year term past 2025. The language directs both parties (Energy Trust, Craft 3) to work with the OPUC to determine what the next appropriate step would be in attempting to fill the gap and provide for the future.

Alison Ebbott asked if Craft 3 is using the principal from the loans which are paid before the term ends. Mark said that there is a revolving mechanism in place for round two that redirects that money back into the fund for customers.

Susan asked if Energy Trust can claim any efficiency savings with this program. Mark affirmed and said that this is paired with our SWR track within the residential program where we offer higher levels of incentives for moderate-income households. In order to use this financing offer, the customer needs to be financing eligible measures and that each of these projects splits out evenly between insulation and weatherization and heating systems measures. When the loan is closed, there is a transaction that occurs within our business systems where we are essentially buying down the amount of the loan up front by reducing the cost to the customer by the contractors. We are recording the transactions and claiming the savings value associated with each measure. This is aimed at extending the SWR programs to more customers.

Mark noted that there is another area where there is a recognizable gap in services available from financial service industry. This is in the realm of financing for manufactured home purchases. Energy Trust is operating a pilot program partnering with non-profit organizations to address this issue. There is an enormous amount of energy efficiency potential unrealized in converting older manufactured homes to modern Energy Star rated manufactured homes. We have been challenged to find ways to serve this customer class effectively to support the energy burden for those households. We have been in discussion with Craft 3 around what type of options would exist for a certain class of personal property loans for manufactured homes on leased land that could pick up the portion where grants leave off.

Mark asked the committee if there are any concerns with the business relationship with Craft 3. Pati Presnail said that this revision doesn't meet the threshold for board approval, but does have the new time horizon associated going beyond 2025. Susan asked Mark to give a short presentation to the board at the November meeting to outline the round two SWR program changes because it is outside of our traditional programs. The document presented today will be included in the Finance Committee report.

Susan asked if the board would need to approve the funding for round two since it will bring the program total over \$500,000 across the two rounds. Pati said that this agreement differs in that we don't look at the cumulative amount over the two parts. Mark added that this is a loan agreement rather than a funding commitment and falls outside of board resolution perimeters.

September Financials

Pati reviewed the financials for September. Susan said they look to be in proper order and had no questions or concerns.

Budget Schedule Review

Pati gave the committee an update on the budget development progress. The Conservation Advisory Council (CAC) met on October 25. Energy Trust Programs Director Peter West presented and the CAC had a number of questions and answers that are being developed at this time.

Pati reviewed the multi-year budget Income Statement. Energy Trust is looking at a decrease in total revenue which is consistent with what we were anticipating on the reserves. Senate Bill 1149 revenue remains stable. There is a need to evaluate what funding is required from Senate Bill 838 funds to keep the reserves at a healthy level.

Northwest Natural Gas has a small rate increase but every other utility is holding firm. Susan asked if we are looking to draw down reserves again in 2018. Pati concurred and said the biggest theme in the draft budget is in residential sector lighting. As the market matures, we are competing against more efficient light bulbs and the savings per light bulb that we are able to claim is on the decline. However, we are still looking at four million bulbs for next year, so the incentive and support costs are similar to last year. The question that came up at the Conservation Advisory Council meeting was that if our savings down, why aren't expenses also lower. Staff is attempting to reframe the conversation to help explain that the decrease in savings does not yet result in a decrease in cost. Pati said that at some point, the market will be transformed and meanwhile Energy Trust will respond with lower incentives and removing offers in certain retail outlets or geographic areas.

Pati reviewed the avoided cost graphs that explain why costs appear to have shifted from electric to gas. The new gas avoided cost is higher than before, and this affects custom and dual fueled measures where costs are allocated within the measure based on relative value. There will be a before and after comparison in the draft budget to outline this change.

Another piece of information in the budget pertains to business participation by building size. Energy Trust conducted a participation study this year to look at how much of the market remains. This is the beginning of a multi-part study to examine where we will go next. Initial findings show that while there is work left to do, it also costs more to get to the small businesses as they have less savings but also have all the project management requirements that large businesses do.

Susan asked if the 2017 forecast could be tied to strategic plan goals in her budget presentation to the board. Pati agreed to confirm. Anne added that it would be interesting to also compare the strategic plan dashboard with the budget. Susan will contact Mark Kendall to provide an updated dashboard for the board meeting.

Change in Bank Signers

Pati reported that she needs to be approved as a bank signer as there are times when she is required to sign documents on behalf of the organization. Susan will also need to be authorized in her role as Finance Committee chair. A bank signer resolution will be prepared and presented for approval at the November board meeting.

Adjourned at 4:46 p.m.

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Notes on August 2017 Financial Statements

September 19, 2017

Revenue

Avista's August payment was delayed by one month. With receipt of the August amount, Avista is no longer in a negative position to budget. Revenues exceed budget by about \$6.6 million, roughly the same amount as last month.

	<u>YTD Actual</u>	<u>YTD Budget</u>	<u>YTD Var</u>	<u>YTD %</u>	<u>PY</u>
PGE	68,864,793	68,742,455	122,338	0%	52,871,410
PAC	43,766,565	38,929,669	4,836,895	12%	34,704,229
NWN	19,757,008	18,378,481	1,378,527	8%	13,266,030
CNG	1,987,979	1,740,175	247,804	14%	1,175,580
Avista	614,418	622,184	(7,766)	-1%	93,600
Investment Income	251,905	170,000	81,905	48%	415,129
Total	135,242,669	128,582,965	6,659,704	5%	102,525,977

Reserves

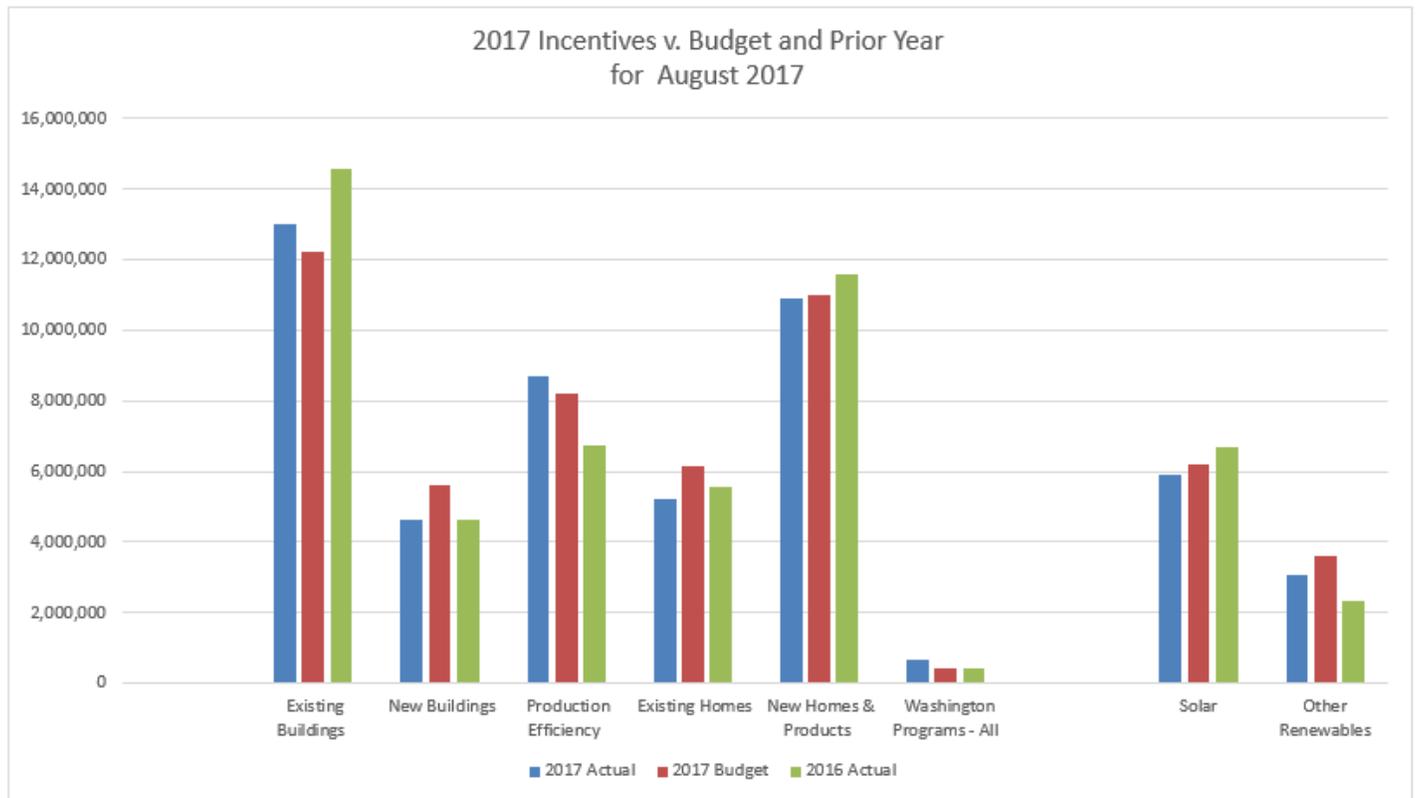
Reserves in August were \$65.6 million, slightly below July levels of \$66.2 million. NW Natural decreased almost \$1 million during the month.

<u>Reserves</u>	<u>8/31/17 Amount</u>	<u>Actual 12/31/16 Amount</u>	<u>% Change from Year End</u>
PGE	20,075,343	6,507,279	209%
PacifiCorp	11,515,624	644,839	1686%
NW Natural	7,154,841	1,485,656	382%
Cascade	664,981	0	
Avista	103,895	68,620	51%
NWN Industrial	2,963,233	1,028,150	188%
NWN Washington	52,742	283,171	-81%
PGE Renewables	7,047,615	7,543,333	-7%
PAC Renewables	6,462,962	7,376,941	-12%
Program Reserves	56,041,236	24,937,989	125%
Contingency Reserve	5,000,000	5,000,000	0%
Contingency Available	4,523,715	3,935,314	15%
Total	65,564,937	33,873,295	94%

Expenses

August expenses came in slightly above budget - \$14.7 million vs. \$14.2. Year-to-date expenses are \$103.5 million, \$5.5 million below budget. The variance is due to lower than expected spending in incentives (\$1.4 million YTD) and Professional services (\$2.7 million YTD). Overall expenses remain \$1.6 million higher than last year.

August incentives came in almost \$1 million more than budgeted. Overall they are within 3% of the budgeted amount for the year. Total incentives in 2017 are slightly less than 2016 (\$52 million vs. \$52.5 million).

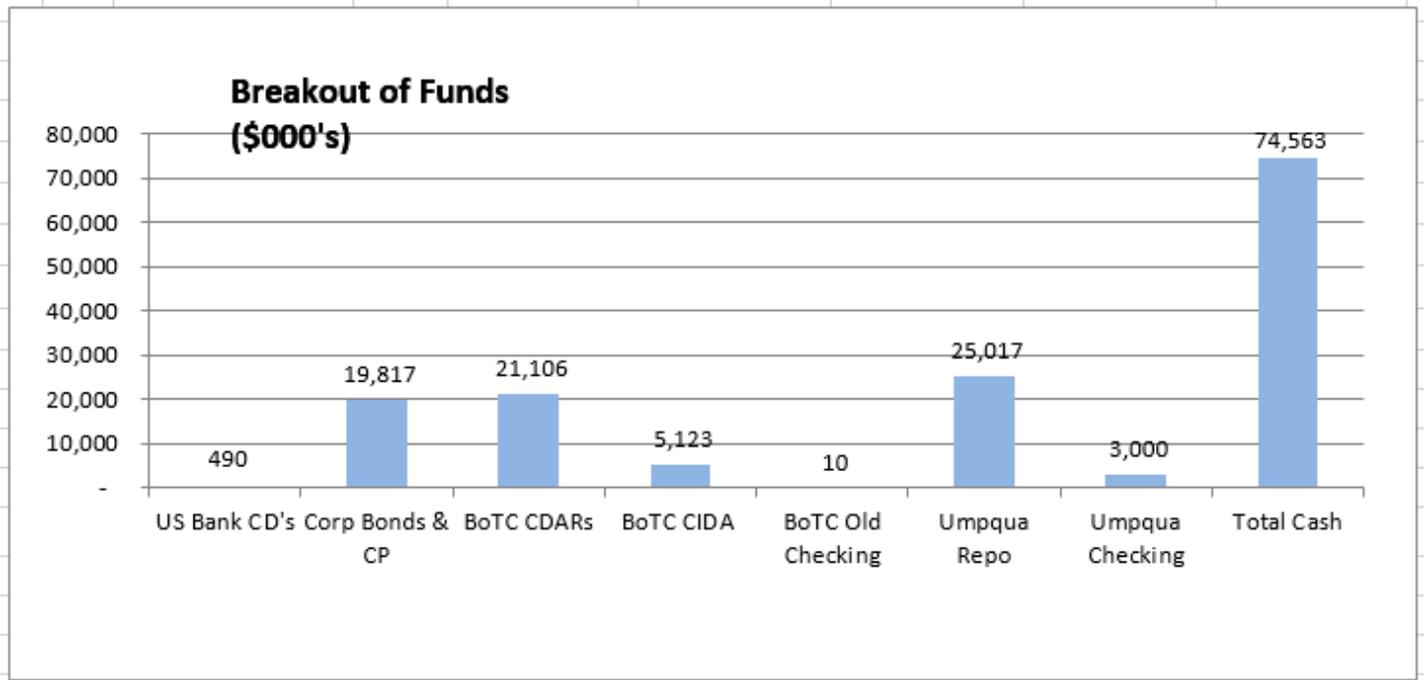


Incentives thru August 2017	Total Incentives			
	Year-to-Date 2017			
	<u>Actual</u>	<u>Budget</u>	<u>Variance</u>	<u>Var %</u>
Existing Buildings	13,016,125	12,219,247	(796,878)	-7%
New Buildings	4,625,873	5,619,654	993,781	18%
Production Efficiency	8,680,039	8,211,992	(468,047)	-6%
Existing Homes	5,222,313	6,174,733	952,420	15%
New Homes & Products	10,896,028	11,018,331	122,303	1%
Washington Programs - All	652,903	401,563	(251,340)	-63%
Solar	5,918,430	6,217,567	299,136	5%
Other Renewables	3,058,914	3,580,430	521,516	15%
Total Incentives	52,070,625	53,443,518	1,372,892	3%
Energy Efficiency Only	43,093,281	43,645,520	552,240	1%

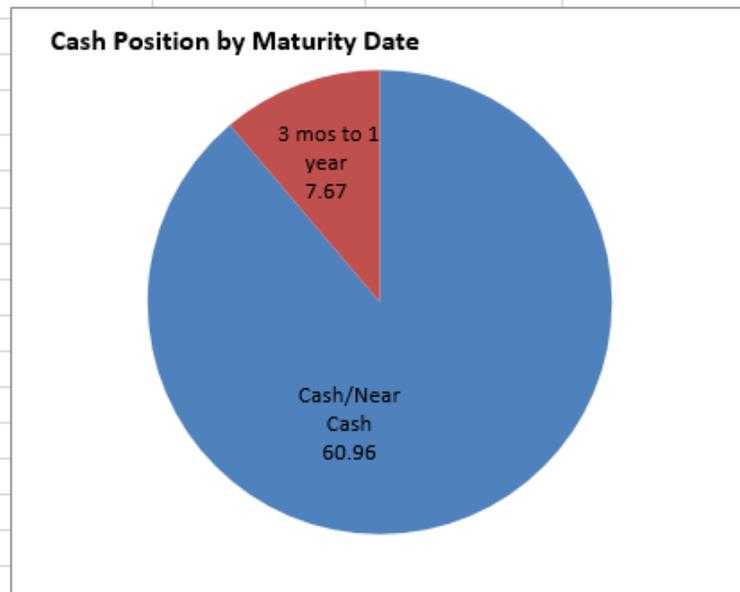
August 2017 vs. August 2016	Total Incentives			
	Year-to-Year Comparison			
	<u>Current Year</u>	<u>Prior Year</u>	<u>Variance</u>	<u>Var %</u>
Existing Buildings	13,016,125	14,552,406	1,536,281	11%
New Buildings	4,625,873	4,637,548	11,675	0%
Production Efficiency	8,680,039	6,726,032	(1,954,007)	-29%
Existing Homes	5,222,313	5,575,100	352,787	6%
New Homes & Products	10,896,028	11,592,033	696,005	6%
Washington Programs - All	652,903	422,696	(230,207)	-54%
Solar	5,918,430	6,690,853	772,422	12%
Other Renewables	3,058,914	2,319,299	(739,615)	-32%
Total Incentives	52,070,625	52,515,967	445,338	1%
Energy Efficiency Only	43,093,281	43,505,815	412,534	1%

Investment Status

The graphs below show the type of investments we hold and the locations where our funds are held. Levels are comparable to last month. Rates are increasing and we won't need to tap into the reserves until year end, so are making a few more very short term investments.



Average Days to Maturity:	34
Average Portfolio Yield:	0.73%



PINK PAPER

Energy Trust of Oregon
BALANCE SHEET
August 31, 2017
(Unaudited)

	August 2017	July 2017	Dec 2016	August 2016	Change from one month ago	Change from Beg. of Year	Change from one year ago
Current Assets							
Cash & Cash Equivalents	41,171,730	42,355,732	44,471,035	26,852,144	(1,184,002)	(3,299,305)	14,319,585
Investments	33,211,209	31,226,501	19,350,134	48,927,057	1,984,708	13,861,075	(15,715,847)
Receivables	156,453	(14,766)	86,058	164,457	171,218	70,395	(8,004)
Prepaid Expenses	344,106	430,090	280,347	438,724	(85,984)	63,759	(94,618)
Advances to Vendors	711,143	1,422,266	2,050,126	756,099	(711,123)	(1,338,983)	(44,956)
Total Current Assets	75,594,640	75,419,823	66,237,700	77,138,481	174,817	9,356,941	(1,543,840)
Fixed Assets							
Computer Hardware and Software	3,733,082	3,733,082	3,696,232	3,671,135	-	36,849.84	61,947
Leasehold Improvements	591,770	326,158	318,964	318,964	265,612	272,806	272,806
Office Equipment and Furniture	815,056	815,056	716,876	701,604	-	98,181	113,452
Total Fixed Assets	5,139,908	4,874,296	4,732,072	4,691,703	265,612.08	407,836	448,205
Less Depreciation	(4,168,989)	(4,094,850)	(3,598,867)	(3,299,112)	(74,139)	(570,122)	(869,877)
Net Fixed Assets	970,919	779,446	1,133,205	1,392,591	191,473	(162,285)	(421,672)
Other Assets							
Deposits	237,314	237,314	223,339	223,339	-	13,975	13,975
Deferred Compensation Asset	877,549	874,139	849,522	785,558	3,410	28,027	91,991
Note Receivable, net of allowance	263,669	263,669	260,891	88,909	-	2,779	174,761
Total Other Assets	1,378,533	1,375,123	1,333,752	1,097,806	3,410	44,781	280,727
Total Assets	77,944,093	77,574,393	68,704,656	79,628,878	369,700	9,239,436	(1,684,785)
Current Liabilities							
Accounts Payable and Accruals	9,656,480	8,863,898	32,588,773	8,634,619	792,582	(22,932,294)	1,021,861
Salaries, Taxes, & Benefits Payable	902,397	937,356	827,526	845,351	(34,959)	74,871	57,045
Total Current Liabilities	10,558,876	9,801,254	33,416,299	9,479,970	757,623	(22,857,423)	1,078,906
Long Term Liabilities							
Deferred Rent	936,864	657,252	559,253	498,532	279,612	377,611	438,332
Deferred Compensation Payable	881,099	877,689	853,072	785,558	3,410	28,027	95,541
Other Long-Term Liabilities	2,315	2,315	2,110	4,290	-	205	(1,975)
Total Long-Term Liabilities	1,820,278	1,537,257	1,414,435	1,288,379	283,021	405,843	531,899
Total Liabilities	12,379,154	11,338,510	34,830,735	10,768,349	1,040,644	(22,451,580)	1,610,805
Net Assets							
Unrestricted Net Assets	65,564,938	66,235,883	33,873,922	68,860,529	(670,944)	31,691,017	(3,295,590)
Total Net Assets	65,564,938	66,235,883	33,873,922	68,860,529	(670,944)	31,691,017	(3,295,590)
Total Liabilities and Net Assets	77,944,093	77,574,393	68,704,656	79,628,878	369,700	9,239,436	(1,684,785)

Energy Trust of Oregon
Cash Flow Statement-Indirect Method
Monthly 2017

	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>Year to Date</u>
Operating Activities:									
<i>Revenue less Expenses</i>	\$ 9,021,323	\$ 11,985,541	7,297,639	3,428,944	(906,648)	(4,408,611)	5,943,771	(670,945)	\$ 31,691,014
<i>Non-cash items:</i>									
Depreciation	70,722	70,512	69,965	70,662	72,383	70,979	71,372	74,139	570,734
Change in Reserve on Long Term Note	-	-	-	-	-	-	-	-	-
Loss on disposal of assets	-	-	-	-	-	-	-	-	-
Receivables	9	-	(50)	400	136,841	-	136,861	(135,000)	139,061
Interest Receivable	(5,311)	(38,100)	11,304	(41,168)	33,111	17,834	(14,056)	(36,218)	(72,604)
Advances to Vendors	660,492	660,492	(1,489,806)	739,643	585,111	(1,239,195)	711,123	711,123	1,338,983
Prepaid expenses and other costs	17,387	(338,051)	27,347	48,843	(21,451)	93,559	5,575	82,574	(84,217)
Accounts payable	(21,595,003)	(2,386,675)	(256,773)	341,108	468,466	(82,140)	(350,716)	792,581	(23,069,152)
Payroll and related accruals	12,024	42,941	253,852	(151,351)	19,195	25,628	(67,842)	(31,549)	102,898
Deferred rent and other	4,262	(585)	14,000	14,205	13,999	14,000	14,000	279,612	353,493
Cash rec'd from / (used in) Operating Activities	(11,814,095)	9,996,075	5,927,478	4,451,286	401,007	(5,507,946)	6,450,088	1,066,317	10,970,210
Investing Activities:									
Investment Activity (1)	(992,696)	(3,749,267)	(5,787,813)	2,537,756	(5,555,047)	3,923,246	(2,252,546)	(1,984,708)	(13,861,075)
(Acquisition)/Disposal of Capital Assets	-	(7,194)	(75,180)	-	(36,850)	-	(23,612)	(265,612)	(408,448)
Cash rec'd from / (used in) Investing Activities	(992,696)	(3,756,461)	(5,862,993)	2,537,756	(5,591,897)	3,923,246	(2,276,158)	(2,250,320)	(14,269,523)
Cash at beginning of Period	44,471,035	31,664,245	37,903,859	37,968,346	44,957,390	39,766,501	38,181,801	42,355,732	44,471,035
Increase/(Decrease) in Cash	(12,806,791)	6,239,614	64,485	6,989,042	(5,190,890)	(1,584,700)	4,173,930	(1,184,003)	(3,299,313)
Cash at end of period	\$ 31,664,245	\$ 37,903,859	\$ 37,968,346	\$ 44,957,390	\$ 39,766,501	\$ 38,181,801	\$ 42,355,732	\$ 41,171,730	\$ 41,171,730

(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 2017 - December 2018

	Actual								Adjusted Budget			
	January	February	March	April	May	June	July	August	September	October	November	December
Cash In:												
Public purpose and Incr funding	15,758,534	21,457,118	21,917,554	17,402,020	15,025,545	13,768,287	15,620,550	14,041,155	12,780,737	16,320,673	12,985,319	15,639,507
Investment Income	17,648	(14,444)	25,634	(2,155)	64,393	53,021	28,294	6,910	(32,590)	(32,590)	(32,590)	(32,590)
From Other Sources	9	0	(50)	400	136,841		136,861	(135,000)				
Total cash in	15,776,191	21,442,674	21,943,138	17,400,265	15,226,779	13,821,308	15,785,705	13,913,065	12,748,147	16,288,083	12,952,729	15,606,917
Cash Out:												
Net cash flow for the month	(27,590,279)	(11,453,791)	(16,090,835)	(12,948,972)	(14,862,622)	(19,329,250)	(9,359,224)	(13,112,356)	(15,616,604)	(17,068,276)	(18,058,333)	(20,692,465)
	(11,814,088)	9,988,883	5,852,303	4,451,293	364,157	(5,507,946)	6,426,481	800,708	(2,868,457)	(780,194)	(5,105,604)	(5,085,548)
Cash Flow from/to Investments	(992,696)	(3,749,267)	(5,787,813)	2,537,756	(5,555,047)	3,923,246	(2,252,546)	(1,984,708)	-	-	-	-
Beginning Balance: Cash & MM	44,471,035	31,664,245	37,903,859	37,968,345	44,957,390	39,766,501	38,181,805	42,355,732	41,171,730	38,303,272	37,523,079	32,417,475
Ending cash & MM	31,664,245	37,903,859	37,968,346	44,957,390	39,766,501	38,181,801	42,355,732	41,171,730	38,303,272	37,523,079	32,417,475	27,331,926

Future Commitments

Renewable Incentives	6,700,000	5,800,000	7,800,000	6,900,000	6,900,000	8,300,000	7,400,000	6,300,000	6,000,000	5,200,000	5,200,000	4,500,000
Efficiency Incentives	69,500,000	69,100,000	81,600,000	80,800,000	80,800,000	86,700,000	86,000,000	86,900,000	98,700,000	96,600,000	94,900,000	87,300,000
Emergency Contingency Pool	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000
Total Commitments	81,200,000	79,900,000	94,400,000	92,700,000	92,700,000	100,000,000	98,400,000	98,200,000	109,700,000	106,800,000	105,100,000	96,800,000

(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 2017 - December 2018

2018 R2 Budget												
	January	February	March	April	May	June	July	August	September	October	November	December
Cash In:												
Public purpose and Incr funding	19,000,000	20,400,000	17,800,000	17,700,000	13,900,000	13,000,000	15,800,000	14,400,000	15,700,000	17,200,000	14,800,000	18,100,000
Investment Income	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
From Other Sources												
Total cash in	19,010,000	20,410,000	17,810,000	17,710,000	13,910,000	13,010,000	15,810,000	14,410,000	15,710,000	17,210,000	14,810,000	18,110,000
Cash Out:												
Net cash flow for the month	(29,400,453)	(11,522,562)	(12,143,651)	(13,249,709)	(12,974,034)	(13,751,122)	(16,010,687)	(13,675,485)	(14,988,146)	(17,133,101)	(18,752,720)	(20,759,756)
	(10,390,453)	8,887,438	5,666,349	4,460,291	935,966	(741,122)	(200,687)	734,515	721,854	76,899	(3,942,720)	(2,649,756)
Cash Flow from/to Investments	-	-	-	-	-	-	-	-	-	-	-	-
Beginning Balance: Cash & MM	27,331,926	16,941,473	25,828,911	31,495,261	35,955,551	36,891,517	36,150,396	35,949,708	36,684,224	37,406,077	37,482,977	33,540,257
Ending cash & MM	16,941,473	25,828,911	31,495,261	35,955,551	36,891,517	36,150,396	35,949,708	36,684,224	37,406,077	37,482,977	33,540,257	30,890,501

Future Commitments

Renewable Incentives	4,500,000	4,500,000	4,500,000	4,500,000	4,500,000	4,500,000	4,500,000	4,500,000	4,500,000	4,500,000	4,500,000	4,500,000
Efficiency Incentives	87,300,000	87,300,000	87,300,000	87,300,000	87,300,000	87,300,000	87,300,000	87,300,000	87,300,000	87,300,000	87,300,000	87,300,000
Emergency Contingency Pool	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000
Total Commitments	96,800,000											

(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
Income Statement - Actual and YTD Budget Comparison
For the Eight Months Ending August 31, 2017
(Unaudited)

	August				YTD			
	Actual	Budget	Budget Variance	Variance %	Actual	Budget	Budget Variance	Variance %
<u>REVENUES</u>								
Public Purpose Funds-PGE	2,977,305	3,114,155	(136,850)	-4%	26,180,233	25,598,340	581,892	2%
Public Purpose Funds-PacifiCorp	2,358,937	2,162,681	196,255	9%	19,922,226	18,131,250	1,790,976	10%
Public Purpose Funds-NW Natural	608,669	640,021	(31,352)	-5%	14,953,945	13,575,418	1,378,527	10%
Public Purpose Funds-Cascade	66,650	89,180	(22,530)	-25%	1,987,979	1,740,175	247,804	14%
Public Purpose Funds-Avista		31,886	(31,886)	-100%	614,418	622,184	(7,766)	-1%
Total Public Purpose Funds	6,011,561	6,037,923	(26,363)	0%	63,658,801	59,667,367	3,991,434	7%
Incremental Funds - PGE	5,189,035	4,879,052	309,983	6%	42,684,561	43,144,115	(459,555)	-1%
Incremental Funds - PacifiCorp	2,840,559	3,198,232	(357,673)	-11%	23,844,339	20,798,419	3,045,919	15%
NW Natural - Industrial DSM			-		3,720,596	3,720,596	-	
NW Natural - Washington			-		1,082,467	1,082,467	-	
Revenue from Investments	43,129	10,000	33,129	331%	251,905	170,000	81,905	48%
TOTAL REVENUE	14,084,284	14,125,207	(40,923)	0%	135,242,669	128,582,965	6,659,704	5%
<u>EXPENSES</u>								
Program Subcontracts	4,799,373	4,908,562	109,189	2%	36,901,314	37,974,622	1,073,307	3%
Incentives	7,972,789	7,030,424	(942,365)	-13%	52,070,625	53,443,518	1,372,892	3%
Salaries and Related Expenses	1,126,639	1,150,510	23,871	2%	8,901,460	9,175,417	273,957	3%
Professional Services	589,782	789,070	199,287	25%	3,588,482	6,317,441	2,728,958	43%
Supplies	5,508	4,050	(1,458)	-36%	24,418	32,400	7,982	25%
Telephone	3,722	5,825	2,103	36%	36,545	46,600	10,055	22%
Postage and Shipping Expenses	666	1,500	834	56%	7,245	12,000	4,755	40%
Occupancy Expenses	80,736	79,203	(1,533)	-2%	616,898	633,622	16,724	3%
Noncapitalized Equip. & Depr.	93,173	118,208	25,035	21%	787,454	891,106	103,653	12%
Call Center	15,594	16,667	1,073	6%	95,273	133,333	38,061	29%
Printing and Publications	208.78	1,171	962	82%	3556.37	11,867	8,310	70%
Travel	15,005	17,753	2,747	15%	131,765	137,689	5,923	4%
Conference, Training & Mtng Exp	12,571	20,537	7,967	39%	132,420	134,300	1,879	1%
Interest Expense and Bank Fees		125	125	100%	1677.92	3,500	1,822	52%
Insurance	8,803	9,167	364	4%	70,262	73,333	3,072	4%
Miscellaneous Expenses	4,887	250	(4,637)	-1855%	34,986	2,000	(32,986)	-1649%
Dues, Licenses and Fees	25,770	19,751	(6,019)	-30%	147,269	104,451	(42,818)	-41%
TOTAL EXPENSES	14,755,228	14,172,771	(582,457)	-4%	103,551,652	109,127,198	5,575,546	5%
TOTAL REVENUE LESS EXPENSES	(670,944)	(47,564)	(623,380)	-1311%	31,691,017	19,455,767	12,235,250	63%

Energy Trust of Oregon
Income Statement - Actual and Prior Yr Comparison
For the Eight Months Ending August 31, 2017
(Unaudited)

	August				YTD			
	Actual	Actual Prior Year	Prior Year Variance	Variance %	Actual	Actual Prior Year	Prior Year Variance	Variance %
<u>REVENUES</u>								
Public Purpose Funds-PGE	2,977,305	3,009,163	(31,858)	-1%	26,180,233	24,735,462	1,444,771	6%
Public Purpose Funds-PacifiCorp	2,358,937	2,235,689	123,248	6%	19,922,226	18,742,227	1,179,999	6%
Public Purpose Funds-NW Natural	608,669	494,046	114,623	23%	14,953,945	10,479,155	4,474,790	43%
Public Purpose Funds-Cascade	66,650	60,246	6,404	11%	1,987,979	1,175,580	812,399	69%
Public Purpose Funds-Avista		15600	(15,600)		614,418	93600	520,818	
Total Public Purpose Funds	6,011,561	5,814,744	196,816	3%	63,658,801	55,226,024	8,432,777	15%
Incremental Funds - PGE	5,189,035	3,181,819	2,007,217	63%	42,684,561	28,135,948	14,548,613	52%
Incremental Funds - PacifiCorp	2,840,559	2,454,522	386,037	16%	23,844,339	15,962,001	7,882,337	49%
NW Natural - Industrial DSM			0		3,720,596	2,018,035	1,702,561	84%
NW Natural - Washington			0		1,082,467	768,840	313,627	41%
Revenue from Investments	43,129	23,640	19,489	82%	251,905	415,129	(163,223)	-39%
TOTAL REVENUE	14,084,284	11,474,725	2,609,559	23%	135,242,669	102,525,977	32,716,692	32%
<u>EXPENSES</u>								
Program Subcontracts	4,799,373	4,520,389	(278,984)	-6%	36,901,314	34,770,222	(2,131,093)	-6%
Incentives	7,972,789	8,264,156	291,368	4%	52,070,625	52,515,967	445,342	1%
Salaries and Related Expenses	1,126,639	992,454	(134,185)	-14%	8,901,460	7,975,905	(925,556)	-12%
Professional Services	589,782	836,909	247,126	30%	3,588,482	4,686,266	1,097,783	23%
Supplies	5,508	4,226	(1,282)	-30%	24,418	20,194	(4,224)	-21%
Telephone	3,722	4,978	1,255	25%	36,545	40,175	3,630	9%
Postage and Shipping Expenses	666	308	(358)	-116%	7,245	6,876	(370)	-5%
Occupancy Expenses	80,736	75,914	(4,822)	-6%	616,898	508,610	(108,288)	-21%
Noncapitalized Equip. & Depr.	93,173	121,448	28,275	23%	787,454	818,916	31,462	4%
Call Center	15,594	14,395	(1,199)	-8%	95,273	112,732	17,460	15%
Printing and Publications	209	256	48		3,556	4,651	1,094	24%
Travel	15,005	11,193	(3,812)	-34%	131,765	127,228	(4,537)	-4%
Conference, Training & Mtng Exp	12,571	8,313	(4,258)	-51%	132,420	106,919	(25,501)	-24%
Interest Expense and Bank Fees			0		1,678	1,621	(57)	-4%
Insurance	8,803	8,607	(196)	-2%	70,262	67,748	(2,514)	-4%
Miscellaneous Expenses	4,887	9,628	4,741	49%	34,986	63,706	28,720	45%
Dues, Licenses and Fees	25,770	6,692	(19,078)	-285%	147,269	71,009	(76,260)	-107%
TOTAL EXPENSES	14,755,228	14,879,868	124,640	1%	103,551,652	101,898,744	(1,652,908)	-2%
TOTAL REVENUE LESS EXPENSES	(670,944)	(3,405,143)	2,734,199	80%	31,691,017	627,233	31,063,784	4953%

Energy Trust of Oregon
Statement of Functional Expenses
For the Eight Months Ending August 31, 2017
(Unaudited)

	Energy Efficiency	Renewable Energy	Total Program Expenses	Management & General	Communications & Customer Service	Total Admin Expenses	Total	Budget	Variance	% Var
Program Expenses										
Incentives	43,093,281	8,977,344	52,070,625				52,070,625	53,443,518	1,372,893	3%
Program Management & Delivery	36,590,133	311,182	36,901,314				36,901,314	37,974,622	1,073,308	3%
Payroll and Related Expenses	2,585,984	789,727	3,375,711	1,618,087	1,085,251	2,703,338	6,079,049	6,142,841	63,792	1%
Outsourced Services	2,042,285	510,143	2,552,428	311,246	533,908	845,154	3,397,582	5,962,735	2,565,153	43%
Planning and Evaluation	1,492,031	89,821	1,581,852	3,327	78,178	81,504	1,663,356	1,942,029	278,673	14%
Customer Service Management	212,853	83,288	296,141				296,141	367,229	71,088	19%
Trade Allies Network	228,857	12,479	241,336				241,336	264,798	23,462	9%
Total Program Expenses	86,245,424	10,773,984	97,019,408	1,932,660	1,697,337	3,629,996	100,649,405	106,097,771	5,448,366	5%
Program Support Costs										
Supplies	6,255	2,095	8,351	6,261	3,144	9,405	17,756	23,690	5,934	25%
Postage and Shipping Expenses	1,546	517	2,063	2,374	683	3,057	5,120	8,465	3,345	40%
Telephone	1,701	569	2,270	914	751	1,665	3,935	5,586	1,651	30%
Printing and Publications	642	106	748	2,284	140	2,423	3,172	9,873	6,701	68%
Occupancy Expenses	182,497	61,098	243,595	98,082	80,636	178,717	422,312	430,773	8,461	2%
Insurance	20,785	6,959	27,744	11,171	9,184	20,355	48,099	49,856	1,757	4%
Equipment	3,150	78,162	81,312	1,693	1,392	3,085	84,397	94,092	9,695	10%
Travel	24,014	14,932	38,946	32,470	37,152	69,621	108,567	123,689	15,122	12%
Meetings, Trainings & Conferences	24,685	16,437	41,122	46,079	13,514	59,593	100,716	88,700	(12,016)	-14%
Interest Expense and Bank Fees				1,678		1,678	1,678	3,500	1,822	52%
Depreciation & Amortization	17,206	5,760	22,966	9,247	7,602	16,849	39,815	40,025	210	1%
Dues, Licenses and Fees	73,156	9,060	82,216	10,200	16,161	26,360	108,576	82,634	(25,942)	-31%
Miscellaneous Expenses	33,500	209	33,709	335	276	611	34,321	1,360	(32,961)	-2424%
IT Services	1,226,068	177,360	1,403,428	291,759	228,597	520,356	1,923,783	2,067,186	143,403	7%
Total Program Support Costs	1,615,205	373,265	1,988,471	514,546	399,231	913,777	2,902,247	3,029,427	127,180	4%
TOTAL EXPENSES	87,860,631	11,147,249	99,007,880	2,447,207	2,096,567	4,543,774	103,551,652	109,127,199	5,575,547	5%

OPUC Measure vs. 8% 4.8%

Program Support Costs	1,988,471
Total Administrative Expenses	4,543,774
Total Support and Administrative	6,532,245
	<i>divided by</i>
Total Utility Revenue (without Int Income)	134,990,763
OPUC %	4.8%

ENERGY TRUST OF OREGON
Summary of All Units
For the Eight Months Ending August 31, 2017

	ENERGY EFFICIENCY									
	PGE	PacifiCorp	Total	NWN Industrial	NW Natural	Cascade	Avista	Oregon Total	NWN WA	ETO Total
REVENUES										
Public Purpose Funding	20,319,486	15,533,838	35,853,324	-	14,953,945	1,987,979	614,418	53,409,666	-	53,409,666
Incremental Funding	42,684,561	23,844,339	66,528,899	3,720,596				70,249,495	1,082,467	71,331,962
Contributions										
Revenue from Investments										
TOTAL PROGRAM REVENUE	63,004,047	39,378,177	102,382,223	3,720,596	14,953,945	1,987,979	614,418	123,659,161	1,082,467	124,741,628
EXPENSES										
Program Management (Note 3)	2,267,723	1,327,417	3,595,141	123,095	406,083	45,012	27,096	4,196,427	74,700	4,271,127
Program Delivery	17,613,541	10,404,872	28,018,413	563,941	3,250,309	393,774	188,141	32,414,578	310,782	32,725,360
Incentives	23,381,762	13,155,210	36,536,972	921,813	4,277,692	429,536	274,364	42,440,378	652,903	43,093,281
Program Eval & Planning Svcs.	1,206,384	699,030	1,905,415	40,244	206,147	20,030	13,898	2,185,732	94,811	2,280,543
Program Marketing/Outreach	1,523,450	921,075	2,444,526	16,254	435,804	30,274	29,822	2,956,679	40,697	2,997,376
Program Legal Services	-	-	-	-	-	-	-	-	-	-
Program Quality Assurance	19,049.00	9,958.00	29,007.00	-	4,201.00	438.00	186.00	33,831.00	1,750.00	35,581.00
Outsourced Services	212,923	128,757	341,681	9,098	39,744	3,045	2,754	396,321	4,125	400,446
Trade Allies & Cust. Svc. Mgmt.	207,619	127,025	334,644	4,779	68,772	4,558	4,780	417,533	24,178	441,711
IT Services	632,076	364,872	996,949	19,936	155,704	13,465	10,543	1,196,595	29,473	1,226,068
Other Program Expenses - all	202,241	118,292	320,532	8,005	32,897	3,687	2,148	367,271	21,867	389,138
TOTAL PROGRAM EXPENSES	47,266,768	27,256,508	74,523,280	1,707,165	8,877,353	943,819	553,732	86,605,345	1,255,286	87,860,631
ADMINISTRATIVE COSTS										
Management & General (Notes 1 & 2)	1,168,305	673,706	1,842,012	42,197	219,423	23,328	13,686	2,140,649	31,028	2,171,677
Communications & Customer Svc (Notes 1 & 2)	1,000,910	577,178	1,578,087	36,151	187,984	19,986	11,725	1,833,934	26,582	1,860,516
Total Administrative Costs	2,169,215	1,250,884	3,420,099	78,348	407,407	43,314	25,411	3,974,583	57,610	4,032,193
TOTAL PROG & ADMIN EXPENSES	49,435,983	28,507,392	77,943,379	1,785,513	9,284,760	987,133	579,143	90,579,928	1,312,896	91,892,824
TOTAL REVENUE LESS EXPENSES	13,568,064	10,870,785	24,438,844	1,935,083	5,669,185	1,000,846	35,275	33,079,233	(230,429)	32,848,804
NET ASSETS - RESERVES										
Cumulative Carryover at 12/31/16	6,507,279	644,839	7,152,117	1,028,150	1,485,656	-	68,620	9,734,531	283,171	10,017,701
Net Assets Reattributed from prior year						(335,865)		(335,865)		(335,865)
Change in net assets this year	13,568,064	10,870,785	24,438,844	1,935,083	5,669,185	1,000,846	35,275	33,079,233	(230,429)	32,848,804
Ending Net Assets - Reserves	20,075,343	11,515,624	31,590,961	2,963,233	7,154,841	664,981	103,895	42,477,899	52,742	42,530,640
Ending Reserve by Category										
Program Reserves (Efficiency and Renewables)	20,075,343	11,515,624	31,590,961	2,963,233	7,154,841	664,981	103,895	42,477,899	52,742	42,530,640
Operational Contingency Pool										
Emergency Contingency Pool										
TOTAL NET ASSETS CUMULATIVE	20,075,343	11,515,624	31,590,961	2,963,233	7,154,841	664,981	103,895	42,477,899	52,742	42,530,640

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
Summary of All Units
For the Eight Months Ending August 31, 2017

	RENEWABLE ENERGY			Other	TOTAL	Approved budget	Change	% Change
	PGE	PacifiCorp	Total		All Programs			
REVENUES								
Public Purpose Funding	5,860,747	4,388,388	10,249,135	-	63,658,801	59,667,367	(3,991,434)	-7%
Incremental Funding					71,331,962	68,745,598	(2,586,365)	-4%
Contributions							-	
Revenue from Investments				251,906	251,906	170,000	81,906	48%
TOTAL PROGRAM REVENUE	5,860,747	4,388,388	10,249,135	251,906	135,242,669	128,582,965	6,659,704	5%
EXPENSES								
Program Management (Note 3)	427,242	369,152	796,394		5,067,521	5,181,886	114,365	2%
Program Delivery	172,815	131,700	304,515		33,029,875	33,442,999	413,124	1%
Incentives	4,926,012	4,051,332	8,977,344		52,070,625	53,443,517	1,372,892	3%
Program Eval & Planning Svcs.	49,216	40,605	89,821		2,370,364	3,416,402	1,046,038	31%
Program Marketing/Outreach	92,078	69,905	161,983		3,159,359	3,804,545	645,186	17%
Program Legal Services	-	-	-		-	13,334	13,334	100%
Program Quality Assurance	-	-	-		35,581.00	56,666	21,085	37%
Outsourced Services	150,813	197,347	348,160		748,606	1,675,546	926,940	55%
Trade Allies & Cust. Svc. Mgmt.	55,389	40,378	95,767		537,478	625,360	87,882	14%
IT Services	95,306	82,054	177,360		1,403,428	1,508,042	104,614	7%
Other Program Expenses - all	108,677	87,229	195,905		585,043	562,490	(22,553)	-4%
TOTAL PROGRAM EXPENSES	6,077,548	5,069,702	11,147,249	-	99,007,880	103,730,787	4,722,907	5%
ADMINISTRATIVE COSTS								
Management & General (Notes 1 & 2)	150,220	125,310	275,530		2,447,207	2,807,154	359,946	13%
Communications & Customer Svc (Notes 1 & 2)	128,697	107,355	236,051		2,096,567	2,589,258	492,691	19%
Total Administrative Costs	278,917	232,665	511,581		4,543,774	5,396,412	852,638	16%
TOTAL PROG & ADMIN EXPENSES	6,356,465	5,302,367	11,658,830		103,551,652	109,127,199	5,575,547	5%
TOTAL REVENUE LESS EXPENSES	(495,718)	(913,979)	(1,409,695)	251,906	31,691,017	19,455,765	(12,235,251)	63%
NET ASSETS - RESERVES								
Cumulative Carryover at 12/31/16	7,543,333	7,376,941	14,920,276	8,935,944	33,873,921	32,329,685	1,544,236	5%
Net Assets Reattributed from prior year				335,865	-			
Change in net assets this year	(495,718)	(913,979)	(1,409,695)	251,906	31,691,017	19,455,765	12,235,252	63%
Ending Net Assets - Reserves	7,047,615	6,462,962	13,510,581	9,523,715	65,564,938	51,785,450	(13,779,488)	27%
Ending Reserve by Category								
Program Reserves (Efficiency and Renewables)	7,047,615	6,462,962	13,510,581		65,564,938	51,785,450	(13,779,488)	
Operational Contingency Pool				4,523,715				
Emergency Contingency Pool				5,000,000				
TOTAL NET ASSETS CUMULATIVE	7,047,615	6,462,962	13,510,581	9,523,715	65,564,938	51,785,450	(13,779,488)	27%

Energy Trust of Oregon
Program Expense by Service Territory
For the Eight Months Ending August 31, 2017
(Unaudited)

	PGE	Pacific Power	Subtotal Elec.	NWN Industrial	NW Natural Gas	Cascade	Avista	Subtotal Gas	Oregon Total	NWN WA	ETO Total	YTD Budget	Variance	% Var
Energy Efficiency														
Commercial														
Existing Buildings	16,152,628	9,120,237	25,272,865	686,090	1,718,054	323,127	141,121	2,868,392	28,141,257	557,737	28,698,994	29,677,205	978,211	3%
New Buildings	6,059,629	2,460,889	8,520,518	169,241	809,066	165,040	39,324	1,182,671	9,703,189		9,703,189	11,458,785	1,755,596	15%
NEEA	850,517	591,038	1,441,555		102,056	10,929		112,985	1,554,540	11,489	1,566,029	1,820,251	254,222	14%
Total Commercial	23,062,775	12,172,164	35,234,939	855,331	2,629,176	499,096	180,445	4,164,047	39,398,986	569,226	39,968,212	42,956,241	2,988,029	7%
Industrial														
Production Efficiency	10,710,417	6,480,055	17,190,472	930,180	320,616	116,557	18,470	1,385,823	18,576,295		18,576,295	17,970,046	(606,249)	-3%
NEEA	201,630	140,115	341,745						341,745		341,745	145,222	(196,523)	-135%
Total Industrial	10,912,047	6,620,170	17,532,217	930,180	320,616	116,557	18,470	1,385,823	18,918,040	-	18,918,040	18,115,268	(802,772)	-4%
Residential														
Existing Homes	3,735,199	3,282,953	7,018,153	-	3,700,426	95,721	283,653	4,079,800	11,097,953	295,934	11,393,887	13,144,023	1,750,136	13%
New Homes/Products	9,970,468	5,212,180	15,182,648	-	2,182,742	227,376	96,576	2,506,694	17,689,342	396,871	18,086,213	18,950,009	863,796	5%
NEEA	1,755,498	1,219,925	2,975,424	-	451,800	48,382		500,182	3,475,605	50,862	3,526,467	3,340,273	(186,194)	-6%
Total Residential	15,461,165	9,715,059	25,176,224	-	6,334,968	371,479	380,228	7,086,676	32,262,900	743,667	33,006,567	35,434,305	2,427,738	7%
Energy Efficiency Program Costs	49,435,983	28,507,392	77,943,379	1,785,513	9,284,760	987,133	579,143	12,636,546	90,579,926	1,312,896	91,892,824	96,505,814	4,612,995	5%
Renewables														
Solar Electric (Photovoltaic)	4,430,231	3,229,535	7,659,766						7,659,766		7,659,766	8,051,862	392,096	5%
Other Renewable	1,926,235	2,072,829	3,999,064						3,999,064		3,999,064	4,569,522	570,458	12%
Renewables Program Costs	6,356,465	5,302,367	11,658,830	-	-	-	-	-	11,658,830	-	11,658,830	12,621,384	962,554	8%
Cost Grand Total	55,792,448	33,809,760	89,602,209	1,785,513	9,284,760	987,133	579,143	12,636,546	102,238,756	1,312,896	103,551,652	109,127,198	5,575,547	5%

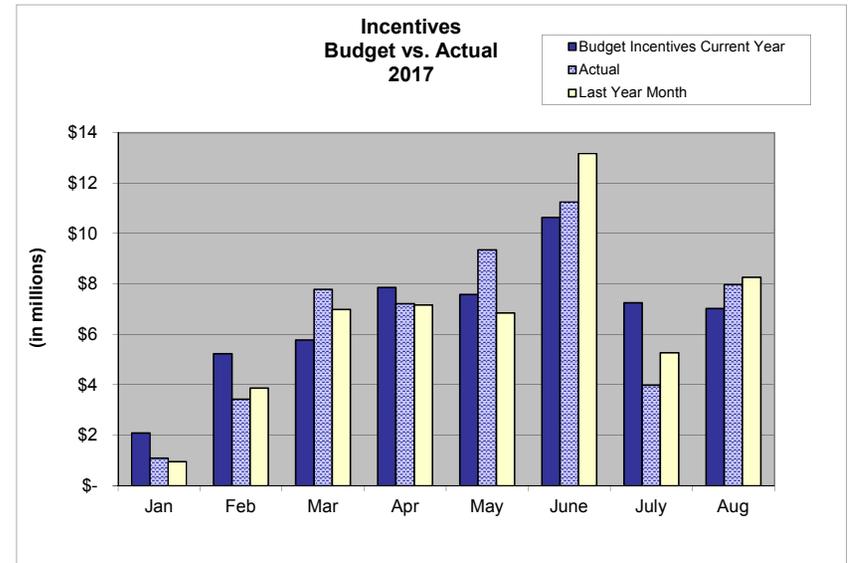
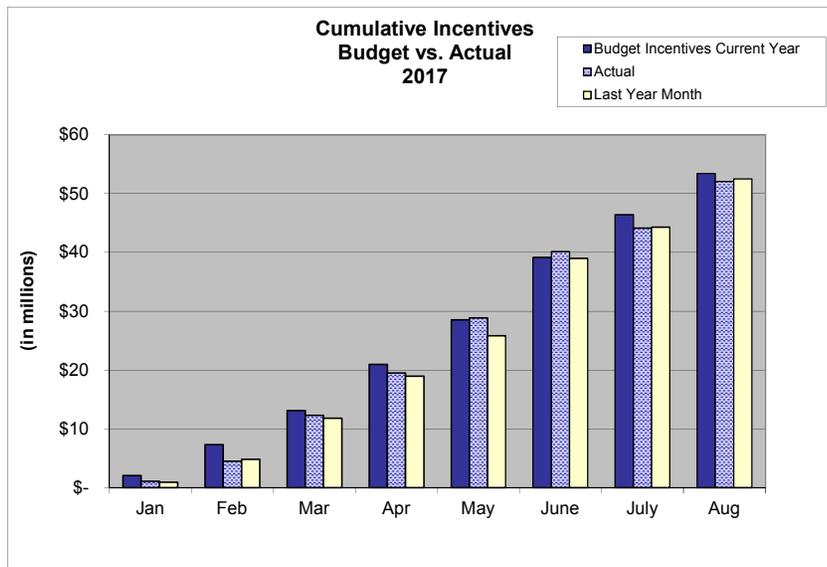
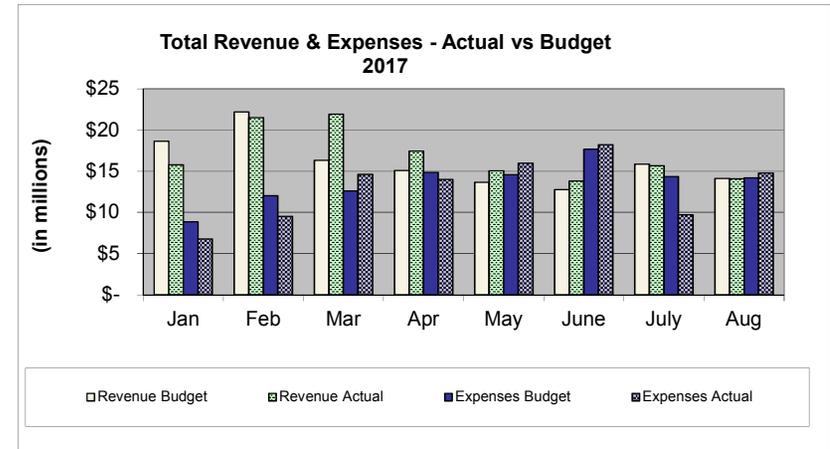
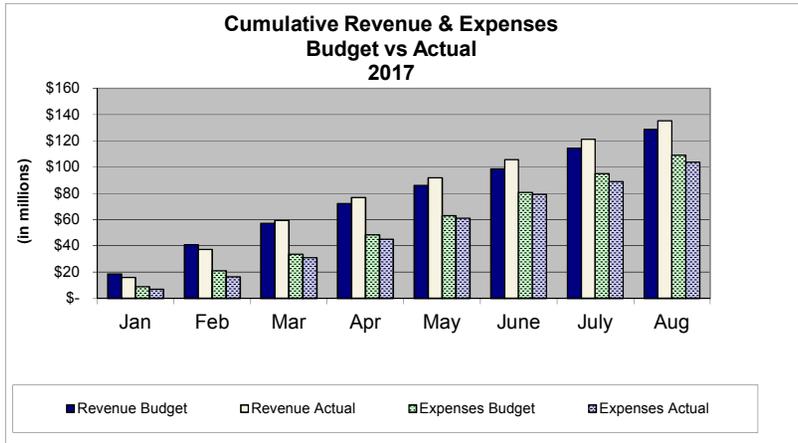
Energy Trust of Oregon
Administrative Expenses
For the Eight Months Ending August 31, 2017
(Unaudited)

EXPENSES	MANAGEMENT & GENERAL						COMMUNICATIONS & CUSTOMER SERVICE					
	ACTUAL	QUARTERLY		YTD			ACTUAL	QUARTERLY		YTD		
		BUDGET	REMAINING	ACTUAL	BUDGET	VARIANCE		BUDGET	REMAINING	ACTUAL	BUDGET	VARIANCE
Outsourced Services	\$59,758	\$125,792	\$66,034	\$296,127	\$463,944	\$167,818	\$197,440	\$355,250	\$157,810	\$533,908	\$947,333	\$413,425
Legal Services	538	3,000	2,462	15,119	8,000	(7,119)						
Salaries and Related Expenses	386,300	666,179	279,879	1,618,087	1,771,476	153,389	255,244	429,351	174,108	1,085,251	1,144,937	59,686
Supplies	407	1,500	1,093	2,905	4,000	1,095	206	250	44	385	667	282
Postage and Shipping Expenses		625	625	1,543	1,667	123						
Printing and Publications	295	1,125	830	2,114	3,000	886		375	375		3,500	3,500
Travel	6,707	15,362	8,655	32,470	40,967	8,497	10,541	11,250	709	37,152	30,000	(7,152)
Conference, Training & Mtngs	13,815	24,462	10,647	46,079	46,233	154	2,269	3,125	856	13,514	8,333	(5,181)
Interest Expense and Bank Fees		375	375	1,678	3,500	1,822						
Dues, Licenses and Fees	2,210	3,117	907	10,184	10,953	769	1,833	4,125	2,292	16,148	11,000	(5,148)
Shared Allocation (Note 1)	31,716	51,008	19,293	125,815	136,022	10,208	25,650	39,966	14,316	103,436	106,575	3,140
IT Service Allocation (Note 2)	79,011	118,042	39,031	291,759	313,507	21,748	82,156	92,488	10,331	228,597	245,637	17,040
Planning & Eval	2,448	1,492	(957)	3,327	3,884	557	78,178	35,057	(43,121)	78,178	91,275	13,098
TOTAL EXPENSES	583,206	1,012,080	428,875	2,447,207	2,807,154	359,946	653,517	971,237	317,720	2,096,567	2,589,258	492,691

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

Note 2) Represents allocation of Shared IT Costs

Administrative Expenses 2nd Month of Quarter



PINK PAPER

For contracts with costs
through: 9/1/2017

CONTRACTOR	Description	City	EST COST	Actual TTD	Remaining	Start	End
Administration							
Administration Total:			13,115,521	4,545,280	8,570,240		
Communications							
Communications Total:			4,039,402	2,691,162	1,348,240		
Energy Efficiency							
Northwest Energy Efficiency Alliance	Regional EE Initiative Agmt	Portland	33,662,505	18,094,048	15,568,457	1/1/2015	7/1/2020
ICF Resources, LLC	2017 BE PMC	Fairfax	14,308,850	8,390,001	5,918,849	1/1/2017	12/31/2017
CLEAResult Consulting Inc	2017 HES PMC	Austin	6,540,508	3,769,660	2,770,848	1/1/2017	12/31/2017
CLEAResult Consulting Inc	2017 NBE PMC	Austin	6,207,078	3,745,188	2,461,890	1/1/2017	12/31/2017
Northwest Energy Efficiency Alliance	Regional Gas EE Initiative	Portland	6,200,354	1,984,908	4,215,446	1/1/2015	7/1/2020
Lockheed Martin Corporation	2017 MF PMC	Grand Prairie	4,586,068	2,826,579	1,759,489	1/1/2017	12/31/2017
Ecova Inc	2017 Products PMC	Spokane	3,907,587	2,339,499	1,568,088	1/1/2017	12/31/2017
Energy 350 Inc	PDC - PE 2017	Portland	3,144,460	2,137,273	1,007,187	1/1/2017	12/31/2017
CLEAResult Consulting Inc	2017 NH PMC	Austin	3,137,693	1,802,614	1,335,079	1/1/2017	12/31/2017
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 2017	Portland	2,017,000	1,525,947	491,053	1/1/2017	12/31/2017
Northwest Power & Conservation Council	RTF Funding Agreement		1,825,000	989,020	835,980	2/25/2015	12/31/2019
Cascade Energy, Inc.	PDC - PE 2017	Walla Walla	1,784,368	1,146,206	638,162	1/1/2017	12/31/2017
RHT Energy Inc.	PDC - PE 2017	Medford	1,740,434	1,115,103	625,331	1/1/2017	12/31/2017
Evergreen Consulting Group, LLC	PE Lighting PDC 2017	Tigard	1,555,700	974,400	581,300	1/1/2017	12/31/2017
KEMA Incorporated	EB & SEM 15-16 Evaluation	Oakland	560,000	0	560,000	6/8/2017	5/31/2018
SBW Consulting, Inc.	PE Program Impact Evaluation	Bellevue	540,000	445,049	94,951	5/1/2016	1/31/2018
Clean Energy Works, Inc.	EE Incentive & Services Agmt	Portland	457,550	412,410	45,140	7/1/2014	12/31/2017
Michaels Energy, Inc.	New Buildings '14 Impact Evalu	La Crosse	328,000	327,997	3	5/23/2016	5/31/2017
Craft3	Loan Agreement	Portland	300,000	300,000	0	6/1/2014	6/20/2025
CLEAResult Consulting Inc	2017 HES WA PMC	Austin	285,746	161,405	124,341	1/1/2017	12/31/2017
ICF Resources, LLC	2017 BE DSM PMC	Fairfax	274,746	145,077	129,669	1/1/2017	12/31/2017
EnergySavvy Inc.	Optix Engage Online Audit Tool	Seattle	273,600	150,667	122,933	6/1/2016	5/31/2018
Pivotal Energy Solutions LLC	License Agreement	Gilbert	270,500	161,362	109,138	3/1/2014	12/31/2017
Balanced Energy Solutions LLC	New Homes QA Inspections	Portland	248,625	107,304	141,321	4/27/2015	12/31/2017
ICF Resources, LLC	2017 BE NWN WA PMC	Fairfax	246,200	133,443	112,757	1/1/2017	12/31/2017
Alternative Energy Systems Consulting, Inc.	PE Mobile App Scoping Tool	Carlsbad	229,830	226,564	3,266	6/1/2016	9/30/2017
TRC Engineers Inc.	Transition Agreement	Irvine	214,216	0	214,216	9/1/2017	12/31/2017
CLEAResult Consulting Inc	RES PMC Transition	Austin	212,603	0	212,603	9/1/2017	12/31/2017

For contracts with costs
through: 9/1/2017

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Alliance For Sustainable Energy, LLC	Technical Services Agreement	Lakewood	104,989	89,215	15,774	10/30/2015	11/30/2017
Alternative Energy Systems Consulting, Inc.	PE Review of Technical Studies	Carlsbad	100,000	6,700	93,300	5/22/2017	12/31/2017
1000 Broadway Building L.P.	Pay-for-Performance Pilot	Portland	88,125	58,750	29,375	10/17/2014	11/1/2018
The Cadmus Group Inc.	Residential Air Conditioning	Watertown	83,550	0	83,550	7/1/2017	12/31/2017
CLEAResult Consulting Inc	Professional Services/Trans	Austin	81,688	59,735	21,953	10/15/2014	10/15/2017
WegoWise Inc	benchmarking license	Boston	77,472	32,832	44,640	6/15/2014	12/31/2018
KEMA Incorporated	EB & SEM Evaluation	Oakland	70,202	62,050	8,152	5/1/2017	5/31/2018
Evergreen Economics	Research Cannabis Market	Portland	69,530	27,039	42,491	6/23/2017	12/31/2017
Abt SRBI Inc.	Fast Feedback Surveys 2017	New York	66,500	33,252	33,248	2/1/2017	2/28/2018
Energy 350 Inc	Professional Services	Portland	64,062	41,276	22,786	12/10/2014	12/10/2018
Apex Analytics LLC	Nest Seasonal Savings Eval	Boulder	59,000	37,295	21,705	8/29/2016	12/31/2017
The Cadmus Group Inc.	Existing Homes Pilot Eval	Watertown	53,000	52,999	1	2/18/2016	12/31/2017
Research Into Action, Inc.	Evaluation MHR Pilot	Portland	52,000	5,655	46,345	5/1/2017	2/28/2019
Green Motors Practice Group	Green Motors Incentive Funding	Boise	50,000	10,847	39,153	1/1/2017	12/31/2017
Earth Advantage, Inc.	Home Energy Score Analysis	Portland	45,000	0	45,000	6/27/2017	12/31/2017
KEMA Incorporated	O&M & SEM Persistence Research	Oakland	45,000	9,754	35,246	12/1/2016	9/30/2017
MetaResource Group	Intel DX1 Mod 1&2 Megaproject	Portland	45,000	29,276	15,724	4/1/2015	12/31/2017
Navigant Consulting Inc	Evaluation Cosultant-DSM Proj.	Boulder	45,000	0	45,000	6/15/2017	6/1/2019
Brightworks Sustainability LLC	Net Zero Fellowship Grant Agmt	Portland	43,500	0	43,500	4/5/2017	8/31/2018
Ecova Inc	RES PDC Transition Agreement	Spokane	39,948	0	39,948	9/1/2017	12/31/2017
Cadeo Group LLC	Evaluation Consulting	Washington	35,000	7,955	27,045	4/25/2017	12/31/2017
KEMA Incorporated	Billing Analysis Review	Oakland	35,000	3,351	31,649	3/15/2015	12/31/2017
The Cadmus Group Inc.	Air Conditioning Measures	Watertown	32,950	22,660	10,290	8/22/2016	8/22/2018
Northwest Energy Efficiency Council	Tool Lending Lbry Sponsorship	Seattle	30,500	30,500	0	9/21/2016	12/31/2017
Anchor Blue LLC	Emergency Tech Measure	Ridgefield	29,750	0	29,750	9/1/2017	11/1/2017
Cadeo Group LLC	Retail Lighting Mkt Analysis	Washington	29,545	0	29,545	7/10/2017	12/31/2017
BASE zero LLC	Quality Assurance Services	Bend	27,325	22,869	4,456	3/1/2016	12/31/2017
Energy Center of Wisconsin	Billing Analysis Review	Madison	25,000	1,710	23,290	3/15/2015	12/31/2017
Northwest Food Processors Association	NW Industrial EE Summit 2017	Portland	25,000	0	25,000	1/1/2017	12/31/2017
Sustainable Northwest	Klamath Industrial/Ag Programs	Portland	24,992	24,992	0	1/1/2017	11/1/2017
Forrest Marketing	Indoor Cannabis MarketResearch	Portland	24,500	22,050	2,450	3/8/2017	9/30/2017
Consortium for Energy Efficiency	Perform. Benchmark Sponsorship		22,255	22,255	0	1/1/2017	12/31/2017
Consortium for Energy Efficiency	Membership Dues - 2017		21,448	21,448	0	1/1/2017	12/31/2017
Bridgetown Printing Company	2017 Bill Insert	Portland	20,000	13,356	6,644	1/18/2017	12/31/2017

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Portland General Electric	Workshop/Training Agreement	Portland	15,000	0	15,000	1/1/2017	12/31/2017
EES Consulting, Inc	Professional Services Agmt	Kirkland	14,800	7,020	7,780	10/1/2016	9/30/2018
Research Into Action, Inc.	Evaluation - APS Pilot	Portland	14,600	4,849	9,751	7/1/2017	12/31/2018
Flink Energy Consulting	Smart Grid Modeling	Portland	12,120	12,120	0	7/12/2016	12/30/2017
LightTracker, Inc.	Lighting Market Analysis	Boulder	12,000	0	12,000	7/17/2017	3/31/2018
FMYI, INC	Subscription Agreement	Portland	11,150	5,150	6,000	4/25/2016	11/1/2017
Earth Advantage, Inc.	2017 Sponsorship	Portland	10,250	0	10,250	3/1/2017	2/28/2018
American Council for and Energy Efficient Economy	Intelligen Effncy Sponsorship		10,000	10,000	0	4/4/2017	12/31/2017
American Council for and Energy Efficient Economy	EE & Wtr Consv. Sponsorship		10,000	10,000	0	4/4/2017	12/31/2017
The Leede Research Group Inc	Evaluation Consultant	Manitowoc	9,000	0	9,000	5/1/2017	12/31/2017
City of Portland Bureau of Planning & Sustainability	Sponsorship - 2017	Portland	8,000	8,000	0	1/5/2017	12/31/2017
KEMA Incorporated	New Bldg Impact Evaluation	Oakland	8,000	7,506	494	5/1/2017	9/30/2017
The Cadmus Group Inc.	New Bldg Program Impact Eval	Watertown	6,500	5,363	1,138	4/20/2017	10/31/2017
Northwest Energy Efficiency Council	BOC 2017 Sponsorship	Seattle	6,000	6,000	0	2/14/2017	12/31/2017
Social Enterprises Inc.	GoGreen Sponsorship - 2017	Portland	5,000	5,000	0	3/21/2017	12/31/2017
Energy Efficiency Total:			99,278,472	54,242,551	45,035,921		

Joint Programs

E Source Companies LLC	E Source Service Agreement	Boulder	133,350	133,350	0	2/1/2014	1/31/2018
Portland State University	GIS Data Research		71,992	0	71,992	1/1/2017	9/30/2017
Structured Communications Systems, Inc.	ShoreTel Phone System Install		65,345	65,287	59	1/1/2017	12/31/2017
CoStar Realty Information Inc	Property Data	Baltimore	48,020	40,815	7,205	6/1/2011	5/31/2018
Grounded Research and Consulting, LLC	Education Background Research	Oakland	25,000	24,972	28	3/13/2017	6/30/2017
American Council for and Energy Efficient Economy	ACEEE Sponsorship - 2017		12,500	12,500	0	1/1/2017	12/31/2017
Navigant Consulting Inc	Resource Assessment Updates	Boulder	10,600	0	10,600	8/26/2016	8/26/2018
Peggy Merchant Events, LLC	T.A. Forum Venue Research	Portland	5,000	0	5,000	7/24/2017	11/30/2017
Joint Programs Total:			371,807	276,924	94,884		

Renewable Energy

Sunway 3, LLC	Prologis PV installation		3,405,000	3,261,044	143,956	9/30/2008	9/30/2028
Clean Water Services	Project Funding Agreement		3,000,000	2,013,106	986,894	11/25/2014	11/25/2039
Oregon Institute of Technology	Geothermal Resource Funding	Klamath Falls	1,550,000	1,550,000	0	9/11/2012	9/11/2032
Farm Power Misty Meadows LLC	Misty Meadows Biogas Facility	Mount Vernon	1,000,000	1,000,000	0	10/25/2012	10/25/2027
Three Sisters Irrigation District	TSID Hydro	Sisters	1,000,000	1,000,000	0	4/25/2012	9/30/2032
Farmers Irrigation District	FID - Plant 2 Hydro	Hood River	900,000	900,000	0	4/1/2014	4/1/2034
Klamath Falls Solar 2 LLC	PV Project Funding Agreement	San Mateo	850,000	0	850,000	7/11/2016	7/10/2041

For contracts with costs
through: 9/1/2017

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Old Mill Solar, LLC	Project Funding Agmt Bly, OR	Lake Oswego	490,000	490,000	0	5/29/2015	5/28/2030
City of Medford	750kW Combined Heat & Power	Medford	450,000	450,000	0	10/20/2011	10/20/2031
City of Pendleton	Pendleton Microturbines	Pendleton	450,000	150,000	300,000	4/20/2012	4/20/2032
RES - Ag FGO LLC	Biogas Manure Digester Project	Washington	441,660	441,660	0	10/27/2010	10/27/2025
RES - Ag FGO LLC	Biogas Manure Digester - FGO	Washington	441,660	438,660	3,000	10/27/2010	10/27/2025
SunE Solar XVI Lessor, LLC	BVT Sexton Mtn PV	Bethesda	355,412	355,412	0	5/15/2014	12/31/2034
City of Gresham	City of Gresham Cogen 2		350,000	334,523	15,477	4/9/2014	7/9/2034
BSA Enterprises Inc	Solar Verifier Services	Sisters	200,000	94,712	105,288	8/1/2016	7/31/2018
Farmers Conservation Alliance	Outreach Activities	Hood River	200,000	154,423	45,577	1/1/2017	12/31/2017
Gary Higbee DBA WindStream Solar	Solar Verifier Services	Eugene	200,000	77,361	122,639	8/1/2016	7/31/2018
Luxurious Plumbing and Heating, Inc.	Solar Verifier Services	West Linn	200,000	103,670	96,330	8/1/2016	7/31/2018
RHT Energy Inc.	Verifier Services Agmt - Solar	Medford	200,000	96,993	103,008	8/1/2016	7/31/2018
City of Astoria	Bear Creek Funding Agreement	Astoria	143,000	143,000	0	3/24/2014	3/24/2034
Solar Oregon	2015 Outreach Agreement	Portland	123,300	90,100	33,200	1/1/2015	4/30/2018
SPS of Oregon Inc	Project Funding Agreement	Wallowa	75,000	74,513	488	10/15/2015	10/31/2036
Kendrick Business Services LLC	Small Business Support Agmt	Albany	60,000	2,375	57,625	11/1/2016	6/30/2018
Future Resource Strategies, LLC	Backfill for RE Staff	Salem	50,000	0	50,000	6/7/2017	11/30/2017
Kendrick Business Services LLC	TA Business Development	Albany	50,000	4,839	45,161	1/1/2017	12/31/2017
Kleinschmidt Associates	Evaluation Services	Pittsfield	47,400	38,976	8,424	1/1/2017	11/30/2018
OSEIA-Oregon Solar Energy Industries Assoc	Technical Training Course Dev		41,650	18,600	23,050	1/1/2017	4/30/2018
The Cadmus Group Inc.	Solar Verification	Watertown	41,000	0	41,000	8/24/2017	2/28/2018
Clean Energy States Alliance	2017 CESA Sponsorship		39,500	39,500	0	7/1/2016	6/30/2017
Clean Energy States Alliance	CESA Membership 17-18		39,500	39,500	0	7/1/2017	6/30/2018
ENERGYneering Solutions Inc	Biopower & Hydro Evaluations	Sisters	25,000	24,954	46	12/6/2016	11/30/2018
University of Oregon	UO SRML Contribution - 2017	Eugene	24,999	24,999	0	3/9/2017	3/8/2018
Wallowa Resources Community Solutions, Inc.	Renewables Field Outreach		24,999	15,788	9,211	2/1/2016	1/30/2018
Robert Migliori	42kW wind energy system	Newberg	24,125	22,352	1,773	4/11/2007	1/31/2024
Warren Griffin	Griffin Wind Project	Salem	13,150	9,255	3,895	10/1/2005	10/1/2020
Oregon Solar Energy Industries Association	Sponsorship 2017	Portland	7,500	7,500	0	1/1/2017	12/31/2017
OSEIA-Oregon Solar Energy Industries Assoc	OSEIA 2018 Conf. Sponsorship		7,500	0	7,500	9/1/2017	12/31/2018
Bonneville Environmental Foundation	REC/WRC Purchase 2016	Portland	4,860	2,430	2,430	1/1/2016	12/31/2017
Renewable Energy Total:			16,526,215	13,470,242	3,055,973		
Grand Total:			133,331,416	75,226,159	58,105,257		

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Notes on September 2017 Financial Statements

October 20, 2017

Revenue

The revenue picture has been consistent for several months. We received revenue payment for NWN Washington in September rather than October, which increased receipts \$938K more than expected.

	<u>YTD Actual</u>	<u>YTD Budget</u>	<u>YTD Var</u>	<u>YTD %</u>	<u>PY</u>
PGE	77,753,841	76,725,757	122,338	0%	58,977,525
PAC	49,449,646	44,520,184	4,836,895	12%	39,592,086
NWN	21,241,731	18,980,711	1,378,527	8%	14,499,743
CNG	2,054,130	1,824,805	247,804	14%	1,232,752
Avista	675,398	652,443	(7,766)	-1%	109,200
Investment Income	299,801	180,000	81,905	48%	452,755
Total	151,474,547	142,883,900	6,659,704	5%	114,864,061

Reserves

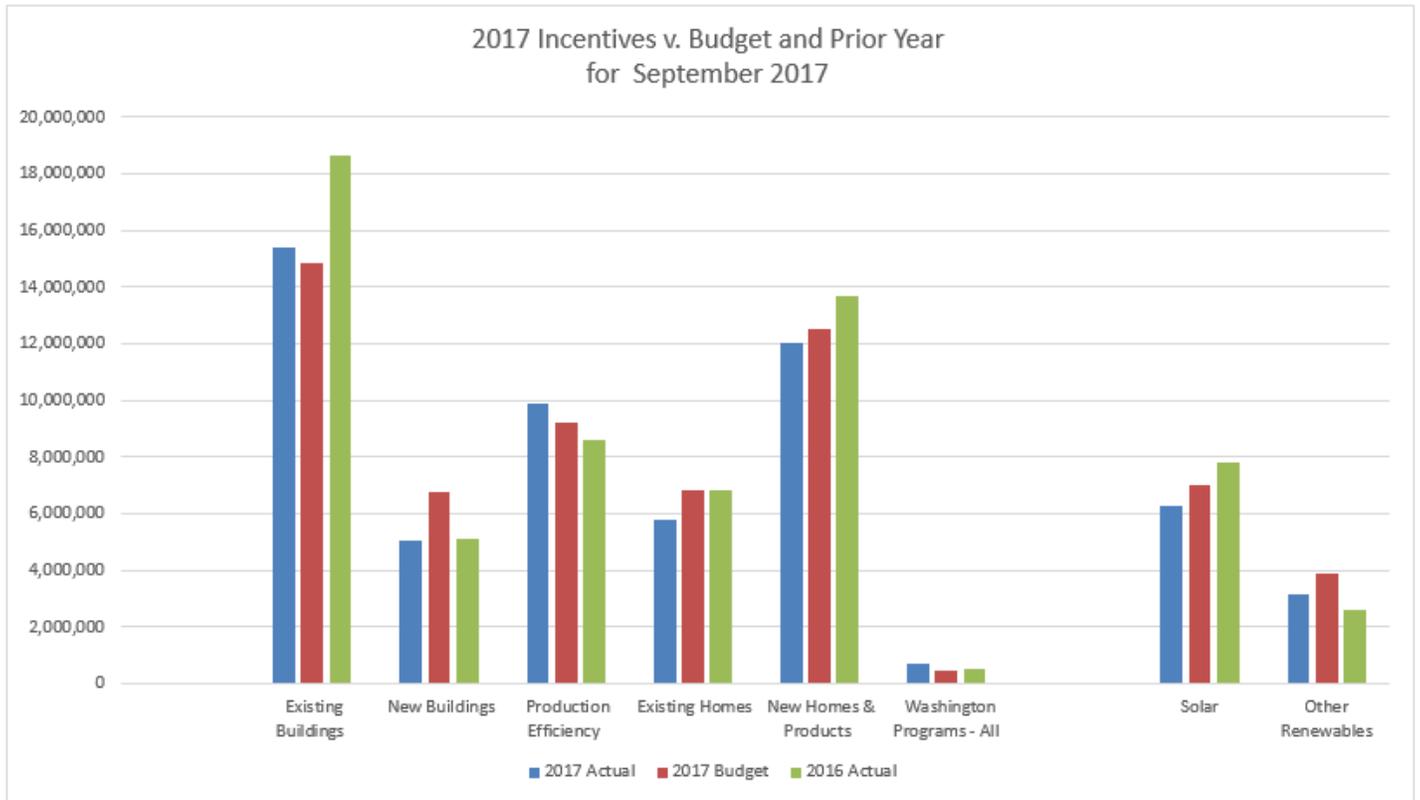
Reserves in September increased almost \$3 million due to lower than expected spending during the month. We will be drawing these amounts down significantly for year-end incentive payments.

<u>Reserves</u>	<u>9/30/17 Amount</u>	<u>Actual 12/31/16 Amount</u>	<u>% Change from Year End</u>
PGE	21,400,680	6,507,279	229%
PacifiCorp	12,923,711	644,839	1904%
NW Natural	6,426,679	1,485,656	333%
Cascade	515,430	0	
Avista	67,901	68,620	-1%
NWN Industrial	2,682,742	1,028,150	161%
NWN Washington	813,213	283,171	187%
PGE Renewables	7,354,422	7,543,333	-3%
PAC Renewables	6,649,684	7,376,941	-10%
Program Reserves	58,834,462	24,937,989	136%
Contingency Reserve	5,000,000	5,000,000	0%
Contingency Available	4,571,610	3,935,314	16%
Total	68,406,058	33,873,295	102%

Expenses

September expenses came in 12% below budget - \$13.4 actual million vs. \$15.2 budgeted. Year-to-date expenses are \$117 million, \$7.4 million below budget. The variance is primarily due to lower than expected spending in incentives (\$3.2 million YTD) and Professional services (\$2.8 million YTD). Overall expenses are \$3 million less than last year at this time.

September incentives came in \$1.8 million less than budgeted. Overall they are within 5% of the budgeted amount for the year. Total incentives in 2017 are \$5.5 million less than 2016 (\$58.3 million vs. \$63.8 million).

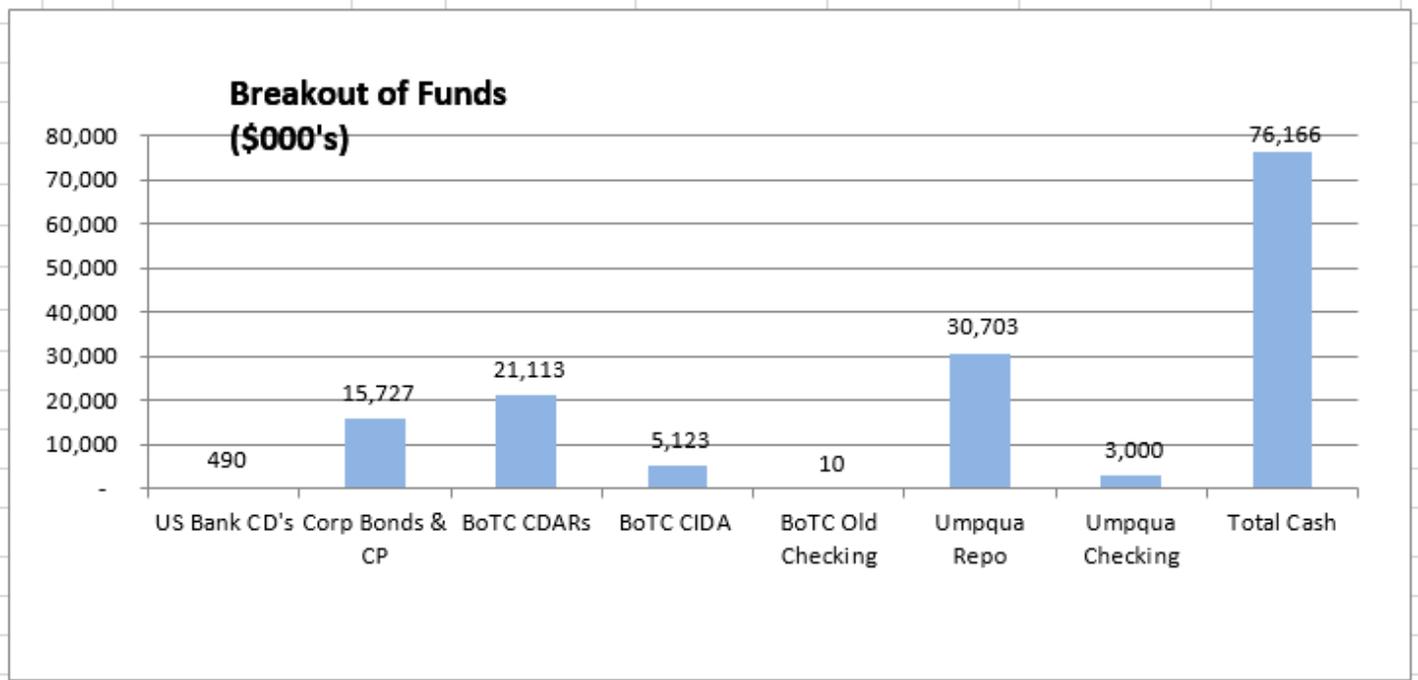


Incentives thru September 2017	Total Incentives			
	<u>Actual</u>	<u>Budget</u>	<u>Variance</u>	<u>Var %</u>
Existing Buildings	15,425,236	14,862,079	(563,157)	-4%
New Buildings	5,073,459	6,782,442	1,708,983	25%
Production Efficiency	9,865,771	9,215,562	(650,209)	-7%
Existing Homes	5,759,919	6,842,189	1,082,270	16%
New Homes & Products	12,023,489	12,516,730	493,242	4%
Washington Programs - All	721,243	453,858	(267,385)	-59%
Solar	6,308,479	7,010,700	702,221	10%
Other Renewables	3,166,119	3,865,997	699,878	18%
Total Incentives	58,343,714	61,549,557	3,205,844	5%
Energy Efficiency Only	48,869,115	50,672,860	1,803,745	4%

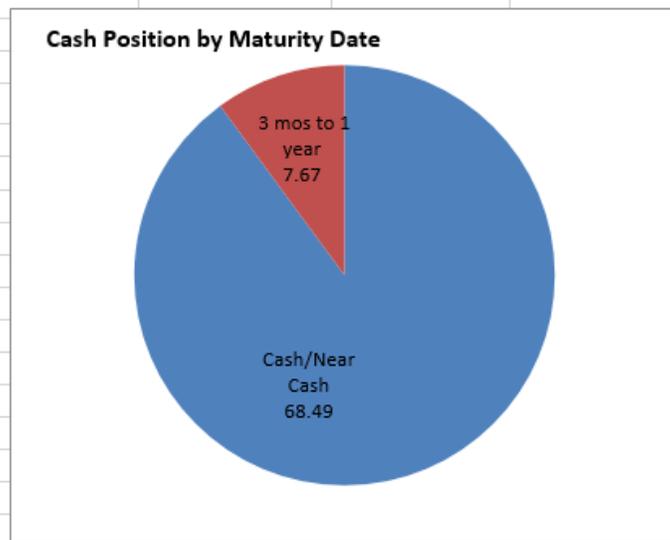
Sept 2017 vs. Sept 2016	Total Incentives			
	<u>Current Year</u>	<u>Prior Year</u>	<u>Variance</u>	<u>Var %</u>
Existing Buildings	15,425,236	18,669,087	3,243,852	17%
New Buildings	5,073,459	5,142,003	68,544	1%
Production Efficiency	9,865,771	8,605,236	(1,260,535)	-15%
Existing Homes	5,759,919	6,859,687	1,099,769	16%
New Homes & Products	12,023,489	13,685,153	1,661,664	12%
Washington Programs - All	721,243	494,403	(226,840)	-46%
Solar	6,308,479	7,793,202	1,484,723	19%
Other Renewables	3,166,119	2,593,632	(572,487)	-22%
Total Incentives	58,343,714	63,842,403	5,498,686	9%
Energy Efficiency Only	48,869,115	53,455,569	4,586,454	9%

Investment Status

The graphs below show the type of investments we hold and the locations where our funds are held. We had some investments mature this month, leading to more cash and lower bond holdings.



Average Days to Maturity:	26
Average Portfolio Yield:	0.64%



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Energy Trust of Oregon
BALANCE SHEET
September 30, 2017
(Unaudited)

	September 2017	August 2017	Dec 2016	September 2016	Change from one month ago	Change from Beg. of Year	Change from one year ago
Current Assets							
Cash & Cash Equivalents	46,864,420	41,171,730	44,471,035	25,404,894	5,692,690	2,393,385	21,459,525
Investments	29,221,261	33,211,209	19,350,134	43,908,093	(3,989,949)	9,871,126	(14,686,832)
Receivables	75,571	156,453	86,058	127,192	(80,882)	(10,487)	(51,621)
Prepaid Expenses	330,236	344,106	280,347	451,839	(13,870)	49,889	(121,603)
Advances to Vendors	2,233,949	711,143	2,050,126	2,042,069	1,522,806	183,823	191,880
Total Current Assets	78,725,436	75,594,640	66,237,700	71,934,087	3,130,796	12,487,736	6,791,349
Fixed Assets							
Computer Hardware and Software	3,733,082	3,733,082	3,696,232	3,671,135	-	36,849.84	61,947
Leasehold Improvements	595,027	591,770	318,964	318,964	3,256	276,062	276,062
Office Equipment and Furniture	815,056	815,056	716,876	701,604	-	98,181	113,452
Total Fixed Assets	5,143,164	5,139,908	4,732,072	4,691,703	3,256.41	411,093	451,461
Less Depreciation	(4,237,608)	(4,168,989)	(3,598,867)	(3,378,519)	(68,620)	(638,742)	(859,089)
Net Fixed Assets	905,556	970,919	1,133,205	1,313,184	(65,363)	(227,649)	(407,628)
Other Assets							
Deposits	237,314	237,314	223,339	223,339	-	13,975	13,975
Deferred Compensation Asset	879,459	877,549	849,522	788,418	1,910	29,937	91,041
Note Receivable, net of allowance	263,669	263,669	260,891	288,909	-	2,779	(25,240)
Total Other Assets	1,380,442	1,378,533	1,333,752	1,300,666	1,910	46,691	79,777
Total Assets	81,011,434	77,944,093	68,704,656	74,547,937	3,067,342	12,306,778	6,463,498
Current Liabilities							
Accounts Payable and Accruals	9,888,749	9,656,480	32,588,773	9,309,069	232,270	(22,700,024)	579,680
Salaries, Taxes, & Benefits Payable	881,046	902,397	827,526	830,087	(21,351)	53,520	50,958
Total Current Liabilities	10,769,795	10,558,876	33,416,299	10,139,156	210,919	(22,646,504)	630,638
Long Term Liabilities							
Deferred Rent	950,252	936,864	559,253	514,402	13,388	390,998	435,849
Deferred Compensation Payable	883,009	881,099	853,072	791,218	1,910	29,937	91,791
Other Long-Term Liabilities	2,315	2,315	2,110	4,290	-	205	(1,975)
Total Long-Term Liabilities	1,835,575	1,820,278	1,414,435	1,309,910	15,297	421,140	525,666
Total Liabilities	12,605,370	12,379,154	34,830,735	11,449,066	226,216	(22,225,364)	1,156,304
Net Assets							
Unrestricted Net Assets	68,406,064	65,564,938	33,873,922	63,098,871	2,841,126	34,532,142	5,307,193
Total Net Assets	68,406,064	65,564,938	33,873,922	63,098,871	2,841,126	34,532,142	5,307,193
Total Liabilities and Net Assets	81,011,434	77,944,093	68,704,656	74,547,937	3,067,342	12,306,778	6,463,498

Energy Trust of Oregon
Cash Flow Statement-Indirect Method
Monthly 2017

	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>Year to Date</u>
Operating Activities:										
Revenue less Expenses	\$ 9,021,323	\$ 11,985,541	7,297,639	3,428,944	(906,648)	(4,408,611)	5,943,771	(670,945)	2,841,126	\$ 34,532,140
<i>Non-cash items:</i>										
Depreciation	70,722	70,512	69,965	70,662	72,383	70,979	71,372	74,139	68,620	639,354
Change in Reserve on Long Term Note	-	-	-	-	-	-	-	-	-	-
Loss on disposal of assets	-	-	-	-	-	-	-	-	-	-
Receivables	9	-	(50)	400	136,841	-	136,861	(135,000)	-	139,061
Interest Receivable	(5,311)	(38,100)	11,304	(41,168)	33,111	17,834	(14,056)	(36,218)	80,882	8,277
Advances to Vendors	660,492	660,492	(1,489,806)	739,643	585,111	(1,239,195)	711,123	711,123	(1,522,806)	(183,823)
Prepaid expenses and other costs	17,387	(338,051)	27,347	48,843	(21,451)	93,559	5,575	82,574	11,961	(72,256)
Accounts payable	(21,595,003)	(2,386,675)	(256,773)	341,108	468,466	(82,140)	(350,716)	792,581	232,268	(22,836,884)
Payroll and related accruals	12,024	42,941	253,852	(151,351)	19,195	25,628	(67,842)	(31,549)	(19,441)	83,457
Deferred rent and other	4,262	(585)	14,000	14,205	13,999	14,000	14,000	279,612	13,388	366,881
Cash rec'd from / (used in) Operating Activities	(11,814,095)	9,996,075	5,927,478	4,451,286	401,007	(5,507,946)	6,450,088	1,066,317	1,705,998	12,676,208
Investing Activities:										
Investment Activity (1)	(992,696)	(3,749,267)	(5,787,813)	2,537,756	(5,555,047)	3,923,246	(2,252,546)	(1,984,708)	3,989,948	(9,871,127)
(Acquisition)/Disposal of Capital Assets	-	(7,194)	(75,180)	-	(36,850)	-	(23,612)	(265,612)	(3,256)	(411,704)
Cash rec'd from / (used in) Investing Activities	(992,696)	(3,756,461)	(5,862,993)	2,537,756	(5,591,897)	3,923,246	(2,276,158)	(2,250,320)	3,986,692	(10,282,831)
Cash at beginning of Period	44,471,035	31,664,245	37,903,859	37,968,346	44,957,390	39,766,501	38,181,801	42,355,732	41,171,730	44,471,035
Increase/(Decrease) in Cash	(12,806,791)	6,239,614	64,485	6,989,042	(5,190,890)	(1,584,700)	4,173,930	(1,184,003)	5,692,689	2,393,376
Cash at end of period	\$ 31,664,245	\$ 37,903,859	\$ 37,968,346	\$ 44,957,390	\$ 39,766,501	\$ 38,181,801	\$ 42,355,732	\$ 41,171,730	\$ 46,864,420	\$ 46,864,420

(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 2017 - December 2018

	Actual									Adjusted Budget		
	January	February	March	April	May	June	July	August	September	October	November	December
Cash In:												
Public purpose and Incr funding	15,758,534	21,457,118	21,917,554	17,402,020	15,025,545	13,768,287	15,620,550	14,041,155	16,183,984	14,590,584	12,228,695	14,722,975
Investment Income	17,648	(14,444)	25,634	(2,155)	64,393	53,021	28,294	6,910	128,778	(88,174)	(88,174)	(88,174)
From Other Sources	9	0	(50)	400	136,841		136,861	(135,000)	-			
Total cash in	15,776,191	21,442,674	21,943,138	17,400,265	15,226,779	13,821,308	15,785,705	13,913,065	16,312,762	14,502,410	12,140,521	14,634,801
Cash Out:												
Net cash flow for the month	(27,590,279)	(11,453,791)	(16,090,835)	(12,948,972)	(14,862,622)	(19,329,250)	(9,359,224)	(13,112,356)	(14,610,016)	(17,785,922)	(18,810,984)	(21,547,471)
	(11,814,088)	9,988,883	5,852,303	4,451,293	364,157	(5,507,946)	6,426,481	800,708	1,702,746	(3,283,513)	(6,670,463)	(6,912,670)
Cash Flow from/to Investments	(992,696)	(3,749,267)	(5,787,813)	2,537,756	(5,555,047)	3,923,246	(2,252,546)	(1,984,708)	3,989,948	-	-	-
Beginning Balance: Cash & MM	44,471,035	31,664,245	37,903,859	37,968,345	44,957,390	39,766,501	38,181,805	42,355,732	41,171,741	46,864,420	43,580,922	36,910,459
Ending cash & MM	31,664,245	37,903,859	37,968,346	44,957,390	39,766,501	38,181,801	42,355,732	41,171,730	46,864,420	43,580,922	36,910,459	29,997,789

Future Commitments

Renewable Incentives	6,700,000	5,800,000	7,800,000	6,900,000	6,900,000	8,300,000	7,400,000	6,300,000	9,600,000	9,000,000	8,500,000	7,600,000
Efficiency Incentives	69,500,000	69,100,000	81,600,000	80,800,000	80,800,000	86,700,000	86,000,000	86,900,000	88,600,000	88,600,000	86,100,000	84,200,000
Emergency Contingency Pool	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000
Total Commitments	81,200,000	79,900,000	94,400,000	92,700,000	92,700,000	100,000,000	98,400,000	98,200,000	103,200,000	102,600,000	99,600,000	96,800,000

(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 2017 - December 2018

2018 R2 Budget												
	January	February	March	April	May	June	July	September	September	October	November	December
Cash In:												
Public purpose and Incr funding	19,000,000	20,400,000	17,800,000	17,700,000	13,900,000	13,000,000	15,800,000	14,400,000	15,700,000	17,200,000	14,800,000	18,100,000
Investment Income	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
From Other Sources												
Total cash in	19,010,000	20,410,000	17,810,000	17,710,000	13,910,000	13,010,000	15,810,000	14,410,000	15,710,000	17,210,000	14,810,000	18,110,000
Cash Out:												
Net cash flow for the month	(29,924,145)	(11,522,562)	(12,143,651)	(13,249,709)	(12,974,034)	(13,751,122)	(16,010,687)	(13,675,485)	(14,988,146)	(17,133,101)	(18,752,720)	(20,759,756)
	(10,914,145)	8,887,438	5,666,349	4,460,291	935,966	(741,122)	(200,687)	734,515	721,854	76,899	(3,942,720)	(2,649,756)
Cash Flow from/to Investments	-	-	-	-	-	-	-	-	-	-	-	-
Beginning Balance: Cash & MM	29,997,789	19,083,644	27,971,082	33,637,431	38,097,722	39,033,688	38,292,567	38,091,879	38,826,395	39,548,248	39,625,148	35,682,428
Ending cash & MM	19,083,644	27,971,082	33,637,431	38,097,722	39,033,688	38,292,567	38,091,879	38,826,395	39,548,248	39,625,148	35,682,428	33,032,672

Future Commitments

Renewable Incentives	7,600,000	8,000,000	8,700,000	8,700,000	8,700,000	8,700,000	8,700,000	8,700,000	8,700,000	8,700,000	8,700,000	8,700,000
Efficiency Incentives	83,500,000	84,300,000	83,000,000	84,000,000	86,200,000	86,200,000	86,200,000	86,200,000	86,200,000	86,200,000	86,200,000	86,200,000
Emergency Contingency Pool	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000
Total Commitments	96,100,000	97,300,000	96,700,000	97,700,000	99,900,000							

(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 YTD Budget Comparison
For the Nine Months Ending September 30, 2017
(Unaudited)

	September				YTD			
	Actual	Budget	Budget Variance	Variance %	Actual	Budget	Budget Variance	Variance %
<u>REVENUES</u>								
Public Purpose Funds-PGE	3,269,069	2,864,722	404,347	14%	29,449,301	28,463,062	986,239	3%
Public Purpose Funds-PacifiCorp	2,511,017	2,243,198	267,819	12%	22,433,243	20,374,448	2,058,795	10%
Public Purpose Funds-NW Natural	546,356	602,230	(55,873)	-9%	15,500,301	14,177,648	1,322,654	9%
Public Purpose Funds-Cascade	66,151	84,630	(18,479)	-22%	2,054,130	1,824,805	229,325	13%
Public Purpose Funds-Avista	60,980	30,259	30,721	102%	675,398	652,443	22,955	4%
Total Public Purpose Funds	6,453,572	5,825,038	628,534	11%	70,112,374	65,492,405	4,619,968	7%
Incremental Funds - PGE	5,619,979	5,118,580	501,399	10%	48,304,540	48,262,695	41,845	0%
Incremental Funds - PacifiCorp	3,172,065	3,347,317	(175,252)	-5%	27,016,403	24,145,736	2,870,667	12%
NW Natural - Industrial DSM			-		3,720,596	3,720,596	-	
NW Natural - Washington	938,367		938,367		2,020,834	1,082,467	938,367	
Revenue from Investments	47,895	10,000	37,895	379%	299,801	180,000	119,801	67%
TOTAL REVENUE	16,231,878	14,300,934	1,930,944	14%	151,474,547	142,883,900	8,590,647	6%
<u>EXPENSES</u>								
Program Subcontracts	5,120,255	4,877,859	(242,396)	-5%	42,021,570	42,852,481	830,911	2%
Incentives	6,273,089	8,106,040	1,832,951	23%	58,343,714	61,549,557	3,205,844	5%
Salaries and Related Expenses	1,097,848	1,150,510	52,663	5%	9,999,308	10,325,927	326,620	3%
Professional Services	654,406	789,070	134,663	17%	4,242,889	7,106,510	2,863,622	40%
Supplies	3,778	4,050	272	7%	28,196	36,450	8,254	23%
Telephone	3,681	5,825	2,144	37%	40,226	52,425	12,199	23%
Postage and Shipping Expenses	684	1,500	816	54%	7,929	13,500	5,571	41%
Occupancy Expenses	78,824	79,203	379	0%	695,722	712,825	17,103	2%
Noncapitalized Equip. & Depr.	91,556	112,655	21,099	19%	879,010	1,003,761	124,752	12%
Call Center	12,174	16,667	4,493	27%	107,446	150,000	42,554	28%
Printing and Publications	810.89	1,171	360	31%	4367.26	13,038	8,670	67%
Travel	18,456	17,753	(704)	-4%	150,222	155,442	5,220	3%
Conference, Training & Mtng Exp	17,088	20,537	3,449	17%	149,509	154,837	5,328	3%
Interest Expense and Bank Fees		125	125	100%	1677.27	3,625	1,948	54%
Insurance	8,803	9,167	364	4%	79,064	82,500	3,436	4%
Miscellaneous Expenses		250	250	100%	34,986	2,250	(32,736)	-1455%
Dues, Licenses and Fees	9,300	8,177	(1,123)	-14%	156,569	112,628	(43,942)	-39%
TOTAL EXPENSES	13,390,753	15,200,558	1,809,805	12%	116,942,408	124,327,756	7,385,348	6%
TOTAL REVENUE LESS EXPENSES	2,841,126	(899,624)	3,740,750	416%	34,532,142	18,556,144	15,975,998	86%

Energy Trust of Oregon
Income Statement - Actual and Prior Yr Comparison
For the Nine Months Ending September 30, 2017
(Unaudited)

	September				YTD			
	Actual	Actual Prior Year	Prior Year Variance	Variance %	Actual	Actual Prior Year	Prior Year Variance	Variance %
<u>REVENUES</u>								
Public Purpose Funds-PGE	3,269,069	2,768,091	500,978	18%	29,449,301	27,503,553	1,945,749	7%
Public Purpose Funds-PacifiCorp	2,511,017	2,318,919	192,098	8%	22,433,243	21,061,146	1,372,097	7%
Public Purpose Funds-NW Natural	546,356	464,874	81,482	18%	15,500,301	10,944,029	4,556,273	42%
Public Purpose Funds-Cascade	66,151	57,172	8,979	16%	2,054,130	1,232,752	821,378	67%
Public Purpose Funds-Avista	60,980	15600	45,380		675,398	109200	566,198	
Total Public Purpose Funds	6,453,572	5,624,655	828,917	15%	70,112,374	60,850,680	9,261,694	15%
Incremental Funds - PGE	5,619,979	3,338,024	2,281,955	68%	48,304,540	31,473,972	16,830,568	53%
Incremental Funds - PacifiCorp	3,172,065	2,568,939	603,126	23%	27,016,403	18,530,940	8,485,463	46%
NW Natural - Industrial DSM			0		3,720,596	2,018,035	1,702,561	84%
NW Natural - Washington	938367	768,839	169,528		2,020,834	1,537,679	483,155	31%
Revenue from Investments	47,895	37,627	10,268	27%	299,801	452,756	(152,955)	-34%
TOTAL REVENUE	16,231,878	12,338,084	3,893,794	32%	151,474,547	114,864,061	36,610,486	32%
<u>EXPENSES</u>								
Program Subcontracts	5,120,255	4,646,020	(474,235)	-10%	42,021,570	39,416,242	(2,605,328)	-7%
Incentives	6,273,089	11,326,437	5,053,348	45%	58,343,714	63,842,403	5,498,690	9%
Salaries and Related Expenses	1,097,848	1,040,872	(56,976)	-5%	9,999,308	9,016,777	(982,531)	-11%
Professional Services	654,406	822,844	168,438	20%	4,242,889	5,509,110	1,266,221	23%
Supplies	3,778	1,625	(2,153)	-132%	28,196	21,819	(6,377)	-29%
Telephone	3,681	5,028	1,347	27%	40,226	45,203	4,977	11%
Postage and Shipping Expenses	684	463	(221)	-48%	7,929	7,339	(591)	-8%
Occupancy Expenses	78,824	74,358	(4,466)	-6%	695,722	582,968	(112,754)	-19%
Noncapitalized Equip. & Depr.	91,556	112,559	21,003	19%	879,010	931,475	52,465	6%
Call Center	12,174	12,725	552	4%	107,446	125,457	18,011	14%
Printing and Publications	811	470	(341)		4,367	5,121	753	15%
Travel	18,456	15,381	(3,075)	-20%	150,222	142,610	(7,612)	-5%
Conference, Training & Mtng Exp	17,088	10,331	(6,757)	-65%	149,509	117,250	(32,258)	-28%
Interest Expense and Bank Fees					1,677	1,621	(56)	-3%
Insurance	8,803	8,607	(196)	-2%	79,064	76,355	(2,710)	-4%
Miscellaneous Expenses		15,827	15,827	100%	34,986	79,533	44,547	56%
Dues, Licenses and Fees	9,300	6,194	(3,106)	-50%	156,569	77,203	(79,366)	-103%
TOTAL EXPENSES	13,390,753	18,099,742	4,708,989	26%	116,942,408	119,998,487	3,056,079	3%
TOTAL REVENUE LESS EXPENSES	2,841,126	(5,761,658)	8,602,784	149%	34,532,142	(5,134,425)	39,666,568	-773%

Energy Trust of Oregon
Statement of Functional Expenses
For the Nine Months Ending September 30, 2017
(Unaudited)

	Energy Efficiency	Renewable Energy	Total Program Expenses	Management & General	Communications & Customer Service	Total Admin Expenses	Total	Budget	Variance	% Var
Program Expenses										
Incentives	48,869,115	9,474,598	58,343,714				58,343,714	61,549,557	3,205,843	5%
Program Management & Delivery	41,665,401	356,169	42,021,570				42,021,570	42,852,481	830,911	2%
Payroll and Related Expenses	2,891,271	895,197	3,786,468	1,799,350	1,226,701	3,026,052	6,812,520	6,914,279	101,759	1%
Outsourced Services	2,493,675	555,113	3,048,788	365,804	552,040	917,843	3,966,631	6,700,592	2,733,961	41%
Planning and Evaluation	1,751,507	105,442	1,856,949	3,905	91,774	95,679	1,952,628	2,190,255	237,627	11%
Customer Service Management	227,440	102,285	329,726				329,726	413,035	83,309	20%
Trade Allies Network	261,838	14,277	276,115				276,115	298,483	22,368	7%
Total Program Expenses	98,160,247	11,503,082	109,663,329	2,169,059	1,870,514	4,039,573	113,702,903	120,918,682	7,215,779	6%
Program Support Costs										
Supplies	7,119	2,415	9,534	7,087	3,934	11,021	20,555	26,651	6,096	23%
Postage and Shipping Expenses	1,686	572	2,258	2,633	749	3,382	5,640	9,523	3,883	41%
Telephone	1,811	614	2,425	968	805	1,772	4,197	6,284	2,087	33%
Printing and Publications	698	126	823	2,932	165	3,097	3,921	10,794	6,873	64%
Occupancy Expenses	205,081	69,553	274,634	109,597	91,141	200,738	475,373	484,620	9,247	2%
Insurance	23,306	7,904	31,210	12,455	10,358	22,813	54,023	56,088	2,065	4%
Equipment	3,499	78,294	81,793	1,870	1,555	3,425	85,217	109,603	24,386	22%
Travel	27,943	17,329	45,272	35,176	40,369	75,545	120,817	139,692	18,875	14%
Meetings, Trainings & Conferences	28,597	18,451	47,047	51,219	14,614	65,834	112,881	103,537	(9,344)	-9%
Interest Expense and Bank Fees				1,677		1,677	1,677	3,625	1,948	54%
Depreciation & Amortization	20,186	6,846	27,032	10,788	8,971	19,758	46,790	45,028	(1,762)	-4%
Dues, Licenses and Fees	76,982	9,060	86,042	10,200	17,536	27,736	113,777	88,653	(25,124)	-28%
Miscellaneous Expenses	33,498	211	33,709	332	276	609	34,318	1,530	(32,788)	-2143%
IT Services	1,376,815	199,167	1,575,982	327,631	256,703	584,334	2,160,316	2,323,447	163,131	7%
Total Program Support Costs	1,807,219	410,542	2,217,761	574,564	447,177	1,021,741	3,239,502	3,409,074	169,572	5%
TOTAL EXPENSES	99,967,470	11,913,624	111,881,094	2,743,622	2,317,692	5,061,315	116,942,408	124,327,756	7,385,352	6%

OPUC Measure vs. 8% 4.8%

Program Support Costs	2,217,761
Total Administrative Expenses	5,061,315
Total Support and Administrative	<u>7,279,076</u>
	<i>divided by</i>
Total Utility Revenue (without Int Income)	151,174,746
OPUC %	4.8%

ENERGY TRUST OF OREGON
Summary of All Units
For the Nine Months Ending September 30, 2017

	ENERGY EFFICIENCY									
	PGE	PacifiCorp	Total	NWN Industrial	NW Natural	Cascade	Avista	Oregon Total	NWN WA	ETO Total
REVENUES										
Public Purpose Funding	22,857,356	17,488,819	40,346,175	-	15,500,301	2,054,130	675,398	58,576,005	-	58,576,005
Incremental Funding	48,304,540	27,016,403	75,320,943	3,720,596				79,041,539	2,020,834	81,062,373
Contributions										
Revenue from Investments										
TOTAL PROGRAM REVENUE	71,161,896	44,505,222	115,667,118	3,720,596	15,500,301	2,054,130	675,398	137,617,544	2,020,834	139,638,378
EXPENSES										
Program Management (Note 3)	2,596,040	1,507,183	4,103,223	144,252	473,236	53,615	32,556	4,806,882	88,383	4,895,265
Program Delivery	19,881,280	11,770,265	31,651,545	679,019	3,741,315	476,877	218,713	36,767,469	362,193	37,129,662
Incentives	26,701,300	14,791,455	41,492,755	1,040,598	4,771,235	526,077	317,206	48,147,874	721,243	48,869,117
Program Eval & Planning Svcs.	1,430,537	839,996	2,270,536	48,164	247,110	25,702	17,210	2,608,719	111,300	2,720,019
Program Marketing/Outreach	1,783,307	1,079,568	2,862,872	17,801	529,251	38,489	37,487	3,485,899	51,165	3,537,064
Program Legal Services	-	-	-	-	-	-	-	-	-	-
Program Quality Assurance	25,049.00	13,158.00	38,207.00	-	5,640.00	615.00	281.00	44,744.00	2,450.00	47,194.00
Outsourced Services	251,464	150,522	401,986	9,773	47,804	3,570	3,406	466,540	6,113	472,653
Trade Allies & Cust. Svc. Mgmt.	229,005	140,744	369,748	5,411	75,661	5,388	5,404	461,616	27,662	489,278
IT Services	710,069	408,537	1,118,607	22,609	174,271	16,106	12,128	1,343,718	33,095	1,376,813
Other Program Expenses - all	225,102	130,140	355,242	8,959	36,741	4,335	2,464	407,740	22,665	430,405
TOTAL PROGRAM EXPENSES	53,833,153	30,831,568	84,664,721	1,976,586	10,102,264	1,150,774	646,855	98,541,201	1,426,269	99,967,470
ADMINISTRATIVE COSTS										
Management & General (Notes 1 & 2)	1,320,144	756,078	2,076,223	48,471	247,737	28,221	15,862	2,416,514	34,976	2,451,490
Communications & Customer Svc (Notes 1 & 2)	1,115,198	638,704	1,753,900	40,947	209,277	23,840	13,400	2,041,364	29,547	2,070,911
Total Administrative Costs	2,435,342	1,394,782	3,830,123	89,418	457,014	52,061	29,262	4,457,878	64,523	4,522,401
TOTAL PROG & ADMIN EXPENSES	56,268,495	32,226,350	88,494,844	2,066,004	10,559,278	1,202,835	676,117	102,999,079	1,490,792	104,489,871
TOTAL REVENUE LESS EXPENSES	14,893,401	12,278,872	27,172,274	1,654,592	4,941,023	851,295	(719)	34,618,465	530,042	35,148,507
NET ASSETS - RESERVES										
Cumulative Carryover at 12/31/16	6,507,279	644,839	7,152,117	1,028,150	1,485,656	-	68,620	9,734,531	283,171	10,017,701
Net Assets Reattributed from prior year						(335,865)		(335,865)		(335,865)
Change in net assets this year	14,893,401	12,278,872	27,172,274	1,654,592	4,941,023	851,295	(719)	34,618,465	530,042	35,148,507
Ending Net Assets - Reserves	21,400,680	12,923,711	34,324,391	2,682,742	6,426,679	515,430	67,901	44,017,131	813,213	44,830,343
Ending Reserve by Category										
Program Reserves (Efficiency and Renewables)	21,400,680	12,923,711	34,324,391	2,682,742	6,426,679	515,430	67,901	44,017,131	813,213	44,830,343
Operational Contingency Pool										
Emergency Contingency Pool										
TOTAL NET ASSETS CUMULATIVE	21,400,680	12,923,711	34,324,391	2,682,742	6,426,679	515,430	67,901	44,017,131	813,213	44,830,343

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
Summary of All Units
For the Nine Months Ending September 30, 2017

	RENEWABLE ENERGY			Other	TOTAL	Approved budget	Change	% Change
	PGE	PacifiCorp	Total		All Programs			
REVENUES								
Public Purpose Funding	6,591,945	4,944,424	11,536,369	-	70,112,374	65,492,406	(3,991,434)	-6%
Incremental Funding					81,062,373	77,211,494	(2,586,365)	-3%
Contributions							-	
Revenue from Investments				299,801	299,801	180,000	119,801	67%
TOTAL PROGRAM REVENUE	6,591,945	4,944,424	11,536,369	299,801	151,474,547	142,883,900	8,590,647	6%
EXPENSES								
Program Management (Note 3)	482,130	420,567	902,698		5,797,963	5,834,344	36,381	1%
Program Delivery	201,496	147,173	348,669		37,478,331	37,757,309	278,978	1%
Incentives	5,195,453	4,279,145	9,474,598		58,343,715	61,549,557	3,205,842	5%
Program Eval & Planning Svcs.	57,685	47,757	105,442		2,825,461	3,847,156	1,021,695	27%
Program Marketing/Outreach	94,646	71,222	165,868		3,702,932	4,265,190	562,258	13%
Program Legal Services	-	-	-		-	15,000	15,000	100%
Program Quality Assurance	-	-	-		47,194.00	63,750	16,556	26%
Outsourced Services	164,844	224,402	389,244		861,897	1,905,317	1,043,420	55%
Trade Allies & Cust. Svc. Mgmt.	61,855	44,708	106,563		595,841	704,018	108,177	15%
IT Services	106,651	92,515	199,167		1,575,980	1,694,989	119,009	7%
Other Program Expenses - all	122,640	98,736	221,375		651,780	634,489	(17,291)	-3%
TOTAL PROGRAM EXPENSES	6,487,400	5,426,225	11,913,624	-	111,881,094	118,271,119	6,390,025	5%
ADMINISTRATIVE COSTS								
Management & General (Notes 1 & 2)	159,076	133,056	292,132		2,743,622	3,144,030	400,407	13%
Communications & Customer Svc (Notes 1 & 2)	134,380	112,400	246,781		2,317,692	2,912,605	594,913	20%
Total Administrative Costs	293,456	245,456	538,913		5,061,314	6,056,635	995,321	16%
TOTAL PROG & ADMIN EXPENSES	6,780,856	5,671,681	12,452,537		116,942,408	124,327,754	7,385,346	6%
TOTAL REVENUE LESS EXPENSES	(188,911)	(727,257)	(916,168)	299,801	34,532,142	18,556,145	(15,975,996)	86%
NET ASSETS - RESERVES								
Cumulative Carryover at 12/31/16	7,543,333	7,376,941	14,920,276	8,935,944	33,873,921	32,329,685	1,544,236	5%
Net Assets Reattributed from prior year				335,865	-			
Change in net assets this year	(188,911)	(727,257)	(916,168)	299,801	34,532,142	18,556,145	15,975,997	86%
Ending Net Assets - Reserves	7,354,422	6,649,684	14,004,108	9,571,610	68,406,064	50,885,830	(17,520,234)	34%
Ending Reserve by Category								
Program Reserves (Efficiency and Renewables)	7,354,422	6,649,684	14,004,108		68,406,064	50,885,830	(17,520,234)	
Operational Contingency Pool				4,571,610				
Emergency Contingency Pool				5,000,000				
TOTAL NET ASSETS CUMULATIVE	7,354,422	6,649,684	14,004,108	9,571,610	68,406,064	50,885,830	(17,520,234)	34%

Energy Trust of Oregon
Program Expense by Service Territory
For the Nine Months Ending September 30, 2017
(Unaudited)

	PGE	Pacific Power	Subtotal Elec.	NWN Industrial	NW Natural Gas	Cascade	Avista	Subtotal Gas	Oregon Total	NWN WA	ETO Total	YTD Budget	Variance	% Var
Energy Efficiency														
Commercial														
Existing Buildings	18,755,776	10,605,580	29,361,356	844,974	2,075,302	440,512	168,169	3,528,956	32,890,312	598,989	33,489,301	34,585,088	1,095,787	3%
New Buildings	6,855,179	2,698,779	9,553,958	169,219	862,184	187,913	42,666	1,261,982	10,815,940		10,815,940	13,355,106	2,539,166	19%
NEEA	972,489	675,797	1,648,286		119,969	12,847		132,816	1,781,102	13,506	1,794,608	2,077,052	282,444	14%
Total Commercial	26,583,444	13,980,156	40,563,600	1,014,193	3,057,455	641,271	210,835	4,923,754	45,487,354	612,495	46,099,849	50,017,246	3,917,397	8%
Industrial														
Production Efficiency	12,230,448	7,110,034	19,340,482	1,051,813	348,110	125,085	18,935	1,543,943	20,884,425		20,884,425	20,187,544	(696,881)	-3%
NEEA	210,272	146,122	356,394						356,394		356,394	162,560	(193,834)	-119%
Total Industrial	12,440,720	7,256,156	19,696,876	1,051,813	348,110	125,085	18,935	1,543,943	21,240,819	-	21,240,819	20,350,104	(890,715)	-4%
Residential														
Existing Homes	4,177,371	3,789,099	7,966,470	-	4,133,798	108,074	323,030	4,564,902	12,531,372	339,964	12,871,336	14,684,418	1,813,082	12%
New Homes/Products	11,080,822	5,820,735	16,901,557	-	2,474,717	270,019	123,316	2,868,052	19,769,609	476,959	20,246,568	21,430,714	1,184,146	6%
NEEA	1,986,139	1,380,202	3,366,341	-	545,198	58,383		603,580	3,969,922	61,375	4,031,297	3,788,696	(242,601)	-6%
Total Residential	17,244,333	10,990,036	28,234,368	-	7,153,713	436,476	446,346	8,036,535	36,270,903	878,298	37,149,201	39,903,828	2,754,627	7%
Energy Efficiency Program Costs	56,268,497	32,226,348	88,494,844	2,066,006	10,559,277	1,202,832	676,116	14,504,232	102,999,076	1,490,793	104,489,871	110,271,178	5,781,309	5%
Renewables														
Solar Electric (Photovoltaic)	4,779,249	3,454,380	8,233,629						8,233,629		8,233,629	9,086,432	852,803	9%
Other Renewable	2,001,607	2,217,301	4,218,908						4,218,908		4,218,908	4,970,147	751,239	15%
Renewables Program Costs	6,780,856	5,671,681	12,452,537	-	-	-	-	-	12,452,537	-	12,452,537	14,056,579	1,604,042	11%
Cost Grand Total	63,049,353	37,898,029	100,947,381	2,066,006	10,559,277	1,202,832	676,116	14,504,232	115,451,613	1,490,793	116,942,408	124,327,757	7,385,349	6%

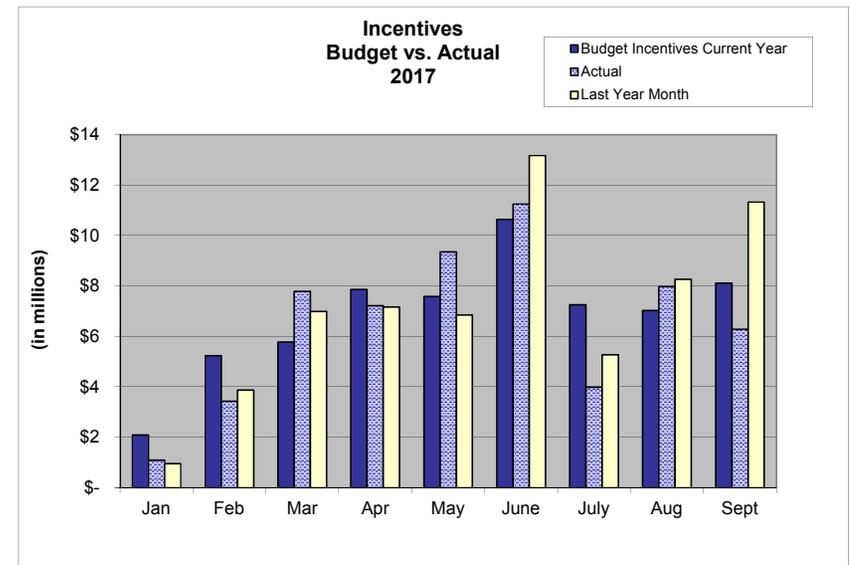
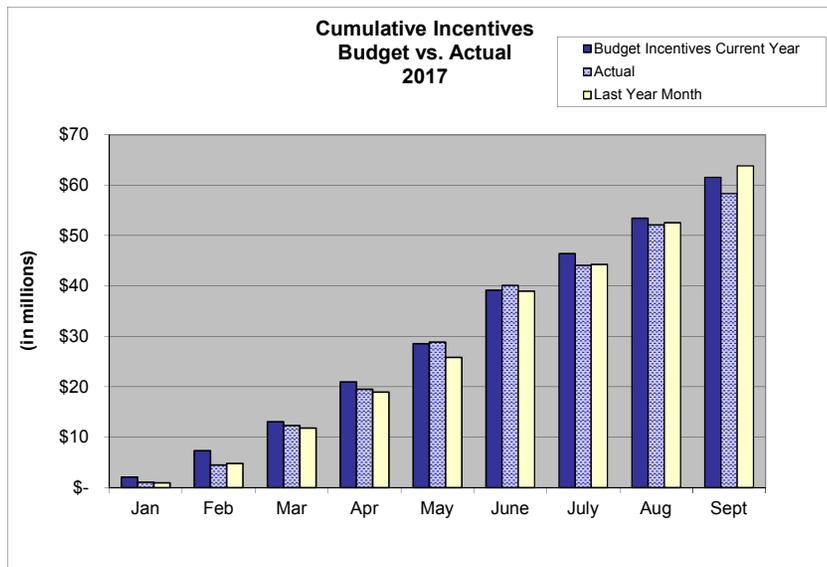
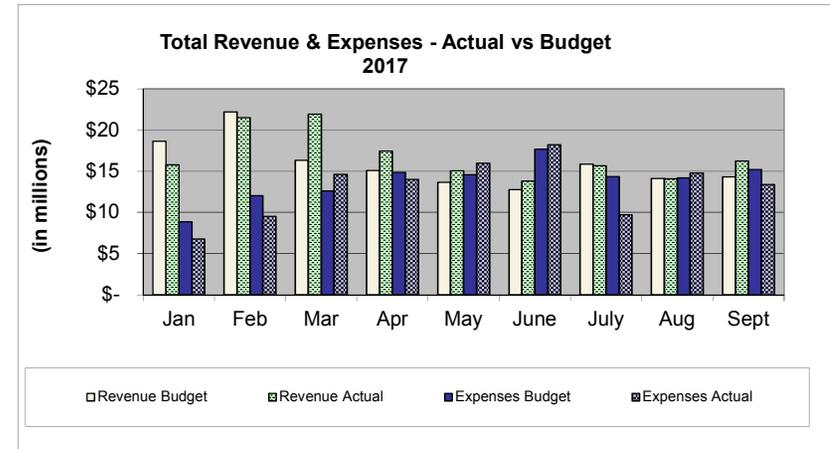
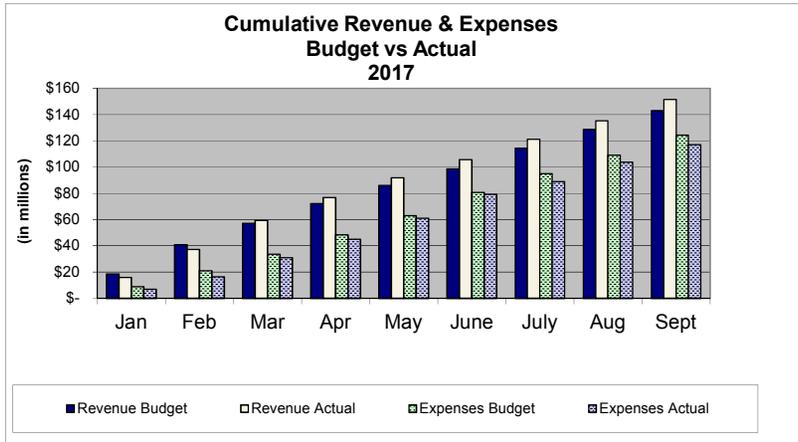
Energy Trust of Oregon
Administrative Expenses
For the Nine Months Ending September 30, 2017
(Unaudited)

EXPENSES	MANAGEMENT & GENERAL						COMMUNICATIONS & CUSTOMER SERVICE					
	ACTUAL	QUARTERLY		YTD			ACTUAL	QUARTERLY		YTD		
		BUDGET	REMAINING	ACTUAL	BUDGET	VARIANCE		BUDGET	REMAINING	ACTUAL	BUDGET	VARIANCE
Outsourced Services	\$114,315	\$125,792	\$11,477	\$350,685	\$505,875	\$155,190	\$215,571	\$355,250	\$139,679	\$552,040	#####	\$513,710
Legal Services	538	3,000	2,462	15,119	9,000	(6,119)						
Salaries and Related Expenses	567,563	666,179	98,616	1,799,350	1,993,536	194,186	396,694	429,351	32,657	1,226,701	1,288,054	61,353
Supplies	791	1,500	709	3,289	4,500	1,211	596	250	(346)	775	750	(25)
Postage and Shipping Expenses	188	625	437	1,731	1,875	144						
Printing and Publications	915	1,125	210	2,734	3,375	641		375	375		3,625	3,625
Travel	9,414	15,362	5,949	35,176	46,087	10,911	13,759	11,250	(2,508)	40,369	33,750	(6,619)
Conference, Training & Mtngs	18,925	24,462	5,537	51,189	54,387	3,199	3,343	3,125	(218)	14,589	9,375	(5,214)
Interest Expense and Bank Fees		375	375	1,677	3,625	1,948						
Dues, Licenses and Fees	2,210	3,117	907	10,184	11,992	1,808	3,209	4,125	916	17,523	12,375	(5,148)
Shared Allocation (Note 1)	46,855	51,008	4,154	140,954	153,025	12,072	39,432	39,966	534	117,218	119,897	2,680
IT Service Allocation (Note 2)	114,883	118,042	3,159	327,631	352,371	24,740	110,263	92,488	(17,775)	256,703	276,088	19,384
Planning & Eval	3,027	1,492	(1,535)	3,905	4,381	475	91,774	35,057	(56,717)	91,774	102,942	11,168
TOTAL EXPENSES	879,624	1,012,080	132,456	2,743,622	3,144,030	400,407	874,640	971,237	96,597	2,317,692	2,912,605	594,915

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

Note 2) Represents allocation of Shared IT Costs

Administrative Expenses 3rd Month of Quarter



PINK PAPER

For contracts with costs
through: 10/1/2017

CONTRACTOR	Description	City	EST COST	Actual TTD	Remaining	Start	End
Administration							
Administration Total:			13,198,856	4,734,277	8,464,579		
Communications							
Communications Total:			4,041,272	2,883,150	1,158,121		
Energy Efficiency							
Northwest Energy Efficiency Alliance	Regional EE Initiative Agmt	Portland	36,142,871	19,948,214	16,194,657	1/1/2015	7/1/2020
ICF Resources, LLC	2017 BE PMC	Fairfax	14,303,850	9,755,679	4,548,171	1/1/2017	12/31/2017
CLEAResult Consulting Inc	2017 HES PMC	Austin	6,540,508	4,295,231	2,245,277	1/1/2017	12/31/2017
CLEAResult Consulting Inc	2017 NBE PMC	Austin	6,207,078	4,249,919	1,957,159	1/1/2017	12/31/2017
Northwest Energy Efficiency Alliance	Regional Gas EE Initiative	Portland	6,200,354	2,364,671	3,835,683	1/1/2015	7/1/2020
Lockheed Martin Corporation	2017 MF PMC	Grand Prairie	4,586,068	3,115,093	1,470,975	1/1/2017	12/31/2017
Ecova Inc	2017 Products PMC	Spokane	3,907,587	2,617,495	1,290,092	1/1/2017	12/31/2017
Energy 350 Inc	PDC - PE 2017	Portland	3,144,460	2,351,157	793,303	1/1/2017	12/31/2017
CLEAResult Consulting Inc	2017 NH PMC	Austin	3,137,693	2,034,909	1,102,784	1/1/2017	12/31/2017
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 2017	Portland	2,017,000	1,708,883	308,117	1/1/2017	12/31/2017
Northwest Power & Conservation Council	RTF Funding Agreement		1,825,000	989,020	835,980	2/25/2015	12/31/2019
Cascade Energy, Inc.	PDC - PE 2017	Walla Walla	1,784,368	1,278,427	505,941	1/1/2017	12/31/2017
RHT Energy Inc.	PDC - PE 2017	Medford	1,740,434	1,247,124	493,310	1/1/2017	12/31/2017
Evergreen Consulting Group, LLC	PE Lighting PDC 2017	Tigard	1,555,700	1,101,487	454,213	1/1/2017	12/31/2017
KEMA Incorporated	EB & SEM 15-16 Evaluation	Oakland	560,000	147,162	412,838	6/8/2017	5/31/2018
SBW Consulting, Inc.	PE Program Impact Evaluation	Bellevue	540,000	499,261	40,739	5/1/2016	1/31/2018
Clean Energy Works, Inc.	EE Incentive & Services Agmt	Portland	457,550	432,410	25,140	7/1/2014	12/31/2017
Michaels Energy, Inc.	New Buildings '14 Impact Evalu	La Crosse	328,000	327,997	3	5/23/2016	5/31/2017
Craft3	Loan Agreement	Portland	300,000	300,000	0	6/1/2014	6/20/2025
CLEAResult Consulting Inc	2017 HES WA PMC	Austin	285,746	192,065	93,681	1/1/2017	12/31/2017
ICF Resources, LLC	2017 BE DSM PMC	Fairfax	274,746	207,043	67,703	1/1/2017	12/31/2017
EnergySavvy Inc.	Optix Engage Online Audit Tool	Seattle	273,600	150,667	122,933	6/1/2016	5/31/2018
Pivotal Energy Solutions LLC	License Agreement	Gilbert	270,500	174,612	95,888	3/1/2014	12/31/2017
Alternative Energy Systems Consulting, Inc.	PE Mobile App Scoping Tool	Carlsbad	249,830	229,657	20,173	6/1/2016	4/30/2018
Balanced Energy Solutions LLC	New Homes QA Inspections	Portland	248,625	117,348	131,277	4/27/2015	12/31/2017
ICF Resources, LLC	2017 BE NWN WA PMC	Fairfax	246,200	155,912	90,288	1/1/2017	12/31/2017
TRC Engineers Inc.	Transition Agreement	Irvine	214,216	37,832	176,384	9/1/2017	12/31/2017
CLEAResult Consulting Inc	RES PMC Transition	Austin	212,603	33,458	179,146	9/1/2017	12/31/2017

For contracts with costs
through: 10/1/2017

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Alliance For Sustainable Energy, LLC	Technical Services Agreement	Lakewood	104,989	89,215	15,774	10/30/2015	11/30/2017
Alternative Energy Systems Consulting, Inc.	PE Review of Technical Studies	Carlsbad	100,000	8,018	91,982	5/22/2017	12/31/2017
1000 Broadway Building L.P.	Pay-for-Performance Pilot	Portland	88,125	58,750	29,375	10/17/2014	11/1/2018
The Cadmus Group Inc.	Residential Air Conditioning	Watertown	83,550	6,235	77,315	7/1/2017	12/31/2017
CLEAResult Consulting Inc	Professional Services/Trans	Austin	81,688	69,170	12,518	10/15/2014	10/15/2018
WegoWise Inc	benchmarking license	Boston	77,472	33,768	43,704	6/15/2014	12/31/2018
KEMA Incorporated	EB & SEM Evaluation	Oakland	70,202	70,194	8	5/1/2017	5/31/2018
Abt SRBI Inc.	Fast Feedback Surveys 2017	New York	70,000	38,794	31,206	2/1/2017	2/28/2018
Evergreen Economics	Research Cannabis Market	Portland	69,530	62,581	6,949	6/23/2017	12/31/2017
Energy 350 Inc	Professional Services	Portland	64,062	51,137	12,925	12/10/2014	12/10/2018
Apex Analytics LLC	Nest Seasonal Savings Eval	Boulder	59,000	50,238	8,763	8/29/2016	12/31/2017
The Cadmus Group Inc.	Existing Homes Pilot Eval	Watertown	53,000	52,999	1	2/18/2016	12/31/2017
Research Into Action, Inc.	Evaluation MHR Pilot	Portland	52,000	7,081	44,919	5/1/2017	2/28/2019
Green Motors Practice Group	Green Motors Incentive Funding	Boise	50,000	11,648	38,352	1/1/2017	12/31/2017
Earth Advantage, Inc.	Home Energy Score Analysis	Portland	45,000	9,000	36,000	6/27/2017	12/31/2017
KEMA Incorporated	O&M & SEM Persistence Research	Oakland	45,000	40,325	4,676	12/1/2016	11/30/2017
MetaResource Group	Intel DX1 Mod 1&2 Megaproject	Portland	45,000	29,276	15,724	4/1/2015	12/31/2017
Navigant Consulting Inc	Evaluation Consultant-DSM Proj.	Boulder	45,000	15,002	29,998	6/15/2017	6/1/2019
Brightworks Sustainability LLC	Net Zero Fellowship Grant Agmt	Portland	43,500	0	43,500	4/5/2017	8/31/2018
The Cadmus Group Inc.	Existing Homes DHP Study	Watertown	40,000	1,298	38,702	9/25/2017	3/31/2019
Ecova Inc	RES PDC Transition Agreement	Spokane	39,948	1,688	38,260	9/1/2017	12/31/2017
Cadeo Group LLC	Evaluation Consulting	Washington	35,000	14,461	20,539	4/25/2017	3/31/2018
KEMA Incorporated	Billing Analysis Review	Oakland	35,000	3,351	31,649	3/15/2015	12/31/2017
The Cadmus Group Inc.	Air Conditioning Measures	Watertown	32,950	22,660	10,290	8/22/2016	8/22/2018
Northwest Energy Efficiency Council	Tool Lending Lbry Sponsorship	Seattle	30,500	30,500	0	9/21/2016	12/31/2017
Anchor Blue LLC	Emergency Tech Measure	Ridgefield	29,750	20,813	8,938	9/1/2017	11/1/2017
Cadeo Group LLC	Retail Lighting Mkt Analysis	Washington	29,545	13,966	15,579	7/10/2017	12/31/2017
BASE zero LLC	Quality Assurance Services	Bend	27,325	24,438	2,888	3/1/2016	12/31/2017
Energy Center of Wisconsin	Billing Analysis Review	Madison	25,000	1,710	23,290	3/15/2015	12/31/2017
Northwest Food Processors Association	NW Industrial EE Summit 2017	Portland	25,000	0	25,000	1/1/2017	12/31/2017
Sustainable Northwest	Klamath Industrial/Ag Programs	Portland	24,992	24,992	0	1/1/2017	11/1/2017
Consortium for Energy Efficiency	Perform. Benchmark Sponsorship		22,255	22,255	0	1/1/2017	12/31/2017
Consortium for Energy Efficiency	Membership Dues - 2017		21,448	21,448	0	1/1/2017	12/31/2017
Bridgetown Printing Company	2017 Bill Insert	Portland	20,000	13,356	6,644	1/18/2017	12/31/2017
Portland General Electric	Workshop/Training Agreement	Portland	15,000	0	15,000	1/1/2017	12/31/2017

For contracts with costs
through: 10/1/2017

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EES Consulting, Inc	Professional Services Agmt	Kirkland	14,800	7,020	7,780	10/1/2016	9/30/2018
Research Into Action, Inc.	Evaluation - APS Pilot	Portland	14,600	13,240	1,361	7/1/2017	12/31/2018
KEMA Incorporated	New Bldg Evaluation	Oakland	13,000	0	13,000	10/1/2017	3/31/2019
Flink Energy Consulting	Smart Grid Modeling	Portland	12,120	12,120	0	7/12/2016	12/30/2017
LightTracker, Inc.	Lighting Market Analysis	Boulder	12,000	0	12,000	7/17/2017	3/31/2018
FMYI, INC	Subscription Agreement	Portland	11,150	5,150	6,000	4/25/2016	11/1/2017
Earth Advantage, Inc.	2017 Sponsorship	Portland	10,250	10,250	0	3/1/2017	2/28/2018
American Council for and Energy Efficient Economy	Intelligen Effncy Sponsorship		10,000	10,000	0	4/4/2017	12/31/2017
American Council for and Energy Efficient Economy	EE & Wtr Consv. Sponsorship		10,000	10,000	0	4/4/2017	12/31/2017
The Leede Research Group Inc	Evaluation Consultant	Manitowoc	9,000	0	9,000	5/1/2017	12/31/2017
City of Portland Bureau of Planning & Sustainability	Sponsorship - 2017	Portland	8,000	8,000	0	1/5/2017	12/31/2017
KEMA Incorporated	New Bldg Impact Evaluation	Oakland	8,000	7,506	494	5/1/2017	9/30/2017
The Cadmus Group Inc.	New Bldg Program Impact Eval	Watertown	6,500	5,825	675	4/20/2017	10/31/2017
The Cadmus Group Inc.	NB Evaluation Plan	Watertown	6,500	0	6,500	10/1/2017	3/31/2019
Northwest Energy Efficiency Council	BOC 2017 Sponsorship	Seattle	6,000	6,000	0	2/14/2017	12/31/2017
Social Enterprises Inc.	GoGreen Sponsorship - 2017	Portland	5,000	5,000	0	3/21/2017	12/31/2017
Energy Efficiency Total:			101,812,338	61,083,209	40,729,129		

Joint Programs

E Source Companies LLC	E Source Service Agreement	Boulder	133,350	133,350	0	2/1/2014	1/31/2018
Portland State University	GIS Data Research		71,992	25,664	46,328	1/1/2017	12/31/2017
Structured Communications Systems, Inc.	ShoreTel Phone System Install		65,345	65,287	59	1/1/2017	12/31/2017
CoStar Realty Information Inc	Property Data	Baltimore	48,020	41,439	6,582	6/1/2011	5/31/2018
Grounded Research and Consulting, LLC	Education Background Research	Oakland	25,000	24,972	28	3/13/2017	6/30/2017
American Council for and Energy Efficient Economy	ACEEE Sponsorship - 2017		12,500	12,500	0	1/1/2017	12/31/2017
Navigant Consulting Inc	Resource Assessment Updates	Boulder	10,600	0	10,600	8/26/2016	8/26/2018
Peggy Merchant Events, LLC	T.A. Forum Venue Research	Portland	5,000	0	5,000	7/24/2017	11/30/2017
Joint Programs Total:			371,807	303,211	68,597		

Renewable Energy

Sunway 3, LLC	Prologis PV installation		3,405,000	3,261,044	143,956	9/30/2008	9/30/2028
Clean Water Services	Project Funding Agreement		3,000,000	2,013,106	986,894	11/25/2014	11/25/2039
Oregon Institute of Technology	Geothermal Resource Funding	Klamath Falls	1,550,000	1,550,000	0	9/11/2012	9/11/2032
Farm Power Misty Meadows LLC	Misty Meadows Biogas Facility	Mount Vernon	1,000,000	1,000,000	0	10/25/2012	10/25/2027
Three Sisters Irrigation District	TSID Hydro	Sisters	1,000,000	1,000,000	0	4/25/2012	9/30/2032
Farmers Irrigation District	FID - Plant 2 Hydro	Hood River	900,000	900,000	0	4/1/2014	4/1/2034
Klamath Falls Solar 2 LLC	PV Project Funding Agreement	San Mateo	850,000	0	850,000	7/11/2016	7/10/2041

For contracts with costs
through: 10/1/2017

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Old Mill Solar, LLC	Project Funding Agmt Bly, OR	Lake Oswego	490,000	490,000	0	5/29/2015	5/28/2030
City of Medford	750kW Combined Heat & Power	Medford	450,000	450,000	0	10/20/2011	10/20/2031
City of Pendleton	Pendleton Microturbines	Pendleton	450,000	150,000	300,000	4/20/2012	4/20/2032
RES - Ag FGO LLC	Biogas Manure Digester Project	Washington	441,660	441,660	0	10/27/2010	10/27/2025
RES - Ag FGO LLC	Biogas Manure Digester - FGO	Washington	441,660	438,660	3,000	10/27/2010	10/27/2025
SunE Solar XVI Lessor, LLC	BVT Sexton Mtn PV	Bethesda	355,412	355,412	0	5/15/2014	12/31/2034
City of Gresham	City of Gresham Cogen 2		350,000	334,523	15,477	4/9/2014	7/9/2034
BSA Enterprises Inc	Solar Verifier Services	Sisters	200,000	100,012	99,988	8/1/2016	7/31/2018
Farmers Conservation Alliance	Outreach Activities	Hood River	200,000	168,980	31,020	1/1/2017	12/31/2017
Gary Higbee DBA WindStream Solar	Solar Verifier Services	Eugene	200,000	82,401	117,599	8/1/2016	7/31/2018
Luxurious Plumbing and Heating, Inc.	Solar Verifier Services	West Linn	200,000	124,948	75,052	8/1/2016	7/31/2018
RHT Energy Inc.	Verifier Services Agmt - Solar	Medford	200,000	104,273	95,728	8/1/2016	7/31/2018
City of Astoria	Bear Creek Funding Agreement	Astoria	143,000	143,000	0	3/24/2014	3/24/2034
Solar Oregon	2015 Outreach Agreement	Portland	123,300	93,000	30,300	1/1/2015	4/30/2018
SPS of Oregon Inc	Project Funding Agreement	Wallowa	75,000	74,513	488	10/15/2015	10/31/2036
Kendrick Business Services LLC	Small Business Support Agmt	Albany	60,000	2,625	57,375	11/1/2016	6/30/2018
Future Resource Strategies, LLC	Backfill for RE Staff	Salem	50,000	0	50,000	6/7/2017	10/8/2017
Kendrick Business Services LLC	TA Business Development	Albany	50,000	6,839	43,161	1/1/2017	12/31/2017
Kleinschmidt Associates	Evaluation Services	Pittsfield	47,400	38,976	8,424	1/1/2017	11/30/2018
OSEIA-Oregon Solar Energy Industries Assoc	Technical Training Course Dev		41,650	18,600	23,050	1/1/2017	4/30/2018
The Cadmus Group Inc.	Solar Verification	Watertown	41,000	0	41,000	8/24/2017	2/28/2018
Clean Energy States Alliance	2017 CESA Sponsorship		39,500	39,500	0	7/1/2016	6/30/2017
Clean Energy States Alliance	CESA Membership 17-18		39,500	39,500	0	7/1/2017	6/30/2018
ENERGYneering Solutions Inc	Biopower & Hydro Evaluations	Sisters	25,000	24,954	46	12/6/2016	11/30/2018
University of Oregon	UO SRML Contribution - 2017	Eugene	24,999	24,999	0	3/9/2017	3/8/2018
Wallowa Resources Community Solutions, Inc.	Renewables Field Outreach		24,999	21,488	3,511	2/1/2016	1/30/2018
Robert Migliori	42kW wind energy system	Newberg	24,125	24,125	0	4/11/2007	1/31/2024
Warren Griffin	Griffin Wind Project	Salem	13,150	9,255	3,895	10/1/2005	10/1/2020
Oregon Solar Energy Industries Association	Sponsorship 2017	Portland	7,500	7,500	0	1/1/2017	12/31/2017
OSEIA-Oregon Solar Energy Industries Assoc	OSEIA 2018 Conf. Sponsorship		7,500	7,500	0	9/1/2017	12/31/2018
Bonneville Environmental Foundation	REC/WRC Purchase 2016	Portland	4,860	2,430	2,430	1/1/2016	12/31/2017
REACH Community Development Inc	Solar LMI Strategies	Portland	3,000	1,000	2,000	9/11/2017	3/31/2018
Renewable Energy Total:			16,529,215	13,544,822	2,984,393		
Grand Total:			135,953,487	82,548,668	53,404,819		

PINK PAPER

Financial Glossary

(for internal use) - updated May 31, 2016

Administrative Costs

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

- I. **Management and General**
 - Includes governance/board activities, interest/financing costs, accounting, payroll, human resources, general legal support, and other general organizational management costs.
 - Receives an allocated share of indirect costs.
- II. **General Communications and Outreach**
 - Expenditures of a general nature, conveying the nonprofit mission of the organization and general public awareness.
 - Receives an allocated share of indirect costs.

Allocation

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

Allocation Cost Pools

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

Auditor's Opinion

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

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

Board-approved Annual Budget

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

Reserves

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

Committed Funds

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

Contract obligations

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

Cost-Effectiveness Calculation

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

Dedicated Funds

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

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

Direct Program Costs

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

Direct Program Evaluation & Planning Services

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

Escrowed Program (Incentive) Funds

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

Expenditures/Expenses

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

Project Tracking Projects Forecasting

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

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

Incentives**I. Residential Incentives**

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

II. Business Incentives

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

III. Service Incentives

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

Indirect Costs

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

IT Support Services

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

Outsourced Services

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

Program Costs

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

Program Delivery Expense

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

Program Legal Services

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

Program Management Expense

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

Program Marketing/Outreach

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

Program Quality Assurance

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

Program Reserves

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

Program Support Costs

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

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

Project Specific Costs (for Renewable Energy)

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

Savings Types

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

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

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

Total Program Expenses (line item on income statement)

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

Trade Ally Programs & Customer Service Management

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

True Up

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

Tab 6

Policy Committee Meeting

October 5, 2017, 3:30 p.m.

Attending by teleconference

Ken Canon, Debbie Kitchin, John Reynolds, Eddie Sherman

Attending at Energy Trust offices

Fred Gordon, Jed Jorgensen, Betsy Kauffman, Corey Kehoe, Steve Lacey, John Volkman, Lily Xu

Policies for Review

Proposal for Authorization for a 300 kW Hydropower Project Funding

Lily Xiu briefed the committee on the McKenzie Hydropower Project. In May 2017, Energy Trust invited proposals for projects to use up to \$3.0 million in incentives types of renewable energy facilities in Portland General Electric service territory, and \$1 million in Pacific Power territory. Three hydropower applications were received, including the McKenzie facility project proposed by the Three Sisters Irrigation District. Staff approved funding for the other two projects, which was less than \$500,000 per project. The McKenzie facility would take advantage of excess pressure in new, pressurized water supply pipes, part of an irrigation modernization strategy. It is expected to generate 922 megawatt hours annually, for delivery to Portland General Electric.

Staff determined that the project has above-market costs of \$778,859 (net-present value). Staff proposes an incentive of \$640,000 split into six payments. The first payment would be \$440,000, payable on commercial operation. Five additional payments of \$40,000 each would be paid upon meeting annual generation milestones. With Energy Trust incentives, the project would pay back in 15 years. Energy Trust would take 18,448 Renewable Energy Certificates (RECs) from the project, equivalent to 100% of project generation over 20 years. Because the project is relative costly, staff believes it is reasonable to request more RECs than usual, (normally, Energy Trust takes ownership of RECs in proportion to its contribution to above-market costs). The funding agreement would include milestones to allow Energy Trust to withdraw funding if the project can't move forward. Funds for the project are within the 2017 Other Renewables program budget.

Ken Canon asked why staff included \$130,000 of contingencies in the project's costs; this raises the above-market amount and therefore raising the amount of incentive we pay. Jed said we are adding the contingency because they do not have interconnection costs agreed with the utilities. Staff has validated the interconnection costs and think they look good, but in our experience, these costs can be surprising. Lily said the goal in evaluating these projects is to help ensure that they are successful. Ken stressed the importance of specifying what "other costs" means.

Jed said that this proposal will be taken to the Renewable Energy Advisory Council meeting on October 25, 2017 and upon approval, would present to the board at the November 8, 2017 meeting.

Economic Development Policy 4.18.000-P

John Volkman reported that this policy is up for its routine three-year review. The policy has been on the books for a long time and was developed in Energy Trust's early years. The policy was crafted to recognize that we want to support economic development, but also recognize that we have the same constraints on this money as we do with money committed to any other project. The policy has not been controversial since it was adopted. While the policy hasn't played an active role in project selection, it is worth having it in case these issues arise.

There are three cleanup items to recommend on this policy. In the second paragraph, the second Whereas clause recognizes that our interest in furthering economic development is a general interest, not tied to a particular strategic plan strategy. The next change would remove superfluous language from in the Resolved paragraph. The third Resolved clause would be changed to clarify that staff authority to commit to these projects is no different from other projects.

Ken asked if we have a staff person dedicated to economic development/quick response. John said that he originally coordinated those responses, and they are now handled by program staff.

The committee approved the recommended revisions for the consent agenda for the November 8, 2017 board meeting.

Methodology for Evaluating Above-Market Costs of Renewable Resource Projects 4.07.000-P

Jed briefed the committee on a technical issue regarding the above-market cost policy. The most Energy Trust can pay for a renewable energy project is (a) the cost of energy from the project, minus (b) the cost the utility would pay for “power from a non-differentiated source.” The issue involves what “non-differentiated costs” means. When the Energy Trust policy was developed, projects of this type (called qualified facilities, or QFs) were compared to non-renewable projects with standardized power purchase agreements. Since then, several different prices have evolved for QF projects, some renewable and some not. Because the Energy Trust policy requires us to use non-renewable prices for step two of the above calculation, we are forced to take a circuitous route: use revenue from a non-renewable power purchase agreement and add the revenue that the project receives from the renewable power purchase agreement, which is the power purchase agreement our QFs actually use.

Staff consulted with OPUC staff, who suggested that this is unnecessarily complex. In their view, the “non-differentiated source” referred to in the OPUC regulation includes any resource that a utility would otherwise buy, whether from a renewable or non-renewable project.

Staff therefore proposes to modify the board policy to clarify that “non-differentiated” refers to power from any avoided resource. This will allow staff’s calculation of above-market cost to use the QF price in the power purchase agreement applicable to the QF project under evaluation.

Update on Draft DEI Policy Adjournment

The meeting adjourned at 4:12 p.m.

Next Meeting: Thursday, November 20, 1:30-3:00 p.m.

Tab 7

Energy Trust of Oregon Glossary of Key Terms and Program Descriptions

Updated April 2017

Key terms

Allied technical assistance contractors: Allied technical assistance contractors provide technical analysis and studies to help industrial customers identify energy-efficiency upgrades.

Avoided cost: The amount of money that an electric utility would spend for the next increment of electric generation it 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 gets paid for power sold to the utility.

Benefit/cost ratio: Energy Trust ensures investment in cost-effective energy efficiency based on the Total Resource Cost Test benefit/cost ratio and the Utility Cost Test benefit/cost ratio. Together, the tests assess the value of the energy-efficiency investment compared to a utility supplying the same amount of energy, and determine whether energy efficiency is the best energy buy for a utility and for all utility customers.

Total Resource Cost Test: This is the main test that determines whether Energy Trust can offer an incentive for a project. Benefits include the value of energy savings to the ratepayers of the utility system over the expected life of the energy-efficiency resource (otherwise known as the avoided cost of energy), and in some cases benefits also include quantifiable non-energy benefits, such as water savings and operations and maintenance benefits. Costs include the total cost of the energy-efficiency resource, including Energy Trust incentives and the project cost paid by the participating customer.

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. Benefits include the value of energy savings to the ratepayers of the utility system over the expected life of the energy-efficiency resource (otherwise known as the avoided cost of energy). Costs include the cost of the Energy Trust incentive.

Multnomah County Property Fit initiative (formerly Commercial Property Assessed Clean Energy): Started in Q3 2015, the pilot provides 100 percent of funding to commercial property owners that complete comprehensive energy-efficiency and renewable energy projects, with standard incentives from Energy Trust and long-term loans from the Portland Development Commission repaid through energy savings or electricity production.

Cost-effectiveness: The OPUC has a definition that refers to 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.

Demand response: A load management strategy, it is the reduction in electricity consumption by end-use customers from their normal pattern of consumption during times of peak energy use, when wholesale electricity prices are high and/or when system reliability is jeopardized. Customers are often compensated for participating in demand response programs.

Energy Saver Kit: Customers of Portland General Electric, Pacific Power, NW Natural and Cascade Natural Gas can order free Energy Saver Kits from Energy Trust’s website, including energy-saving LEDs, showerheads and faucet aerators.

EPS™: Builders can receive cash incentives for new homes constructed to EPS energy performance requirements, indicating low energy consumption, utility costs and carbon footprint. The score helps homebuyers assess and compare the energy use and costs of similarly sized homes.

Irrigation modernization: A collaborative effort by Energy Trust and Farmers Conservation Alliance, irrigation modernization connects irrigation districts and farmers with tools to invest in modern irrigation infrastructure, saving water and energy, improving habitats for fish and generating clean energy through small-scale hydropower systems installed in pipes.

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 a measure.

LivingWise kits: LivingWise kits and curriculum are delivered to sixth-grade students in Oregon schools. Energy Trust provides free LivingWise science curriculum to teachers, and offers energy-saving LEDs and showerheads for students to install in homes.

Market solutions: Tailored market solutions incentive packages help businesses make quick decisions and achieve deeper energy savings when constructing small restaurant, grocery, multifamily, office, school or retail buildings less than 70,000 square feet.

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.

Megaproject: Large commercial or industrial projects receiving more than \$500,000 in Energy Trust incentives for energy-efficiency upgrades are considered megaprojects. These projects are reviewed and approved by Energy Trust’s Board of Directors.

Midstream incentive: Midstream incentives are provided to distributors and to retailers, with savings passed onto customers. Downstream incentives are provided directly to customers.

Path to Net Zero: The Path to Net Zero offering provides increased design, technical assistance, construction, and measurement and reporting incentives to new commercial construction projects that aim to exceed energy code by 40 percent through a combination of energy-efficiency and renewable energy features.

Pay for Performance: The Pay for Performance offering for commercial customers offers incentives for capital and operations and maintenance improvements over a multiyear period to help achieve additional energy savings for more comprehensive projects.

Program Management Contractor (PMC): Company contracted 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. Contracts are rebid on a regular basis.

Program Delivery Contractor (PDC): Company contracted 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. Contracts are rebid on a regular basis.

Project development assistance: Incentives and support for early-stage development of Other Renewables projects helps build a pipeline of future renewable energy projects.

Retrocommissioning: A systematic process for identifying less-than-optimal performance in commercial equipment, lighting and control systems and improving the energy efficiency of these existing systems.

Savings Within Reach: Owners of single-family or manufactured homes who meet moderate-income qualifications can receive enhanced Savings Within Reach incentives for qualifying projects.

Strategic Energy Management: Energy Trust helps industrial and commercial customers reduce energy use and save money through behavioral and low-cost operations and maintenance improvements.

Verifier: Trade ally verifiers provide technical guidance and inspection to home builders, ensuring that homes rated with EPS save energy through energy-efficient windows, HVAC, appliances and weatherization.

Program descriptions

Existing Buildings. The Existing Buildings program offers energy-efficient improvements for existing commercial buildings of all sizes. Incentives are available for custom projects, including capital upgrades and operations and maintenance improvements; standard upgrades; lighting upgrades; and energy management offerings with tools, training, technical assistance and Strategic Energy Management offerings to help customers reduce energy use through behavioral and operations improvements.

Existing Multifamily. The Existing Multifamily program serves existing multifamily buildings with two or more units, including market-rate housing, affordable housing, homeowners associations, individual unit owners, and assisted living and campus living facilities. The program offers standard incentives for water heaters, HVAC equipment, weatherization, appliances and foodservice equipment; free in-unit installation of LEDs, showerheads

and faucet aerators and distribution of advanced power strips; custom incentives for capital improvements; incentives for lighting upgrades in common areas; and incentives paid to distributors to reduce costs of efficient lighting and equipment for customers.

New Buildings. The New Buildings program supports design and construction of high-performance commercial buildings and major renovations of all sizes and building types. Staff engage with building owners, developers, business owners and design professionals to provide standard prescriptive incentives, market solutions incentive packages and custom incentives. Tailored market solutions incentive packages help businesses make quick decisions and achieve deeper energy savings when constructing small restaurant, grocery, multifamily, office, school or retail buildings less than 70,000 square feet.

Production Efficiency. The Production Efficiency program offers technical assistance and incentives to industrial and agricultural businesses, including incentives for custom projects, standard lighting and equipment upgrades delivered by trade allies, and an industrial Strategic Energy Management offering to help customers achieve persistent energy savings through behavioral and operations and maintenance improvements.

Existing Homes. The Existing Homes program serves single-family homeowners, renters and owners of existing manufactured homes with energy-saving recommendations, referrals to qualified trade ally contractors, cash incentives for heating and water heating equipment, smart thermostats, insulation and windows, and LEDs, showerheads and faucet aerators delivered through kits. Enhanced Savings Within Reach incentives are available for moderate-income residents.

New Homes. The New Homes program works with trade ally builders, subcontractors and verifiers to construct energy-efficient homes that exceed code through construction of EPS-rated homes and prescriptive incentives for individual equipment.

Products. The Products program offers cash incentives for residential ENERGY STAR qualified products, including lighting, clothes washers and showerheads. The program also provides energy-saving kits to food pantries to deliver to their clients, and distributes showerheads through water bureaus and districts. In addition, the program encourages the sale of energy-efficient new manufactured homes.

Solar Electric. The Solar program aims to create a vigorous and sustainable market for solar energy by offering cash incentives that lower above-market costs for small solar projects, educating consumers, creating and enforcing quality standards and ensuring a robust network of qualified trade ally contractors. Staff review incentive levels regularly and gradually reduce them to manage budget and respond to decreases in solar costs. The Solar program supports installation of standard solar systems on residential and commercial properties, and also large custom projects if funding is available.

Other Renewables. The Other Renewables program provides project development assistance and incentives that lower above-market costs for projects that generate renewable energy from hydropower, biopower, wind and geothermal resources. Project development assistance supports early-stage development and helps build a pipeline of future renewable energy installation projects. In 2016, staff focused on projects that provide a wide range of benefits, including biogas projects generating energy from anaerobic digestion of organic waste and hydropower projects at irrigation districts.

Northwest Energy Efficiency Alliance. NEEA is a nonprofit organization working to maximize energy efficiency to meet our future energy needs. Michael Colgrove, Energy Trust executive director, serves as a board member. NEEA is supported by and works in partnership with Bonneville Power Administration, Energy Trust and more than 100 Northwest utilities for the benefit of more than 12 million energy consumers. NEEA uses the market power of the region to accelerate innovation and adoption of energy-efficient products, services and practices. NEEA has delivered market transformation savings under contract to Energy Trust since 2002.

