Energy Trust Board of Directors Meeting

December 12, 2014

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133rd Board Meeting

Friday, December 12, 2014
421 SW Oak Street, Suite 300
Portland, Oregon

EnergyTrust of Oregon

Agenda

		Tab	Purpose
12:15pm	**Call to Order** *(Debbie Kitchin)* • Approve agenda		
	General Public Comment *The president may defer specific public comment to the appropriate agenda topic.*		
	Consent Agenda ..... *The consent agenda may be approved by a single motion, second and vote of the board. Any item on the consent agenda will be moved to the regular agenda upon the request from any member of the board.* • November 5 board meeting minutes • Amend Cost Effectiveness Policy—R731 • Amend Self-Direct Policy—R732 • Amend contract with Energy Savvy—R728	**1**	*Action*
	Board Appointment *(John Reynolds)* ..... • Election of Heather Beusse-Eberhardt to Board—R723	**1**	*Action*
12:25pm	**President's Report** *(John Reynolds)*		
12:35pm	**Final Proposed 2015 Budget & 2015-2016 Action Plan** *(Margie Harris, Peter West, Courtney Wilton)* ..... • General overview • Public comment discussion • Resolution to adopt 2015 Budget and 2016 Projection—R726..... • Resolution to adopt 2015-2016 Action Plan—R727.....	**Separate Document** **2** **2**	 *Action* *Action*
1:35pm	**Break**		
1:45pm	**Energy Programs** ..... • Steel Bridge Solar Project—R729 *(Thad Roth & Dave McClelland)* • Northwest Energy Efficiency Alliance Natural Gas Initiative—R730 *(Margie Harris & Fred Gordon)*	**3**	*Action*
2:30pm	**Committee Reports** • Evaluation Committee *(Alan Meyer)* ..... • Finance Committee *(Dan Enloe)*..... • Policy Committee *(Roger Hamilton)*.....	 **4** ..... **5** **6**	 *Info* *Info* *Info*
3:15pm	**Adjourn**		

The next meeting of the Energy Trust Board of Directors will be held
Wednesday, February 25, 2015 at 12:15pm
at Energy Trust of Oregon, 421 SW Oak Street, Suite 300, Portland

Separate Document **Final Proposed 2015 Budget & 2015-2016 Action Plan**

Tab 1 **Consent Agenda & Board Appointment**
- November 5 meeting minutes
- Amend Cost Effectiveness Policy—R731
- Amend Self-Direct Policy—R732
- Amend contract with Energy Savvy—R728
- Election of Heather Beusse-Eberhardt to Board—R723

Tab 2 **Final Proposed 2015 Budget & 2015-2016 Action Plan**
- Resolution to adopt 2015 Budget and 2016 Projection—R726
- Resolution to adopt 2015-2016 Action Plan—R727

Tab 3 **Energy Programs**
- Steel Bridge Solar Project—R729
- Northwest Energy Efficiency Alliance Natural Gas Initiative—R730

Tab 4 **Evaluation Committee**
- November 14 meeting notes
- Nest Thermostat Heat Pump Control Pilot Evaluation & Staff Response

Tab 5 **Finance Committee**
- Notes on October 2014 financial statements
- October financials and contract summary report
- Financial glossary

Tab 6 **Policy Committee**
- Notes on October 2014 financial statements

Tab 7 **Advisory Council Notes**
- November 21 RAC notes
- November 21 CAC notes

Tab 8 **Quarterly Report**
- Quarter Three 2014 Report to the Oregon Public Utility Commission and Energy Trust Board of Directors

Tab 9 **Glossary of Acronyms and Terminology**

Tab 1

Board Meeting Minutes—132nd Meeting

November 5, 2014

Board members present: Susan Brodahl, Ken Canon, Melissa Cribbins (by phone), Dan Enloe, Roger Hamilton, Mark Kendall, Debbie Kitchin, Alan Meyer, John Reynolds, Anne Root, Eddie Sherman, Dave Slavensky, Warren Cook (ODOE, special advisor)

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

Staff attending: Margie Harris, Ana Morel, Hannah Hacker, Debbie Menashe, Amber Cole, Steve Lacey, Peter West, Courtney Wilton, Fred Gordon, Elaine Prause, Jay Ward, Scott Clark, Karen Chase, Ted Light, Kim Crossman, Phil Degens, Betsy Kauffman, Diane Ferington, Mia Hart, Sarah Castor

Others attending: Jim Abrahamson (Cascade Natural Gas), Don Jones, Jr. (PacifiCorp), Lauren Shapton (Portland General Electric), John Charles (Cascade Policy Institute), Susan Stratton (NEEA), Beth McQueston (NEEA), Juliet Johnson (Oregon Public Utility Commission), Elizabeth McNannay (Resource Consultants), Bob Stull (CLEAResult), Celeste Becia (CLEAResult), Christina Cabrales (Conservation Services Group), Verlea Briggs (Portland General Electric), Heather Beusse-Eberhardt (public)

Business Meeting

President Debbie Kitchin called the meeting to order at 12:15 p.m.

General Public Comments

There were no public comments.

Consent Agenda

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

MOTION: Approve consent agenda

Consent agenda includes:

1) October 1 Board meeting minutes

Moved by: John Reynolds		Seconded by: Ken Canon
Vote:	In favor: 10	Abstained: 0
	Opposed: 0	

Susan Brodahl joined the meeting at 12:20 p.m.

President's Report

President Debbie Kitchin announced Energy Trust ranked third in Business Oregon's awards for 100 Best Nonprofits to Work for in Oregon in 2014. Last week, Debbie attended the Portland Business Journal's Manufacturing Awards Breakfast of which Energy Trust was a sponsor. The breakfast recognized small, medium and large manufacturers for innovation and strategic evolution. Oregon's manufacturing industry is diverse and an economic driver for the state. The largest sector is computer and electronics, followed by food manufacturing and wood products. The manufacturing industry provides skilled, higher-paid job opportunities and brings money into the region. Debbie showed graphs specifying manufacturing employee hourly compensation, including wages, salaries and benefits, which are greater than employees in non-manufacturing industries. The manufacturing industry also provides about 20 percent of total employment and one-half of the nation's investment in research and development. Manufacturing industries are important to the economy by providing higher wages and

helping address inequities in society. Energy Trust programs can help those businesses be more competitive, especially by helping to offset pressures when going overseas. It was noted the manufacturing sector is both energy intensive and energy sensitive. The board discussed what causes industries to locate in Oregon, including energy reliability and materials supply.

Board Appointments

The board postponed action on Resolution 723, electing Heather Beusse-Eberhardt to the board.

Election of Edmund Pat Sherman, John Reynolds

John R. introduced Resolution 724, electing Edmund (Eddie) Pat Sherman to the board. Rick Applegate recently retired from the board and the resolution nominates Eddie to fill Rick's remaining term and complete a full successive term. Eddie is principal with Against the Current Consulting Group of Portland and serves on the board of the Native American Youth and Family Center. He is a member of the Navajo and Omaha Nations. Eddie will bring expertise in communications and development, and his leadership and involvement in the Native American community will assist the board as it guides Energy Trust in serving all eligible utility customers.

RESOLUTION 724
ELECTING EDMUND PAT SHERMAN TO
THE ENERGY TRUST BOARD OF DIRECTORS

WHEREAS:

1. **Rick Applegate has retired from his position on the Energy Trust board. His term expires in February 2015.**
2. **The board nominating committee has reviewed candidates for the open board seat and nominates Edmund Pat Sherman, Principal with Against the Current Consulting Group of Portland, Oregon to fill Mr. Applegate's remaining term and complete a full successive term.**

It is therefore RESOLVED:

That the Energy Trust of Oregon, Inc., Board of Directors elects Edmund Pat Sherman to the Energy Trust Board of Directors to a term expiring February 2018, subject to all requirements of the Bylaws of Energy Trust.

Moved by: Alan Meyer		Seconded by: Roger Hamilton
Vote:	In favor: 11	Abstained: 0
	Opposed: o	

Eddie thanked the directors for the opportunity to serve on the board. He has dedicated most of his career to work with Native American communities locally and across the country to improve their quality of life, and sees overlapping issues with the energy industry. He looks forward to the opportunity to learn and provide a different perspective.

Northwest Energy Efficiency Alliance Annual Update

Susan Stratton, Executive Director of the Northwest Energy Efficiency Alliance (NEEA) provided an update on NEEA activities for Energy Trust. As a NEEA board member, Margie worked closely with Susan over the past year as NEEA developed its 2015-2019 Strategic and Business Plans. Margie mentioned NEEA's core work focused on emerging technologies, codes and standards and regional data collection and analysis as being of particular importance for Energy Trust to meet savings goals at a very low cost. Margie and staff also look forward to initiating gas market transformation activities with NEEA in 2015.

Susan described NEEA's role as a four-state regional alliance funded by Energy Trust, Bonneville Power Administration (BPA) and approximately 100 other regional electric utilities. NEEA provides market leverage, economies of scale and risk pooling in the areas of emerging technology and other market transformation efforts. Susan showed a graph to visualize the goal of market transformation, which is moving the market to higher efficiency products and services that are then locked in with state and federal codes and standards. NEEA and partner investments collaborating to move the market has resulted in measurable savings of 1,024 average megawatts (aMW), equivalent to two power plants. In 2013, savings were largely from residential markets and less in commercial, industry and agriculture. Energy Trust currently provides about 20 percent of NEEA's funding to acquire low-cost electric energy savings for PGE and Pacific Power customers.

Susan described NEEA's collaboration with Energy Trust in the areas of emerging technology, market development, codes and standards and initial natural gas market transformation efforts. She mentioned there are about 15 opportunities currently being worked on together, and NEEA is looking for additional areas of collaboration. She noted initiatives need to be complementary and coordinated while remaining cost-effective for utility customers.

NEEA's 2015-2019 Strategic Plan directs the nonprofit to fill the energy-efficiency pipeline with emerging products, services, practices and approaches, and create market conditions that will accelerate and sustain their adoption. Filling the pipeline includes bi-weekly meetings with Energy Trust and coordinating product testing. Susan provided a list of related initiatives underway across the residential, commercial and industrial sectors.

The board asked whether products available in the Pacific Northwest are unique only to the region. Susan mentioned NEEA has a long-term working relationship with major manufacturers and gains insights into what and when products will be brought to the region. She cited NEEA's success with ductless heat pumps and heat pump water heaters is leading to current efforts with heat pump dryers.

Susan noted creating market conditions for energy efficiency includes working upstream to increase product availability and affordability while coordinating program offerings. Susan provided a list of initiatives underway to create market conditions for energy efficiency across the three sectors.

Susan described a recent change in NEEA's delivery of program offerings for its funders. Through the development of its five-year business plan this summer, some funders raised the concern that not all offers are suitable for their particular service territories. All funders share in their desire to support market transformation and identified customization as a valuable approach given differences across and within states. In response, NEEA's next five-year business plan allows funders to opt out of certain initiatives and customize their funding levels. Energy Trust opted out of industrial technical training as the capability to deliver this service exists within Energy Trust's current program. Susan noted most members are signing up for the majority of other offerings.

Susan clarified the residential sector will continue as the sector with the highest percentage of delivered savings in 2015 due to work in consumer markets. NEEA will still have strong efforts on the commercial side. Margie noted Energy Trust's overall funding for NEEA is less in the upcoming 5-year funding cycle from 2015-2019.

The board commented that 40 percent of Energy Trust funding to NEEA goes to commercial sector initiatives but the commercial sector is only about 10 percent of savings. Margie noted market transformation savings take multiple years to be realized.

The board noted there are no NEEA strategies to integrate renewable energy and load balancing, and asked Susan what research NEEA has on distributed generation and avoiding peak power plants. Susan

noted vigorous discussions with the NEEA board over the past year on what kind of research NEEA could undertake on topics like distributed generation, load management and technologies that deliver at peak load times. The NEEA board asked staff to stay with only energy-efficiency technologies and preferred that utilities work in those areas. Susan mentioned some of the areas NEEA works on may support such utility efforts.

The board commented on NEEA's success in driving new standards, and noted the lack of such standards in smart meters and other demand-side management technologies. They discussed how setting standards in this area could be a leadership opportunity for NEEA.

The board asked what is communicated to consumers so they know what energy-efficient products to purchase, especially as product standards are established. Susan mentioned NEEA is not visible to the consumer at the time of purchase, and is continuing to push the standards to higher efficiency levels through efforts with retailers to stock higher efficiency products, which puts good energy-efficient products on the shelf to purchase. The board discussed how manufacturers respond to increasing efficiency levels.

The board asked how NEEA counts energy savings. Susan noted her appreciation of the question, especially for efforts integrated between NEEA and Energy Trust, and the importance of not double counting savings. When NEEA looks at how a market has moved, it first looks at big picture savings and then subtracts Energy Trust funding to determine NEEA-only savings. This is an area where NEEA is very diligent.

Susan described the proposed scope for the natural gas market transformation business plan. The scope includes five technology initiatives, scanning for new technologies, research and evaluation. There will be an advisory committee, which will evaluate the plan at mid-cycle during the five-year cycle. The budget is approximately $18 million compared to $169 million of electric market transformation, and the funds are covered entirely by Energy Trust and gas utilities. All funding commitments are expected year-end to begin efforts at the start of 2015. Gas market transformation will operate as a new stand-alone effort, and is not yet integrated into overall NEEA efforts, until NEEA reaches a comfort level with funding gas utilities.

The board asked what natural gas products will be pursued first. Susan mentioned gas-fired heat pump water heaters, some residential hearth products and some commercial products. NEEA is also working with the Gas Technology Institute. Susan mentioned NEEA strives to remain fuel neutral in its activities, an approach undertaken since NEEA formed and one which will continue with the new focus on the gas market transformation.

Susan mentioned how NEEA strives to balance urban and rural equity. Funding levels by utility are determined by the number and types of customers, load and other factors. NEEA will continue to provide non-market transformation services that benefit from a regional approach, including data collection and sharing services, an online collaboration platform called Conduit, regional stock assessments for each sector and an annual energy efficiency conference. For the 2015-2019 period NEEA's budget is approximately $33 million/year vs. $40 million/year for the current five-year period.

Management Review Implementation Plan

Courtney Wilton and Margie Harris presented a preliminary staff response to the independent Management Review completed by Coraggio Group and adopted by the board in October. Earlier this week, Ken Canon, Margie and Courtney presented the Management Review during a formal hearing of the Oregon Public Utility Commission. The presentation included the process used to complete the analysis, a list of 16 recommendations by Coraggio Group, and preliminary Energy Trust staff responses to the recommendations. .

Margie provided an overview of the draft staff responses to the recommendations. After receiving feedback from the board and incorporating the OPUC's feedback, staff will develop final responses and corresponding actions and add specific timing for implementation. Next year, staff will bring back to the board updates on progress made addressing the recommendations.

Margie highlighted three recommendations that will not require action or changes to operations, noted as recommendations 2, 6 and 7 in the board packet paper.

Margie noted recommendations 1, 3 and 10 are currently underway or are planned to begin at Energy Trust, specifically continuing IT system improvements, changing the forecasting and budgeting process, and developing metrics for continuous improvement projects in 2015.

Recommendation 11 suggests implementing continuous improvement for all core processes. Staff suggests applying continuous improvement strategies not to all core processes but to those processes that affect the most people and hold the potential for the greatest gain.

Margie reviewed the remaining recommendations. The board asked if the OPUC would agree with the Management Review reporting recommendations. Margie mentioned the meeting focused on administrative issues and no formal decisions were made. However, she thought there appeared to be support from the Commissions on the proposed approach. The board mentioned staff could set decision-making rules that determined the level of reporting undertaken. For example, if results are within a range of savings, the decision could be to report in detail or in summary. The board mentioned this is an area to redirect staff time in a productive manner.

For recommendation 14 on expanding the span of control by management levels, the board mentioned staff could also look at span of control as budget authority and could do an analysis on that for additional information to consider when looking at this recommendation. The board discussed span of control at Energy Trust. The board commented there are always opportunities for improvement, and staff should not feel compelled to determine an arbitrary span of control guideline. The board encouraged staff to look at implementers, such as Program Management Contractors and Program Delivery Contractors (PMCs and PDCs), versus utilities to benchmark this recommendation. The board noted poor span of control is typically visible by large administrative costs, whereas Energy Trust has low administrative costs and was recently recognized as the third best nonprofit to work for in Oregon. The board also noted there are a lot of recommendations staff is responding to and the topic of span of control is a lower priority. Reflecting board discussion, staff will look at some comparisons against PMCs and PDCs.

The board noted that although there are 16 recommendations, Coraggio Group was clear in the delivery of the report that these are nuances in an organization that is operating effectively now. During Coraggio Group's presentation to the board in October, it noted these are fine-tuning recommendations. The board noted this is a credit to the management of Energy Trust over the years.

The board indicated comfort with the approach staff proposed and looks forward to hearing a progress update in 2015.

The board took a break from 1:50 p.m. to 2:03 p.m.

Draft 2015 Annual Budget & Draft 2015-2016 Action Plan

Margie presented on the draft annual budget and two-year action plan. The development of the draft budget is a cross-organizational effort, starting with utility Integrated Resource Planning and program concept presentations with each utility in the summer and leading into annual energy-efficiency and renewable energy goals, and sector and program strategies. Margie thanked Programs, Finance, Planning, Legal, Executive and Communications and Customer Service staff for their work on the budget and action plan drafts.

Margie provided a brief overview on Energy Trust and programs delivered to acquire affordable, cost-effective energy efficiency, invest in renewable energy technologies, support local contractors and businesses to reach and serve customers, and support market transformation activities. She summarized how Energy Trust operates, including our goal-oriented environment with accountability and transparency to the board, OPUC, utilities, customers and state legislature. Program offerings are designed for all customers in residential, commercial and industrial sectors.

Margie summarized projected 2014 results, including a forecast ranging from 96 percent to 113 percent of energy-efficiency goals by utility for the year. Generation results are lower than expected due to delayed and cancelled projects. Margie noted Energy Trust has minimal influence on custom renewable energy project completion dates.

Margie highlighted progress to the current 2010-2014 Strategic Plan goals, with expectations to exceed the electric savings and natural gas savings goals, while falling short of the renewable energy generation goal. In this strategic plan, the goals set in 2009 were ambitious and put the organization on track to double savings over the previous five years, which the organization did accomplish. The renewable energy generation is behind on the five-year goal for a variety of important reasons, including the loss of subsidies especially Oregon Business Energy Tax Credits, the economic downturn, and low natural gas prices.

The draft 2015 annual budget is built on the success achieved over the years, including 2002-2013 results of 436 aMW saved, 112 aMW generated, 33 million annual therms saved, $1.7 billion saved on participant utility bills, $3.1 billion added to Oregon's economy and 10 million tons of carbon dioxide avoided. Energy Trust activities are a contributing factor to Oregon ranking as the third most energy-efficient state in the nation, tied with Vermont and Rhode Island, by the American Council for an Energy-Efficient Economy. The board suggested the words "since 2002" be added to the slides detailing results.

Margie reviewed the approximately six-month budget development process and the four building blocks used in preparing the draft budget and action plan. The board commented that the areas of emphasis slide note on developing and changing the renewable energy market, as written, does not clearly align with the charge to lower above-market costs and could be clarified and reframed.

Margie highlighted the top takeaways of the draft 2015 budget, including lower revenue collections for 2015, lower spending, utilizing reserves, a more sustainable rate of savings acquisition, greater emphasis on support for renewable energy project completion and lower costs, largely flat staffing costs and low administrative costs. Overall, the draft 2015 revenues are $148.2 million, which is $20 million less than 2014 while still delivering significant benefits.

Dependent on OPUC acknowledgement, there will be no rate changes for Cascade Natural Gas and there will be rate decreases for the other three utilities. The decreases are due to factors like Energy Trust meeting previous annual savings goals at lower-than-expected costs, utility revenue received in 2014 being greater than forecasted due to the cold weather conditions, and staff budgeting in a tighter fashion for the next year by referencing actual historical spending patterns and by shifting to a reliance on new utility specific program reserves if needed. The board requested rate impact by utility over a three-year period to be able to answer questions they might receive related to 2015 revenues. Staff will follow up once the OPUC approves the rate changes. The board expressed appreciation for the budgeting approach and resulting benefits to ratepayers.

The draft 2015 expenditures of $167.8 million will be approximately 5 percent less than 2014 due to lower costs for NEEA and the Existing Homes program, a different delivery model for residential products and the closer budgeting approach taken by staff. It was noted the difference between budget and expenditures will be covered by drawing down on program reserves.

Margie described the most significant difference in planned 2015 expenditures compared to 2014 is the drop in incentives due primarily to budgeting more closely and aligning with actual expenditures. In addition, there is a shift of commercial Strategic Energy Management (SEM) costs from incentives to delivery as the initiative utilizes a Program Delivery Contractor (PDC) model next year. The modest increase in program delivery costs is due to the commercial SEM cost change. Costs for internal program delivery, communications and customer service, and management and general will stay roughly the same as 2014. The board noted the pie chart could misconstrue the actual overall operational costs. Staff noted the OPUC definition of administrative costs is based on revenue and not expenditures. The slide can also be clarified.

Peter reviewed the 2015 electric savings by program, with the majority of savings from business customers. The overall savings goal is 52.9 aMW at 3.1 cents per kWh levelized. There is a drop in savings compared to 2014 when a megaproject was completed. There is an expected rebound in the New Buildings program leading to savings going back up again in 2016 as projects in a record high pipeline are completed.

Peter highlighted NEEA initiatives, including a budget of $6.5 million, savings of 4.84 aMW at less than 3.5 cents per kWh levelized and the launch of a gas market transformation plan.

Peter reviewed the 2015 natural gas savings by program. The overall savings goal is 5.8 million annual therms at 34.4 cents per therm levelized. This small drop in savings compared to 2014 stems largely from cost-effectiveness constraints.

Peter mentioned that overall on the business side there is an increase in industrial and commercial projects. However, average savings per project are down. For example, savings are down 20 percent on industrial projects and 23 percent on commercial projects. Programs are experiencing customers who undertake more incremental investments, reflecting tighter budgets and an approach to manage risk while ensuring a return on investment. Peter also mentioned that as Energy Trust reaches further into a market, programs are then driving measures into more marginal segments where there is not as big of a “bang for the buck” as before. As we drive further into the market, programs work with more people who would have invested in energy efficiency on their own. Energy Trust removes those types of customers, called free riders, yet programs still need to drive deeper into the market to reach those customers who would not have participated. This level of effort increases the cost per unit saved.

Peter showed a summary of goals, budget and levelized costs by utility. He clarified the Pacific Power Integrated Resource Plan (IRP) goal is lower than the energy goal for the utility, as the utility is in progress of updating its IRP.

Peter reviewed the renewable energy generation goal of 3.46 aMW at 4.0 cents per kWh levelized. The generation goal is 23 percent less than 2014. In 2015, there will be more generation from the Other Renewables program due to delayed 2014 projects moving into 2015. The Solar program will continue its focus on lowering soft costs of solar installations by working with trade allies on their sales model and other initiatives. Peter noted the renewable energy sector is largely dependent on the availability of other federal and state subsidies.

Margie reviewed the two-year action plans and highlighted three focus areas. The emerging technologies focus area includes investment in NEEA, pilot programs and expanded project support for renewable energy projects. The focus area of expanding participation includes using utility data and research to target customers and broaden participation, serving moderate-income customers and small businesses, and expanding staff presence in rural and outlying areas. The board suggested IT might be able to help with analyzing data to support targeting efforts and keep costs lower. The third focus area is on operations, including cost management, benchmarking with utilities and continuous improvement pilots.

Overall, the budget keeps staffing cost increases under 2 percent; overall, below 7 percent of total budgeted expenditures. Staffing costs include a request of two new full-time positions, a planning engineering manager and an industrial technical manager. There is also a request to convert two existing agency contractors to full-time staff, an industrial program coordinator and a Communications and Customer Service coordinator/analyst. Staff will work with the OPUC on a measure of total expenditures related to staffing.

Margie reviewed the overall takeaways of the budget and described the expected benefits for customers and Oregon. The full budget outreach schedule was reviewed. Comments on the budget are welcome from the public through November 19, a revised budget will be posted on Energy Trust's website by December 4, and presented to the board on December 12 for review and consideration for approval.

The board discussed the staffing cost increases even though savings will be realized from lower healthcare costs.

The board commented on the trend of more projects bringing in fewer savings, the focus areas of emerging technologies and expanding participation, and the relatively stable staffing costs. The board discussed sensitivity to implementing process improvements, quantifying productivity gains and using continuous improvement pilots all while setting a goal of keeping staffing costs flat. To the board, this shows a dichotomy. Staff clarified there is not a goal of keeping staffing costs flat yet it is a sensitive issue. The board discussed the downside of squeezing more productivity out of already highly productive staff. Margie mentioned the right measure is not a number of full-time employees and is the level of savings and the cost of those savings. This will be explored further with the OPUC as discussions begin around developing a staffing metric. Margie mentioned staff are added modestly and with great consideration. The board asked to see a graph of staffing costs and levelized costs over the years. The board mentioned it would be worth seeing revenue and savings over time as well, potentially at a Strategic Planning committee meeting.

The board asked what will happen after the three-year time horizon to reduce reserves. Margie clarified there will still be negotiations with each utility annually on funding levels, including after the three-year timeframe.

Committee Reports

Evaluation Committee, Alan Meyer

The committee reviewed the method to calculate free ridership rates for measures and programs. The calculation directly impacts program offerings and savings achievements. The committee's discussion centered on having a large enough sample size to ensure no anomalies in the calculations that could result in negatively affecting program offerings. The committee also reviewed a lighting shelf space survey that indicated stocks of LEDs and halogen lights increased while stocks of compact fluorescent light bulbs and incandescent light bulbs decreased. A Nest pilot evaluation was completed. The board commented on what looks like a high number of Nest pilot sites being eliminated at the evaluation stage when the sites could have been more rigorously selected. Staff mentioned sites were selected through Home Energy Reviews. The site characteristics may have changed throughout the process or site information gathered during the Home Energy Review was incorrect. The committee also reviewed a market lift pilot and an evaluation of an energy management system and energy information system pilot.

Finance Committee, Dan Enloe

At the last meeting, the committee reviewed much of what was covered in the draft budget presentation. It was noted reserves are at $115 million (absent commitments) and the budget strategy to lower reserves is a sound strategy. The typical busy last few months of the year have begun. The committee noted a variance in marketing expenditures, which largely is because the majority of the annual

marketing budget was spent in one quarter. The committee commented how the financial reports are structured where one can find such variances.

Compensation Committee, Dan Enloe
The committee selected the current healthcare provider for services next year at greatly reduced costs.

Adjourn

The meeting adjourned at 4:00 p.m.

The next regular meeting of the Energy Trust Board of Directors will be held Friday, December 12, 2014, at 12:15 p.m. at Energy Trust of Oregon, Inc., 421 SW Oak Street, Suite 300, Portland, Oregon.

_____
Alan Meyer, Secretary

Board Decision
Amending the Cost Effectiveness Policy

December 12, 2014

RESOLUTION 731
AMENDING THE COST EFFECTIVENESS POLICY

WHEREAS:

1. **The Cost Effectiveness Policy was originally adopted by the board in 2002 to set forth principles to evaluate whether Energy Trust investments to reduce the economic and environmental costs of using gas and electricity are consistent with Oregon law on "cost effective local energy conservation." To determine whether support for local energy conservation is "cost effective," Energy Trust compares the costs of energy-savings programs and measures to the cost of alternative sources of natural gas and electric energy. The cost of alternative sources is known as "avoided cost";**

2. **The Cost Effectiveness Policy has undergone revisions since its adoption, and was last reviewed by the Policy Committee in December 2011 as part of the Committee's regular cycle of policy reviews;**

3. **In 2014, the Oregon Public Utility Commission (OPUC) and the Washington Utility and Transportation Commission (WTUC) issued orders clarifying the substance and application of tests used to compare energy efficiency costs to avoided cost in order to ensure that energy efficiency investments are cost-effective;**

4. **Although no substantive changes to the policy are warranted by these orders, Energy Trust staff suggested some editing of the current policy to ensure that the policy reflects terminology that is consistent with the recent OPUC and WTUC orders. As a result, staff revised the policy language as reflected in the suggested amended policy attached as Attachment 1; and**

5. **The Policy Committee supports the suggested amendment and recommends approval through the board's consent agenda.**

It is therefore RESOLVED that the Board of Directors hereby approves amendment of the Cost Effectiveness Policy as shown in Attachment 1.

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

ATTACHMENT 1

Cost-Effectiveness Policy and General Methodology for Energy Trust of Oregon

History			
Source	Date	Action/Notes	Next Review Date
Board Decision	February 27, 2002	Approved (R83)	March 22, 2002
Board	March 22, 2002	Reviewed, Revised	April 3, 2002
Board	April 3, 2002	Reviewed, Revised (Minutes)	April 2005
Board	September 7, 2005	Revised (R353)	September 2008
Board	February 13, 2008	Revised (R464)	February 2011
Board	December 16, 2011	Revised (R596)	December 2014

Introduction

The Energy Trust of Oregon seeks a future that includes sufficient, stable, and affordable power available to all customers through sustained investment in energy efficiency and renewable resources that reduce the economic and environmental costs of using gas and electricity. To properly evaluate such investments, Energy Trust compares the cost of energy-saving programs and measures to the cost of alternative sources of natural gas and electric energy. The cost of alternative sources is known as "avoided cost". The Oregon Public Utility Commission (PUC), the Washington Utilities and Transportation Commission (WUTC), the Northwest Power and Conservation Council (NPCC) and the Northwest Energy Efficiency Alliance (Alliance) use similar approaches and assumptions to analyze the cost-effectiveness of energy efficiency investments. Consistent with these approaches, this policy encompasses two tests to determine cost-effectiveness and describes the key variables or economic model inputs that define these tests in Energy Trust analysis.

The Oregon Renewable Energy Act of 2007 (SB 838) allows supplemental energy efficiency funding, i.e., more than the three-percent public purpose charge authorized in the 1999 law. The 2007 Act, together with the agreements that fund Energy Trust natural gas efficiency programs in Oregon, support Energy Trust programs that help utilities meet goals that are determined through Integrated Resource Planning. In that process, the OPUC reviews and may acknowledge avoided cost forecasts from each utility. Because Energy Trust funding is significantly affected by this process, the following policy is designed to be consistent with OPUC guidance and, to the extent practical, with utility integrated resource plans. Energy Trust may consider prospective costs and benefits over a period of more than one year, as appropriate, for emerging technologies and market transformation ventures.

Policy

Energy Trust adopts the Utility ~~System~~ Cost Test (UCT) and ~~Societal~~ Total Resource Cost t~~T~~est (TRC)~~s~~, as described below, as its primary determinants of whether efficiency investments meet cost-effectiveness criteria. The economic comparison will be presented as a benefit-to-cost ratio. Programs and measures that pass both tests, or are likely to over time, are eligible for Energy Trust investment. Both tests consider energy impacts on customers who are influenced by the program, and long term market effects of programs and measures (e.g., sales, or efficacy of efficient technologies beyond the direct program participants) where such effects are

significant and likely. The difference between the ~~Utility System~~ UCT and ~~Societal tests~~TRC is that the ~~Societal Test~~TRCincludes all costs (not just Energy Trust costs) and savings of program participants and others who were influenced to act by Energy Trust programs. The ~~Utility System Test~~UCT includes Energy Trust costs only, and savings from program participants and others who were influenced to act by Energy Trust programs.

For programs and measures that pass these cost-effectiveness tests, in configuring programs Energy Trust may consider other factors identified in its strategic plan and action plans.

Costs

The ~~societal~~ total resource cost definition is in alignment with the OPUC docket no. UM-551's definition ~~of Total Resource Cost (Societal) perspective~~ as including total costs and total benefits in cost effectiveness calculations.[1] The following costs will be included in the ~~societal~~ TRC perspective:

1. Total cost of efficiency measures and actions,[2] including costs to Energy Trust and participants
2. Energy Trust administrative costs
3. Energy Trust program management costs

The utility cost~~system~~ test includes only the Energy Trust incentives and items 2 and 3, above, i.e., all Energy Trust efficiency costs, not those paid by consumers.
Costs excluded: The value of Oregon and/or Federal tax credits will be deducted from the cost of measures because similar tax credits are not included in avoided costs used by Energy Trust. Program administration or management costs of local programs that are paid by federal or state agencies will not be included, as they are often associated with non-energy considerations such as equity, employment, etc., and are not included in the benefit/cost tests under PUC guidance.

Benefits

In the ~~societal~~ total resource cost test, Energy Trust will include the following benefits:

1. The value of the electrical and/or gas energy saved based on the avoided cost forecasts of the utilities whose customers are served by the Energy Trust, as reviewed and approved by the PUC.[3] Periodically, Energy Trust will work with the utilities and PUC to develop an average, or merged cost forecast. This will be done separately for the electric utilities and gas utilities, so that Energy Trust program decisions are based on a single set of price forecasts for each fuel.Energy Trust may include factors such as hedge value, if not considered in the utility forecasts, based on agreement with the utilities and PUC.
2. Non-energy benefits will be quantified by a reasonable and practical method.Where non-energy benefits are clear, large, but difficult to quantify, Energy Trust will document this to the Oregon and/or Washington Commissions and propose cost-

[1] In Washington, the primary cost/benefit criterion is the ~~societal~~ total resource cost test, but where there are significant non energy benefits the WUTC will consider using the utility cost test. ~~applied to entire programs. In addition to following this guidance, Energy Trust will continue to apply the test to specific measures to assure consistency of programs across states (for administrative efficiency) and optimal rate payer value.~~
[2] For equipment or structures that would be purchased regardless of efficiency actions, this is the incremental cost of upgrading the efficiency of the purchase beyond common practice.
[3] This includes the value of avoided peak energy use.

effectiveness exceptions in Oregon, and application of the UCT in Washington. ~~Unless and until the OPUC develops an alternative approach, Energy Trust may use proxies for these benefits where research shows that the benefits are large, they cannot be practically quantified, and they clearly influence consumer decisions~~.

3. For electricity, both line losses and avoided Transmission and Distribution construction.
4. Natural gas capacity benefits and benefits from reduced transmission and delivery losses will be included where significant and quantifiable.
5. In addition, the Energy Trust will apply in its analysis the 10% credit for energy efficiency as required under the Northwest Power Act and OPUC docket no. UM-551. This credit recognizes the benefits of conservation in addressing risk and uncertainty.

Avoided costs based on integrated resource planning will be provided to the Energy Trust by utilities. The utility ~~system~~ cost test will include items 1, 3, 4 and 5, above.

Currently, utility avoided costs include the forecast value of reduced carbon dioxide emissions. Oregon PUC guidance provides that other environmental pollutant costs may be considered only when specified by the PUC.

Discount rates

Energy Trust will revise avoided costs and discount rate from time to time to be consistent with the cost of capital used in the utilities' Integrated Resource Plans.

In analysis and reporting, Energy Trust will use a discount rate based on OPUC-reviewed integrated resource planning discount rates used by the utilities whose customers are served by the Energy Trust. Periodically, Energy Trust will work with the utilities and OPUC to derive a single discount rate close to those employed by the utilities. This discount rate will be used to compare the costs and benefits of efficiency investments to other investments.

In conclusion, Energy Trust programs and measures will be reviewed using both the Utility ~~System~~ Cost and the Total Resource Cost ~~Societal~~ tests. If the benefit-to-cost ratio is greater than 1.0, a program should be considered cost-effective and may be considered for Energy Trust efficiency funding.

Board Decision
Amending the Self Direct Policy

December 12, 2014

RESOLUTION 732
AMENDING THE SELF DIRECT POLICY

WHEREAS:

1. **Oregon law allows entities that use over one average megawatt of electricity a year at a single site to direct their own electric efficiency and renewable energy projects and deduct the cost from the public purpose charge on their electric bills;**

2. **The Self Direct Policy was originally adopted by the board in 2001 and revised in 2002 to allow self-directors incentives for projects only if they agree not to use self-direct credits at the same site for 36 months. The policy recognizes that self-directors should not have the same access to Energy Trust incentives as electric users who pay the public purpose charge;**

3. **The Self Direct Policy is up for its regular three year cycle of review by the Policy Committee;**

4. **Staff has proposed some format changes to the Self-Direct Policy, but no substantive changes at this time, and the revised the policy language is attached as Attachment 1; and**

5. **The Policy Committee supports the suggested amendment and recommends approval through the board's consent agenda.**

It is therefore RESOLVED that the Board of Directors hereby approves amendment of the Cost Effectiveness Policy as shown in Attachment 1.

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

ATTACHMENT 1

Eligibility of Self-Direct Businesses for Energy Trust Incentives

History			
Source	Date	Action/Notes	Next Review Date
Board Decision	May 8, 2001	Approved (R27)	November 28, 2001
Board	November 28, 2001	Reviewed, Revised (R58)	January 30, 2002
Board	January 30, 2002	Reviewed, Revised (R69, R70)	April 3, 2002
Board	April 3, 2002	Reviewed, Revised (R96)	October 30, 2002
Board	October 30, 2002	Reviewed, Revised (R137)	October 2005
Board	May 25, 2006	Reviewed, Revised (R392)	May 2009
Policy Committee/Board	September 2, 2009	Reviewed, no changes	August 2012
Policy Committee	Oct. 23, 2012	Ditto	Oct. 2015

~~ENERGY TRUST POLICY ON SELF-DIRECTION~~

Introduction

~~WHEREAS:~~

~~1.~~ Oregon law allows entities that use over one average megawatt of electricity a year at a single site to direct their own electric efficiency and renewable energy projects and deduct the cost from the public purpose charge on their electric bills.

~~2.~~ In 2002, Energy Trust adopted a policy allowing self-directors a full Energy Trust incentive for the new project only if the self-director agrees not to use self-direct credits at the same site for 36 months. The policy recognizes that self-directors should not have the same access to Energy Trust incentives as electric users who pay the public purpose charge.

~~3. The board wishes to clarify the policy and to make two substantive changes meant to facilitate the policy's administration.~~

~~It is therefore RESOLVED:~~

Policy

~~The Energy Trust policy on self-direction is as follows:~~

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

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

   B. Measures exempted: As long as it claims no self-direct credit for these measures, an energy user may receive 100% of the standard Energy Trust incentive for the following measures:
      - unitary HVAC systems;
      - motor replacement; and
      - measures determined by Energy Trust staff to have modest costs ($3,000 or less per project) and savings, and where application of this policy's requirements would unreasonably interfere with efforts to encourage participation in an Energy Trust program.

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

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

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

4. Repayment requirement: If the energy user accepts a full Energy Trust incentive for a measure and agrees not to use self-direction credits on its electric bill at a site for a 36-month period, Energy Trust staff:
   A. Shall require repayment if the self-director begins using credits before the 36 months has ended. If required, recovery will be by the following formula: Refund Amount = 0.5 x A x B, *where* A = total amount of Energy Trust incentives paid and B = 36 minus the number of months elapsed since measure installation or completion, divided by 36. Repayment must be completed within two years of the time the repayment obligation is triggered.
   B. May waive repayment for projects whose repayment obligation would be $3,000 or less.

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

~~Adopted on May 25, 2006, by the Energy Trust Board of Directors~~

Board Decision
Amend Contract with Energy Savvy

December 12, 2014

Summary

Authorize the executive director to amend Energy Trust's contract with Evoworx, Inc., dba Energy Savvy, to add $115,000 to provide an on-line audit tool for residential customers during 2015, while staff conducts a competitive process for this service longer-term.

Background

- Since 2004 Energy Trust has offered a free online audit tool for residential customers. The tool is intended to allow customers to assess their home's energy use and point customers to specific options to save energy and generate renewable energy.
- In 2012, Energy Trust awarded a contract to Energy Savvy to provide this service. The service administers a survey which, once completed, generates a report showing energy savings potential and providing targeted recommendations for the customer's home.
- By the end of 2014, Energy Trust will have expended about $434,000 on the Energy Savvy contract. Continuing the service in 2015 will cost another $115,000, putting the total contract amount over $500,000, which requires board authorization.
- This has been a sole-source contract, based on Energy Savvy's specialized experience and our judgment that we could not duplicate the tool without a significant investment of time and resources and limiting the program's ability to work on other, higher priorities.
- Staff plans to conduct a competitive solicitation in 2015 to ensure all options are considered. Energy Trust gets good value from the Energy Savvy service – the tool receives an average of 1,000 visitors per month, and 22% of visitors participate in one or more of our programs after completing the audit.

Discussion

- The proposed contract extension will continue making the Energy Savvy tool available for a year while staff conducts a competitive solicitation.
- In the first quarter of the coming year, staff plans to issue a Request for Information to survey the market for comparable products. We will assess the best submissions, and, if an alternative vendor is selected, anticipate launching a replacement tool in the first quarter of 2016.

Recommendation

Authorize the executive director to amend the contract with Energy Savvy to add $115,000 to provide an on-line audit tool for residential customers during 2015, by adopting resolution 728.

RESOLUTION 728

AMEND THE CONTRACT WITH ENERGY SAVVY

WHEREAS:

1. **Since 2004 Energy Trust has offered a free online audit tool for residential customers.**
2. **In 2012, Energy Trust awarded a contract to Energy Savvy to provide this service.**
3. **By the end of 2014 Energy Trust will have expended about $434,000 on the Energy Savvy contract. Continuing the service in 2015 will cost another $115,000, putting the total contract amount over $500,000, which requires board authorization.**
4. **The proposed contract extension will continue this service for a year while staff conducts a competitive solicitation for bids to provide the service longer-term.**

It is therefore RESOLVED:

The Board of Directors of Energy Trust of Oregon authorizes the executive director to amend Energy Trust's contract with Energy Savvy to add $115,000 to provide an on-line audit tool for residential customers during 2015, while a competitive process is conducted for bids to provide the service longer-term.

Moved by: Seconded by:

Vote: In favor: Abstained:

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

Board Decision
Electing Heather Beusse-Eberhardt to Energy Trust Board

December 12, 2014

Summary

Elect Heather Beusse-Eberhardt to the board seat vacated by Kenneth Mitchell-Phillips.

Background

- In December 2013 Kenneth Mitchell-Phillips was elected to finish out a three-year board term (ending February 2016) vacated by Anne Donnelly on September 29, 2013.
- On July 20, 2014 Mr. Mitchell-Phillips resigned from this seat due to scheduling conflicts.
- The board nominating committee, having reviewed candidates, nominates Heather Beusse-Eberhardt. Ms. Beusse-Eberhardt is Director of Technology Evaluation and Implementation-Solar at EDF Renewable Energy in Portland, Oregon. She also held the positions of Structured Finance Manager and Project Finance Manager at EDF Renewable Energy, where she has worked since 2008. Prior to this, Ms. Beusse-Eberhardt was Director of Partnership Development at GLOBIO. She also worked at Intel as a Platform Planner, Sr. Financial Analyst, Analyst to LAN Access Division, and founded and led the Intel Employee Sustainability Network.
- Ms. Beusse-Eberhardt serves on the board of Burke E. Porter Machinery and volunteers as a member of the Social Venture Partners. She was a middle school math instructor for Teach For America and a Business English Instructor in South America.

Recommendation

Adopt the resolution below.

RESOLUTION 723
ELECTING HEATHER BEUSSE-EBERHARDT TO
THE ENERGY TRUST BOARD OF DIRECTORS

WHEREAS:

1. **In December 2013 Kenneth Mitchell-Phillips was elected to finish out a three-year board term (ending February 2016) vacated by Anne Donnelly on September 29, 2013. Director Mitchell-Phillips resigned his position on the board effective July 20, 2014 due to scheduling conflicts, and his position on the board has remained open and unfilled since that time.**
2. **The board nominating committee has reviewed candidates for the open board seat and nominates Heather Beusse-Eberhardt, Director of Technology Evaluation and Implementation-Solar at EDF Renewable Energy in Portland, Oregon to fill Mr. Mitchell-Phillips' remaining term complete a full successive term.**

It is therefore RESOLVED:

That the Energy Trust of Oregon, Inc., Board of Directors elects Heather Beusse-Eberhard to the Energy Trust Board of Directors to a term expiring February 2019, subject to all requirements of the Bylaws of Energy Trust.

Moved by: Seconded by:

Vote: In favor: Abstained:

Opposed:

Tab 2

Board Decision
Adoption of 2015 Budget and 2016 Projection

December 12, 2014

Summary

To adopt the Energy Trust budget for 2015 and projection for 2016.

Background

- The draft budget for 2015 and projections for 2016 (the draft budget) were presented to and discussed by the board at its meeting on November 5, 2014.
- The draft budget was posted on the Energy Trust website on October 31, 2014.
- The Conservation and Renewable Energy Advisory Councils were presented highlights from the draft budget, and discussed the draft budget, at their respective meetings on October 22, 2014, and provided updates on November 21, 2014.
- The Finance Committee reviewed the draft budget on October 24, 2014.
- The Oregon Public Utility Commission was briefed on the draft budget on November 12, 2014, and heard public comment on the draft budget on December 3, 2014.
- NW Natural, Cascade Nature Gas, Portland General Electric, and Pacific Power were presented the draft budget at individual meetings held between October 29, 2014, and November 17, 2014.
- A live public webinar was conducted November 12, 2014.
- Public comments were due November 19, 2014.
- The board will hear public comment and discuss the final proposed budget and action plan at its meeting on December 12, 2014.

Recommendation

Staff recommends adoption of the Energy Trust budget for 2015 and projection for 2016.

RESOLUTION 726
ADOPTION OF 2015 BUDGET AND PROJECTION FOR 2016

BE IT RESOLVED: That the Energy Trust of Oregon, Inc., Board of Directors approves the 2015 budget and 2016 projection as presented in the board packet.

Moved by: Seconded by:

Vote: In favor: Abstained:

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

Board Decision
Adoption of 2015-2016 Action Plan
December 12, 2014

Summary
To adopt the Energy Trust two-year Action Plan for 2015-2016.

Background
- The Energy Trust grant agreement with the Oregon Public Utility Commission requires Energy Trust to update its two-year Action Plan annually and describe the activities the organization will undertake to accomplish over the coming two years.
- This updating occurs each year in connection with the preparation and finalization of the following year's budget.
- The 2015-2016 Action Plan outlines activities Energy Trust will undertake in 2015 and 2016 to achieve its strategic goals.

Discussion
- A draft of the two-year action plan for 2015-2016 (the action plan) was presented to and discussed by the board at its meeting on November 5, 2014.
- The action plan was posted on the Energy Trust website on October 31, 2014.
- The Conservation and Renewable Energy Advisory Councils were presented highlights from the action plan at their respective meetings on October 22, 2014, and provided updates on November 21, 2014.
- The Finance Committee reviewed the action plan on October 24, 2014.
- The Oregon Public Utility Commission was briefed on the action plan on November 12, 2014 and heard public comment on the action plan on December 3, 2014.
- NW Natural, Cascade Nature Gas, Portland General Electric, and Pacific Power were presented the action plan at individual meetings held between October 29, 2014, and November 17, 2014.
- A live public webinar was conducted November 12, 2014.
- Public comments were due November 19, 2014.
- The board will hear public comment and discuss the final proposed budget and action plan at its meeting on December 12, 2014.

Recommendation
Staff recommends adoption of the Energy Trust Action Plan for 2015-2016.

RESOLUTION 727
ADOPTING 2015-2016 ACTION PLAN

BE IT RESOLVED: That Energy Trust of Oregon, Inc. Board of Directors approves the two-year 2015-2016 Action Plan as presented in the board packet.

Moved by: Seconded by:

Vote: In favor: Abstained:

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

Tab 3

Board Decision
Authorizing Funds for Steel Bridge Solar Project

December 12, 2014

Summary

Authorize the executive director to negotiate and execute a contract for funding of up to $2,000,000 toward the above-market cost of a 3.0 MW_{DC} (megawatt direct current) ground-mounted solar photovoltaic facility near Willamina, Oregon, developed and owned by NRG Energy, Inc. and delivering energy to Portland General Electric (PGE).

Energy Trust Goals

This project supports the 2015-2019 Strategic Plan: to accelerate the rate at which renewable energy resources are acquired, helping to achieve Oregon's 2025 goal of meeting at least eight percent of retail electrical load from small-scale renewable energy projects. This project also reflects the Oregon Public Utility Commission's fourth funding priority for Renewables: fund above-market costs associated with innovative and custom solar projects, as funds are available.

Background

- Energy Trust did not budget for any PGE custom solar projects in 2014, but has $3,250,000 in unallocated funds for PGE projects available after conducting competitive funding processes for non-solar custom projects. Under Energy Trust funding priorities and OPUC performance measures, Energy Trust may allocate incentive funding for custom solar projects if funding remains after considering eligible non-solar custom projects. Energy Trust reallocated the available PGE funds as follows:
  - $1,250,000 were used to fund standard solar program incentives.
  - The remaining $2,000,000 were allocated for a PGE Solar Project RFP.
- Energy Trust issued a PGE Solar RFP in September 2014 and received three PGE Solar RFP applications in October 2014; all three were determined to be eligible for funding and reviewed by Energy Trust staff.
- Based on the strength of the RFP proposal, Energy Trust selected the Steel Bridge Solar Project (the Steel Bridge project). The Steel Bridge Project proposed an incentive of $2,000,000.
- This resolution would authorize incentive funds for the Steel Bridge project in an amount which exceeds the executive director's contract signing authority.

Discussion

- The nameplate capacity of the Steel Bridge project will be approximately 3.0 MW_{DC} (megawatt direct current). The project is expected to generate 3800 MWhs (0.43 aMW) per year.
- The Steel Bridge project is proposed by an experienced development team: OneEnergy Renewables is the developer; Christenson Electric as the engineering, construction and procurement (EPC) contractor; and NRG Energy Inc. will own and operate the system.
- Staff's financial summary of the Steel Bridge project is as follows:

Revenues		
	Energy Sales	$2,949,972
	Consolidated Tax Benefits	$2,315,327
	Total NPV Revenues	**$5,265,299**
Expenses		
	Capitalized Construction Cost	$5,935,395
	Other Expenses	$ 573,365
	O&M Cost	$ 590,367
	Taxes	$ 78,886
	Total NPV Expenses	**$7,178,013**
Above Market Cost (Total Revenue - Total Expense)		($1,912,714)
Above Market Cost Increased for Tax Impacts		**($3,102,839)**

- The Steel Bridge total construction cost is $5,935,395, the lowest per-watt cost of any solar project reviewed by Energy Trust to date. It is the first utility-scale solar project that Energy Trust would support that has neither a 50% BETC nor a negotiated power purchase agreement.
- Requested Energy Trust funding for the project, at $2,000,000, is $0.67/watt of rated DC. At such a per-watt rate, the incentive funding request is also substantially less than the incentives provided to support PGE's Outback Solar PV project ($0.85/watt) and Baldock Solar PV project ($1.15/watt).
- The Steel Bridge project will be installed along state highway 18 near Willamina, Oregon and will interconnect to the nearby PGE Willamina substation.
- The Steel Bridge project has several attractions:
  - The project is being developed by OneEnergy Renewables, an experienced developer specializing in the development of utility scale solar projects and other renewable energy technology projects in the 20 to 50 MW range.
  - The Steel Bridge project already has achieved several important project milestones. It has a signed 20-year power purchase agreement (PPA) with PGE at favorable rates, a signed interconnection agreement, and a Phase 1 environmental review.
  - The project has site control having already signed a 26-year lease for the site property. The development team expects that the project can be in commercial operation by the third quarter of 2015.
- Staff reviewed the project designs and found them to be reasonable for a project of this size, type and design.
- In the funding agreement with OneEnergy, staff will propose to require OneEnergy to assign up to 75 percent of the Renewable Energy Certificates (RECs) arising out of the projects to PGE for the benefit of PGE ratepayers.
- The Renewable Energy Advisory Council (RAC) supports the Steel Bridge project.

Recommendation

Authorize the executive director or her designee to sign a contract authorizing expenditure of up to $2,000,000 to provide above-market support for the Steel Bridge project, contingent on successful contract negotiation consistent with the resolution below.

RESOLUTION 729
AUTHORIZING FUNDS FOR STEEL BRIDGE SOLAR PROJECT

WHEREAS:

1. **Consistent with Energy Trust's 2015-2019 Strategic Plan, Energy Trust supports all eligible renewable energy technologies using competitive approaches to identify and fund new projects and market solutions for those projects receiving non-standard incentives.**
2. **In addition, the Oregon Public Utility Commission (OPUC) fourth funding priority for renewables for Energy Trust to support the above-market costs associated with innovative and custom solar projects, "as funds are available."**
3. **In mid-2014, Staff identified $2,000,000 in available funds for innovative and custom solar projects, funds unallocated after a 2014 "Other Renewables" RFP process and support of standard solar projects.**
4. **In September 2014, Energy Trust released a Request for Proposals for innovative and custom solar projects, and three applications were received and reviewed.**
5. **Though all three submissions were eligible for Energy Trust funding, staff recommends moving forward with one, the Steel Bridge Solar 3.0 MW$_{DC}$ project, a ground mounted, fixed-tilt installation located near Willamina, Oregon on leased, agricultural land. The Steel Bridge project proposal demonstrated many strengths.**
6. **This project has a solid business plan, executed 26-year lease, experienced developer, construction contractor, and owner, and executed power purchase agreement (PPA) and interconnection agreement.**
7. **Total project cost is estimated to be approximately $6,000,000, which Energy Trust staff considers reasonable for a project of this size and design, at $1.98/W$_{DC}$ the lowest all-in cost of any project the solar program as supported.**
8. **The above-market cost on a net-present value basis over 20 years is estimated at $3,102,839.**
9. **Based on its analysis of above-market cost and available incentive funding for projects of this type, staff recommends an Energy Trust incentive of up to $2,000,000.**
10. **In consideration for its incentive funding contribution, Energy Trust will require that the project owner assign up to 75 percent of the Renewable Energy Certificates (RECs) for the project to PGE for compliance with Oregon's solar mandate and renewable energy requirements.**

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

1. **An incentive of up to $2,000,000 for the Steel Bridge ground-mounted solar project near Willamina, Oregon with minimum capacity of 3.0 MW_{DC} and expected generation of 3,800 MWh/year (0.43 aMW).**
2. **Energy Trust to require the project owner to deliver up to 75% of all RECs from this project to PGE for the benefit of its ratepayers and for compliance with PGE's renewable energy generation and solar capacity obligations to the state.**
3. **The executive director or her designee to negotiate and sign an agreement consistent with this resolution.**

Moved by: Seconded by:

Vote: In favor: Abstained:

Opposed:

Board Decision
Authorizing a 2015-2019 Funding Commitment to the Northwest Energy Efficiency Alliance Natural Gas Initiative

December 12, 2014

Summary

Authorize the executive director to negotiate and execute a five-year contractual commitment to fund the Northwest Energy Efficiency Alliance (NEEA) 2015-2019 Natural Gas Market Transformation Business Plan in an amount up to $6,300,000 to deliver 280 million therms savings annually to the region at a 20-year weighted average total resource cost (TRC) of $0.28/therm through regional gas market transformation activities thereby benefiting Energy Trust's natural gas customers.

Background

- NEEA is a non-profit corporation that has been funded by Northwest utilities and the Bonneville Power Administration since 1997. NEEA works on a regional basis to further its mission to mobilize the Northwest to become increasingly energy efficiency tor a sustainable future. NEEA has led regional market-transformation, supported Energy Trust energy efficiency initiatives and increased availability of energy-efficient emerging technologies to provide cost-effective electricity savings through long-lasting changes to the marketplace.
- Since our inception, Energy Trust has supported and relied upon NEEA as the premier source of market transformation activities and electric energy savings benefitting over 140 Pacific Northwest utilities and their respective 12 million customers.
- In August 2014, the NEEA Board of directors approved a 2015-2019 Natural Gas Market Transformation Business Plan (the "Gas Business Plan") to build on its experience in delivering electric energy savings to natural gas. The Gas Business Plan is the product of a collaborative of natural gas stakeholders convened and organized by NEEA over six months in early 2014 (the "Collaborative"). Supported by the Collaborative, NEEA's Gas Business Plan proposes a five-year, $18.3 million natural gas market transformation plan that leverages and complements NEEA's 2015-2019 Business Plan for electric energy efficiency. Energy Trust, as the administrator of public purpose energy efficiency funds for NW Natural and for Cascade Natural Gas in Oregon, seeks to fund NEEA's natural gas initiative consistent with the Gas Business Plan.
- Proposed funders of the Gas Business Plan are Avista Natural Gas, Cascade Natural Gas in Washington, Puget Sound Energy, and Energy Trust, representing NW Natural Gas and also Cascade Natural Gas in Oregon. Together these proposed funders represent approximately 70% of the region's residential and commercial load and customers. It is NEEA's intent to demonstrate success with the Gas Business Plan in order to expand participation to remaining regional gas utilities over time. Energy Trust would be the second largest funder of the gas initiative, representing approximately 34% of the total funding commitment at this time.
- As a participant in the Collaborative, and based on its work with NEEA through its electric market transformation and efficiency initiatives, Energy Trust believes that NEEA has an established track record for regional market transformation activities which can be extended to natural gas savings. Energy Trust believes that this expanded NEEA effort can provide more natural gas savings at a lower cost to Energy trust than Energy Trust can solely achieve.

Discussion

- Energy Trust supports and engages with NEEA as the regional Alliance of more than 140 Northwest utilities and the Bonneville Power Administration, pursuing electric market transformation benefits on behalf of the region.
- Continued collaborative investment in NEEA enables resources to be pooled and leveraged across the region, maximizing opportunities and benefits of market changes while minimizing risks.
- Beginning in 2014, Energy Trust participated in the Collaborative, an effort by natural gas utilities in the region and organized by NEEA to develop a strategy for initiating natural gas market transformation in the Northwest. A Northwest regional natural gas market transformation effort would permit NEEA to build experience working in natural gas markets and to drive towards a fully integrated approach to electric and gas energy efficiency market transformation.
- As a result of the Collaborative's efforts, in August 2014 the NEEA Board of Directors approved the Gas Business Plan.
- The Gas Business Plan presents opportunities for Energy Trust. Energy Trust's own draft strategic plan identifies the need to expand focus on emerging technologies, an area of NEEA expertise and a significant strategy to meet our future savings acquisition goals through new products, services and opportunities. A market transformation approach for emerging natural gas energy efficiency technologies and opportunities would support and complement Energy Trust's efforts.
- To pursue activities and achieve results identified in the Gas Business Plan, NEEA is seeking to secure five-year contractual commitments from Collaborative participants. This is consistent with how NEEA contracts with its funders for electric energy efficiency. Because market transformation requires several years of staged activity, a long-term commitment is appropriate.
- NEEA requests a five-year commitment from Energy Trust for up to $6.4 million, an amount representing Energy Trust's allocated funding share as the representative of Cascade Natural Gas in Oregon and NW Natural, and based on based on Energy Trust's share of customers and gas loads from its funding gas utilities.
- The Gas Business Plan proposes to acquire 280 million annual Therms by 2035 in regional natural gas energy savings from market transformation investments over the first five years of that period, at a projected weighted average levelized total resource cost (TRC) of no more $0.28/Therm.
- The cost of savings to be acquired is well within minimum OPUC performance measures for Energy Trust.
- The Oregon Public Utility Commission will be notified before final execution of this five-year contract.
- Energy Trust staff support the NEEA Gas Business Plan and the corresponding funding request. Staff regards NEEA investments as critical to the achievement of Energy Trust savings goals over the next five years, knowing such savings will continue to deliver benefits to utilities and customers we represent well beyond this time period.

Recommendation

Authorize the executive director or her designee to sign a contract authorizing expenditure of up to $6,400,000 to acquire 280 million annual therms savings regionally through natural gas market transformation during the period 2015-2019, contingent on successful contract negotiation consistent with the resolution, below.

RESOLUTION 730
AUTHORIZING A 2015-2019 FUNDING COMMITMENT
TO THE NORTHWEST ENERGY EFFICIENCY ALLIANCE

WHEREAS:

1. **The Northwest Energy Efficiency Alliance (NEEA) remains the premier regional market transformation organization and Energy Trust contractor since our inception.**
2. **As an outcome of a collaborative of regional natural gas stakeholders, NEEA's board of directors has approved a 2015-2019 NEEA Natural Gas Market Transformation Business Plan (the "NEEA Gas Business Plan") which targets acquisition of 280 million Therms in regional energy savings annually at a projected cost of no more than $0.28 /Therm.**
3. **Planned NEEA savings acquisition compare favorably to costs projected from other Energy Trust programs and also comply with minimum OPUC performance measures established for Energy Trust.**
4. **The NEEA Gas Business Plan prioritizes regional coordination and collaboration to accelerate market transformation development of emerging natural energy efficiency technologies, a critical strategy identified in Energy Trust's own strategic planning process.**
5. **Staff regards NEEA's work as essential to achieving Energy Trust savings goals over the next few years, helping ensure a full pipeline of gas efficiency projects to deliver long-term benefits to Oregon and the region.**

It is therefore RESOLVED:

1. **The executive director or her designee is authorized to negotiate and sign a five-year contract with NEEA authorizing funding of up to $6,400,000 to support natural gas market transformation over the period 2015-19.**
2. **Funding shall be consistent with Energy Trust's board-approved annual budgets and two-year action plans.**

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

Tab 4

Evaluation Committee Meeting

November 14, 2014 12:00-3:00 pm

Attendees

Evaluation Committee Members
Alan Meyer, Board Member, Committee Chair
Susan Brodahl, Board Member
Mark Kendall, Board Member
Anne Root, Board Member (phone)
Ken Keating, Expert Outside Reviewer

Energy Trust Staff
Steve Lacey, Director of Operations
Phil Degens, Evaluation Manager
Sarah Castor, Evaluation Sr. Project Manager
Erika Kociolek, Evaluation Project Manager
Dan Rubado, Evaluation Project Manager
Elaine Prause, Senior Manager of Planning
Jackie Goss, Planning Engineer
Sue Fletcher, Senior Manager, Communications and Customer Service
Susan Jamison, Residential Marketing Manager
Brooke Graham, Sr. Customer Service Operations Manager
Shelly Carlton, Strategic Marketing Manager
Kathleen Belkhayat, Project Manager, Commercial Sector
Oliver Kesting, Commercial Sector Lead
Marshall Johnson, Program Manager, Existing Homes
Spencer Moersfelder, Program Manager, Existing Buildings

Other Attendees
Christopher Frye, NEEA

1. 2014 Residential Awareness Survey

Presented by Sarah Castor

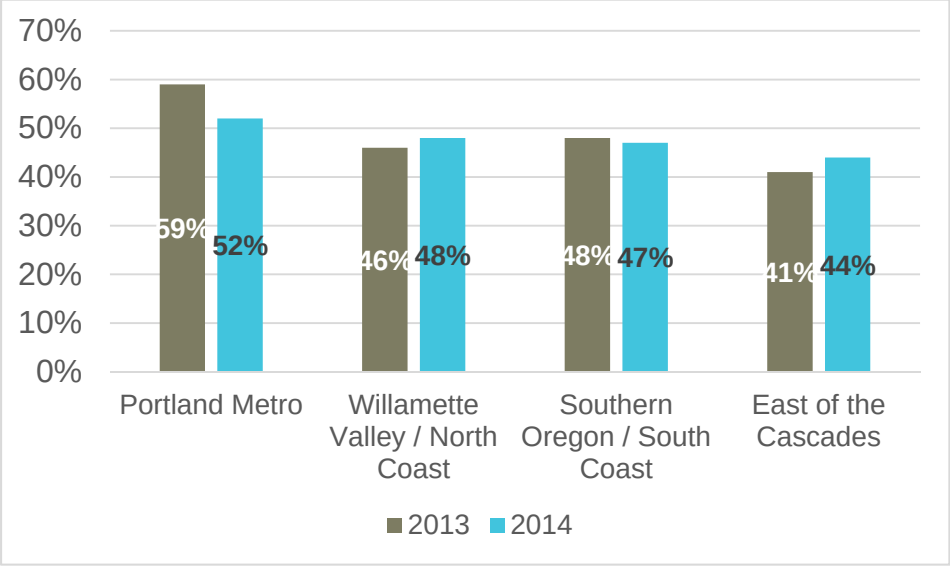
Background: The contractor for this study was Research Into Action. The study kicked off in April 2014, and was completed in September 2014. The survey was fielded in August 2014. This is the seventh annual survey about residential awareness. The goals for the survey were to get insight into utility customer awareness and perceptions of Energy Trust and energy efficiency in general. This information informs Energy Trust's communications and marketing strategies. This was the first year that we added questions around awareness of commercial offerings. Alan asked if there were industrial or commercial awareness surveys. Sarah responded that the problem with doing a similar survey for commercial and industrial is how to identify people who are decision-makers at businesses who should be aware of us. We have done a lot through commercial and industrial process evaluations to investigate this, including non-participant surveys, which give us an idea of how aware non-participants are of Energy Trust in the commercial sector. Alan commented that we work more directly with industrial customers and more indirectly with commercial and residential customers; awareness is more important when we are working with a group of folks directly. Sarah responded there is definitely interest in knowing about awareness of Energy Trust in the commercial and industrial sectors, but it's mostly a challenge with methods that prevents us from doing a similar survey with customers in those groups.

Evaluation Methods: There were a total of 836 respondents. Surveys took place in August 2013, and the average survey length was 15 minutes (this is 5 minutes shorter than it has been in the past). The survey was fielded by phone using wireless and landline random digit dialing, plus a targeted landline list, which was used to round out some of the quotas that are harder to reach. Respondents had to be a customer of at least one of our four utilities, and had to be responsible for paying bills or making decisions related to energy. Forty percent of responses were by wireless, because the most recent Centers for Disease Control report shows 38% of Oregon households are wireless-only. Respondents were weighted to accurately represent geography, respondent age, home type, and home ownership status (renter versus owner). An examination of respondent demographics confirms they represent the general public fairly well, although renters are somewhat overrepresented in the weighted data. Research Into Action did confirm that this did not affect some of the main outcomes of the study such as awareness and participation. The overall confidence and precision is 95% ± 3.3%

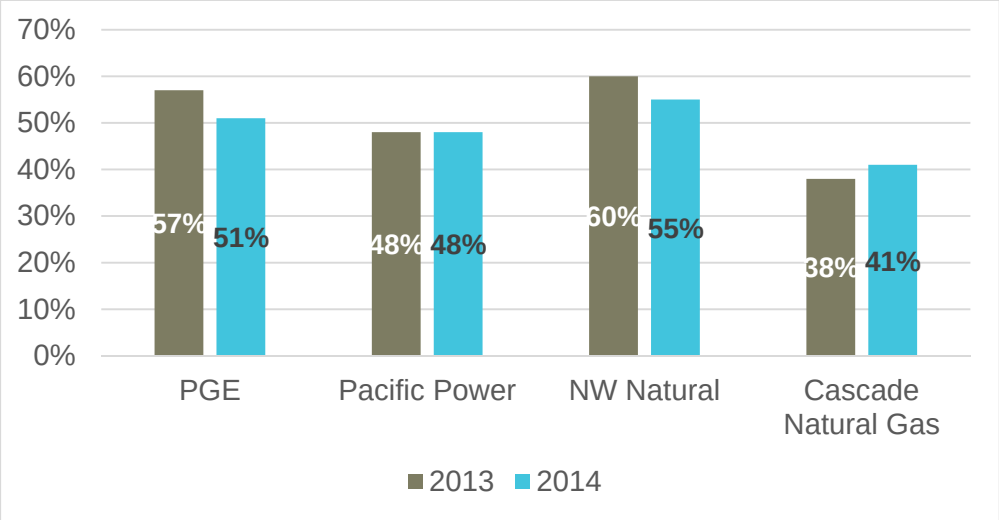
Findings: After several screener questions, the first question of the survey was, "Do you know of any organizations in your area that offer incentives to help you save energy or use renewable energy at home?" Without prompting, 58% of respondents could not think of any organizations. Utilities were most commonly named; 25% of Portland General Electric and Pacific Power customers named their electric utility, and 13% of NW Natural and Cascade Natural Gas customers named their gas utility. Energy Trust was named by 9% of respondents. Mark asked if there were any differences in responses to this question between renters and homeowners. Sarah responded that we did not look at that breakdown for this question, but we will look into it and follow up.

Awareness/Familiarity: The second question was, "For a given list of organizations, please indicate how familiar you are on a scale of 1 to 5, where 5 is very familiar." The list included Energy Trust, utilities, and Energy Star (which is more of a brand than an organization). In 2014, 49% of respondents reported some level of familiarity with Energy Trust (which we are calling "awareness" for our purposes). Last year, 51% of respondents said they were familiar with Energy Trust.

The chart below shows regional breakouts. We can see that historically, awareness was highest in Portland Metro, Southern Oregon and the Willamette Valley. This year, the gaps have closed a bit relative to last year. It used to be that awareness was 59% in Portland Metro versus 41% East of the Cascades (an 18 percentage point difference) and this year, there is only an 8 percentage point difference. Awareness came down in some areas and went up in others.



The chart below shows the breakdown by utility. We see that the gaps between utilities have also closed a bit; PGE and NW Natural used to have significantly higher awareness than Pacific Power and Cascade Natural Gas, but this is less the case this year, and we see a slight increase in awareness among Cascade Natural Gas customers.



Very few respondents reported being "very" familiar (4 or 5 out of 5) with Energy Trust, which is consistent with previous years. Respondents know the name, but not a lot of the particulars if not prompted. Prompted awareness of Energy Trust services and incentives was fairly good; two-thirds reported awareness of Energy Trust appliance incentives (which is one of the highest volume programs) while awareness of insulation and solar was lowest, at 48%. Twenty-six percent were aware of our offerings for businesses. This year, we asked respondents if they were employed, and if so, in what industry, and then whether or not they were a decision-maker at their company. Among those that said they were a decision-maker in their company, 41% said they were aware of our offerings.

44% of respondents said they felt favorably toward Energy Trust, which is less than last year (65%), but that was a slightly different scale (a four point scale).

Ken asked if the survey was fielded about the same time whole house retrofits and cost-effectiveness were covered in the news. Sue responded that this was during the same time period, and there may be some impact. However, Energy Trust's call center never received direct consumer calls; we don't think it penetrated that deeply for consumers. We expect to see impacts next spring as insulation measures go away, and this will depend on how contractors frame that in their conversations with customers. Ken asked how many said "unfavorable." Sarah responded that about a quarter each fell into "low favorability" and "moderate favorability," 44% fell into "high favorability" and 10% said "don't know." Ken said it would be helpful to find out why customers said "low favorability." Alan asked if people that said they used Energy Trust services had high favorability. Sarah responded that she will check into whether there was an open-ended question after this question on favorability and look into favorability by participation. [Update: There was no open-ended question, but this would be good to ask in the next survey.]

Energy Trust was rated as slightly less favorable than utilities, which is not surprising; respondents are likely much more familiar with utilities, and in general, the more people know about an organization, the more likely they are to be favorable toward it. Mark added that people express skepticism towards things they don't fully understand, which seems to be the theme here. Susan B. noted this suggests a lot of potential customers for us to reach, which is great.

Perceptions: Respondents were asked to rate a series of statements about how they perceived Energy Trust. The statements are fairly consistent with what was asked last year, but any differences will be highlighted. The most commonly agreed upon statement was, “Energy Trust is a credible information source about renewable energy” (65% in 2014 versus 59% in 2013). Last year, the statement included “energy efficiency and renewable energy.” We added a new statement, “Energy Trust helps reduce energy costs”; 61% agreed. Fifty-seven percent agreed that “Energy Trust is an organization you trust” and 50% agreed with the statement “Energy Trust makes energy efficiency more affordable.” Last year, the statement read “more affordable for you,” which was more specific than the statement used this year. Finally, 42% agreed with the statement “Energy Trust is the best source for information about energy-efficient products and services” (this statement included renewable energy last year).

Anne asked if we have evaluated the delivery of services by region, i.e. the number of people that participated in Energy Trust programs as a percent of the population. Phil responded that we have looked at how well we serve different regions; we found that more people participated in the tri-county region than outside of it, and part of that may have to do with which areas are gas-only, which ones have a non-participating electric utility, etc. Also, we know from past surveys that some people think they participated with us but they haven’t, and some don’t remember participating with us but they have, so it is difficult to estimate a regional participation number from the results of this survey. Sarah noted that we haven’t looked at services per capita in the past. Sue added that we do report on activity by region in the quarterly OPUC reports.

Communications and Marketing: We asked respondents who were aware of Energy Trust in the past 12 months, did you see any advertisements for Energy Trust, or hear about Energy Trust through various channels. Thirty percent said they had seen an ad (mostly TV). Twenty-two percent heard about Energy Trust through their utility (mostly bill inserts) and 19% said word of mouth. We also asked how respondents prefer to receive communications from Energy Trust. Most said postal mail (29%) or bill inserts (26%). The third most preferred option was e-mail (19%). We need to look more into whether this was popular among participants or non-participants; if more participants preferred e-mail, we have e-mail addresses for participants in our CRM system and can communicate with customers more through e-mail.

Participation: The reported participation rate is 19%, and was 21% last year. Alan asked if the 19% was of all respondents, or something else. Sarah responded that this was asked of only of people who are aware of Energy Trust; among those, reported participation was 39% and when averaged with unaware respondents (who did not participate), reported participation is 19%. In past studies, we collected addresses to try to compare actual participation with reported participation, but this was very tough. We know that a lot of people misstate or underestimate participation, or participated at a different address (which we don’t know) so there is a lot of error in the resulting number. Chris asked if we know the actual participation rate. Dan responded about a year and a half ago, we estimated it to be about 45% for residential. Phil noted that the “participant” is the house, so this measure is different from what we are getting here.

In previous years, reported participation was weighted toward the Portland Metro region, and this year, we did not see statistically significant differences between regions. Two-thirds said they made some type of home improvement, 62% said they received an Energy Saver Kit, and 45% said they received an in-home, phone-based, or online Home Energy review. Twenty percent reported their business received an incentive from Energy Trust. Eighty-three percent were satisfied with their experience participating with Energy Trust, which was the same as in 2013.

We grouped respondents by type: 49% were aware (19% were participants and 30% were aware non-participants). The remaining 51% of respondents were unaware. Participants tended to have higher levels of education and income, and were more likely to own a single-family dwelling.

Energy Saving Actions & Motivations: We asked about any actions respondents had taken to save energy in the previous 12 months. Two-thirds said they had, which was down slightly from 73% in 2013. Just over half (55%) of respondents reported having at least one LED bulb, up from 44% in 2013. Alan asked if the question was asked in a way so people know what we mean by LED lamp and if people could have been including CFLs in their estimate of number of LEDs. Sarah responded that we specified light bulbs, not Christmas lights or other small light bulbs in appliances, etc. In previous surveys we asked separately about CFLs, so respondents should have known not to include CFLs in their estimates of the number of LEDs in their home. Chris asked if we knew whether respondents were replacing CFLs with LEDs. Sarah responded that we don't know from this survey. We did ask how many LEDs they had. Most (21%) had 1-5, indicating that customers are experimenting with LEDs. Eight percent had 20 or more LEDs. We are definitely seeing an increase in LEDs. This is the only technology we ask about specifically in this survey. We used to ask more about what respondents had in their homes, but cut those questions out to keep the survey short. However, the number of LEDs has been something we have wanted to keep an eye on over the years.

We asked customers about the greatest motivators and barriers to take action; lower energy bills is the greatest motivator, and cost is the greatest barrier, followed by other priorities.

We asked respondents if they were currently undertaking or planning a home improvement in the near future. Forty-one percent of respondents said yes; this was higher for participants (56%), and lower for unaware respondents (35%). Only half of the upgrades were energy saving upgrades. We asked how respondents get information when planning a home improvement; most (44%) said online resources, 24% said family and friends, and 16% said home improvement stores.

Conclusions and Recommendations: Energy Trust's market presence remains steady year over year. Research Into Action recommends investigating ways to identify and engage unaware residents and, to gauge the success of marketing strategies, set a target for awareness and track consistently. For Energy Trust, the priority is on targeting eligible residents who can make improvements. We track the success of marketing efforts in a variety of ways, including testing responses to marketing campaigns, impressions, and uptake of e-mails and other offers. We could set a goal of increasing awareness by the next survey, but a target for awareness does not seem meaningful, as awareness does not guarantee particular level of savings.

Alan asked what does awareness of Energy Trust buy us. Susan B. commented that you have to touch a contact five times before you get to awareness, and then once you have awareness, you need to move that contact along the path of engagement. Also, we need to consider that even if there are people who are not eligible, they work, and their company may be eligible to work with us, and their being aware may lead to their company's engagement with Energy Trust. Sue commented that we don't do brand advertising; all of our advertising is some type of call to action. This survey allows us to understand awareness and favorability but advertising and customer engagement will always be focused on a direct path to savings.

Aware non-participants whose demographic characteristics resemble those of participants represent near-term potential for Energy Trust. Research Into Action recommends engaging aware non-participants who resemble participants. Again, Energy Trust will focus on eligible residents.

Research Into Action noted that different survey methods used over time make analysis of trends difficult, and recommend establishing key methodological requirements for vendors to follow every year. Energy Trust wants to be consistent in how we ask the key questions about awareness/familiarity and participation, but other questions have changed in response to our changing needs for the survey. This isn't solely a tracking survey; it serves communication and marketing needs so we want to be flexible to meet the needs of the Communications and Customer Service group. If we decide that something did not work in the past, we want to feel free to do it better the next year. Alan asked if there is a core group of questions that are consistent. Sarah responded that we strive to keep several core questions the same over time. However, last year, we changed the way we asked about awareness. We wanted something deeper than "are you aware, yes or no?" so we changed this question to ask about familiarity. We also changed the percentage of the sample that was wireless-only because the proportion of wireless-only households changed.

Sue added that the information on awareness about business offerings is new, and those numbers were very interesting. Chris asked how the question about business offerings was asked. Sarah responded that we first asked about various services for residential customers offered by Energy Trust, and then about services for businesses: "are you aware that Energy Trust offers cash incentives and expertise for energy efficiency upgrades in business and solar incentives for businesses?" We think this will be interesting to track in the next survey.

Energy Trust Take: Awareness/familiarity and reported participation are stable relative to 2013, and many other results are not significantly different from past years. Staff recommend not conducting the full survey more than every other year. We could do what we did this past winter – a short (5 question) survey about awareness/familiarity and a few other things.

Also, some methods have differed over the years because the needs for the survey have changed. Some standardization may be useful, but we want to maintain flexibility to ask the questions that get us the information we need out of the survey.

Chris asked if Energy Trust has looked at whether question responses are similar year over year, which may indicate they are good candidates for removal. Sarah responded that we review the questions each year to identify which questions provided good insight (or not) and which questions have had consistent responses, and make decisions about whether to remove or change questions based on that review. Chris asked if Energy Trust's call centers ask about how customers heard of Energy Trust. Sue responded that we have asked that question on paper forms, but it was hardly ever filled out. We do include the question on web forms, and are getting information through that channel. Call centers have it in scripts as optional, and we have a place to capture that information in CRM. Communications and customer service has relied on this survey to get a sense of how customers have heard about us. There has been some change over time, but bill inserts have been a consistently high performing communication channel for Energy Trust.

2. Commercial Strategic Energy Management Evaluation, Year 2

Presented by Dan Rubado

Background: Commercial SEM is strategic energy management for large commercial customers delivered by technical service providers. Two approaches have been offered: one is a cohort approach where a group of participants have trainings together, and the other approach is an individual approach, where technical service providers meet one on one with customers. Both approaches involve a series of workshops, meetings, and site visits intended to train participants of commercial organizations to manage energy and identify opportunities for energy savings. This involves creating an energy team, setting energy goals, creating an energy policy

and strategic plan, monitoring energy use and savings over time, and identifying opportunities to reduce energy use and taking action. Savings are claimed based on building-level energy analysis, and incentives are paid at $0.02/kWh and $0.20/therm. This excludes capital projects done during the same time period.

Evaluation Purpose: This is the second of two reports. The purpose of this evaluation is to document the evolution of commercial SEM as a program, compile lessons learned from program staff, get feedback from participants, assess how well SEM is working, review savings calculations used to quantify savings from the program and the models used to obtain savings estimates, and provide recommendations for improving the delivery of SEM and how savings are calculated.

Evaluation Methods: The evaluation involved reviewing documents, participant information, and SEM savings results. The evaluator conducted interviews with program staff and technical service providers, as well as participants (both current participants and past participants from the first year of the pilot). The evaluator also performed an engineering review of the monitoring, targeting, and reporting (MT&R) workbooks that are used to estimate energy savings, and that participants use to track energy use. The engineering review included customer reports the technical service providers give to customers at the end of the SEM engagement to understand how they did, and a review of savings calculation methods.

Savings: The table below shows 2013 SEM savings for participants in the cohort and corporate (individual) approaches. There were two cohort 1 participants that decided to continue participating in SEM and do a second year of SEM. And then there are five participants in cohort 2 that completed their first year of SEM. There is one participant doing the individual (corporate) SEM approach, and that participant is in their second year. Alan asked if the participant doing the corporate approach represents one company or one site. Dan responded that it is one company with multiple sites. Ken asked if the savings are cumulative or represent first year savings. Dan responded that these are first year savings. The program projects savings for the year following the SEM engagement, and this is the same amount every year for three years (SEM currently has a three-year measure life, and we will be doing some work to see if that is the right number).

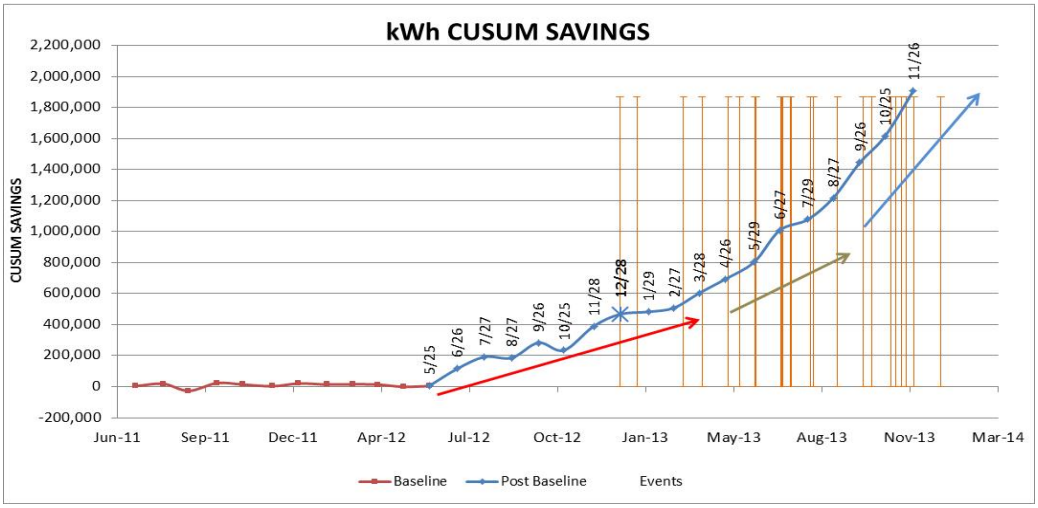
SEM Approach	Participant	2013 savings from SEM	
		kWh	Therms
Cohort	**Cohort 1 - Year 2**		
	Cohort-1P4	1,008,619	30,202
	Cohort-1P5	122,774	49,372
	Cohort 2		
	Cohort-2P1	451,339	41,448
	Cohort-2P2	2,353,778	39,507
	Cohort-2P3	2,006,535	10,511
	Cohort-2P4	216,446	82,051
	Cohort-2P5	1,062,651	13,007
	Cohort Total	**7,222,142**	**266,098**
Corporate	**Year 2**		
	Corporate-2P1	144,386	51,929

Overall Satisfaction and Workshops: All participants were highly satisfied overall, and the technical service providers were highly rated. The workshops were all rated highly across the board. Participants thought the workshops presented useful information, and contained the right amount of material. Participants reported that sharing experiences between organizations was most valuable, which is something we have heard time and time again with SEM.

Organizational Change: One of the goals of SEM is to create organizational change, and embed thinking about energy in a different way into corporate culture. There are a few metrics of organizational change, including creating an energy team that meets regularly and has an executive sponsor, an energy champion, and other staff to identify opportunities and think about energy. Success of energy teams was mixed; some organizations still had an energy team functioning after the fact, while others were down to an energy champion or executive sponsor, were meeting less regularly, or were not meeting but communicating via e-mail. Organizational assessments were used to determine how many SEM practices stayed embedded in organizations. These assessments were well-received, but were “too generic” for some – not specific enough to their company or industry. Energy management plans were viewed as an important step by participants, but many of them were slow to complete and adopt them; only a few implemented a strategic plan for energy and had it on the books, although everyone said it was on their radar and were working on it, but they hadn’t completed it.

Building Operation Assessments: Attendance varied widely for on-site audits. These assessments were rated very highly across the board. People found value in this activity; it served as a foundation for where people figure out SEM and how to identify energy saving opportunities. It also gave participants a good start on changes to save energy and how do it themselves (the changes were mostly operational changes focused on schedule adjustments, lighting and HVAC).

Savings Reports: Reports were given to Energy Trust by the technical service providers. These reports were prepared at end of the SEM engagement, and listed out of all of the technical methods and results from analyses that the technical service providers did on each building each organization had enrolled in SEM. The evaluator found the reports to be confusing with no clear purpose, and noted that non-technical people might more difficulty understanding contents. Technical information was presented without context or explanation, and no rationale was provided for the selection of the baseline period or analysis approach. Also, there was some variation in how things were done that was not described in those reports. The reports were overly standardized; when there was a different approach, the template didn’t accommodate that well. Alan asked how this is being addressed. Dan noted that the program is looking at revising the template, including what information is included and what documentation is needed. Kathleen clarified that the reports are not currently provided to participants, although the program wants to make them available to participants moving forward. The evaluator also noted that the CUSUM charts (see below for example) were atypical in that savings is not the area under the curve, it is the difference between the red and blue arrows.



Use of MT&R Tools: Each participant is given an Excel workbook to track energy use and savings over time (MT&R workbook). After the end of the SEM engagement, only two participants were still using the tool, although all participants reported tracking energy use in some way. Many of them were using other tools (such as EnergyExpert or Portfolio Manager) before the SEM engagement. They felt these tools worked better for them, and kept using them. The goal is for participants to use whatever tool they want; the main point is they are still tracking their energy, and display a strong preference for automated online tools versus Excel workbooks that require manual entry of usage and weather data. Chris asked if there were other online tools besides EnergyExpert and Portfolio Manager. Kathleen responded that there are a variety of tools our customers are looking at; they are trying to figure out which one works best for them. It's really tricky to find a tool that serves everyone, and can work for everything they need it for.

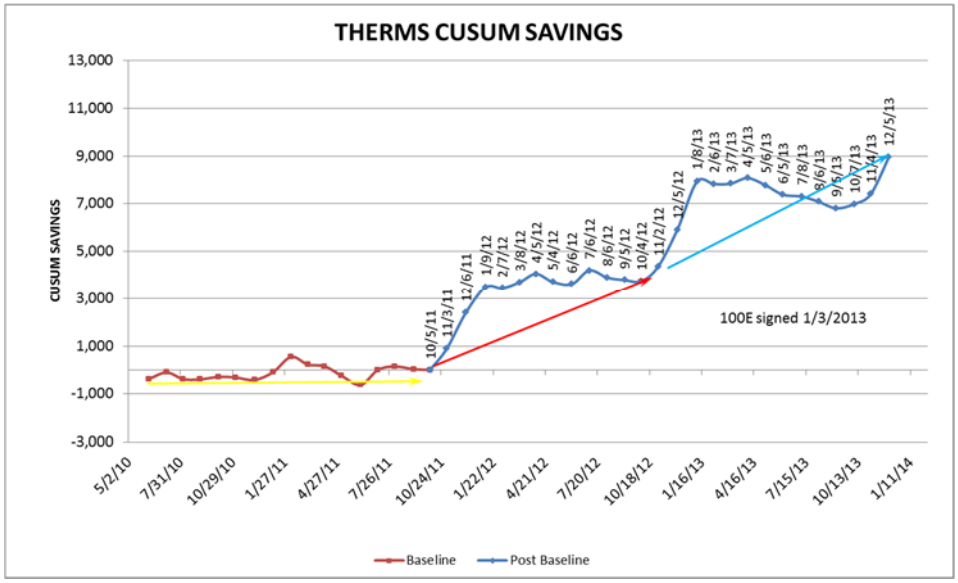
SEM Persistence: Participants varied in their upkeep of SEM practices. Some organizations still had energy teams that met regularly. Others disbanded a bit, although most continued to track energy and reported putting more focus on energy in their organization, which seemed to be a lasting legacy, even if energy teams and SEM plans were not formally maintained.

Capital Projects: Savings for capital projects are subtracted from SEM savings. Most participants are continuously upgrading their facilities and equipment, and increasing the number of capital projects they do after participating in SEM. A number of participants initiated large efficiency projects that were identified during SEM participation. Alan asked if those savings are attributable to SEM even though they are subtracted. Dan responded that SEM provides leads for new projects that are not quantified in SEM savings.

Incentives: Participants receive a significant incentive in the form of the free technical services provided to them for a year through the SEM engagement. In addition to those technical services, Energy Trust also provides participants modest incentives for SEM savings. Participants were mostly satisfied with these incentives, but reported they were not a driving factor for doing SEM. The incentives helped validate their efforts with management.

Savings Methodology: Regression analysis using weather variables is used to establish an energy baseline for each building. Savings are calculated as the difference in actual usage observed and predicted usage from the model, subtracting out any savings from capital projects. The cumulative sum (CUMSUM) of savings is computed over time, and the last few months of SEM savings is extrapolated out to determine annual savings. By design, there is no explicit linkage between actions and savings. This is building level analysis, and assumes that nebulous and difficult to quantify things are done through SEM, and savings are observed.

Review of Savings: The evaluator found that the CUSUM graphs are confusing and do not display savings over time. The use of a "pre" period in addition to a baseline period ending long before participation in SEM is atypical. Baseline periods were not selected consistently, and linear extrapolation of savings may be inaccurate; modeling savings based on typical weather or expected operations would be better.



As shown in the chart above, with gas use, CUSUM savings fluctuate. In the summer, savings are zero. A straight line projection is very dependent on the time of year and months used to do the projection, as well as the months that are being extrapolated. Where savings are variable over time, a different method should be used to annualize the savings looking out into the future

The program has been zeroing out buildings with negative savings, however, negative savings are a reflection of variation in modeling, and removing them introduces bias into the overall estimate. Phil noted this should not be called negative savings – it should be called change in consumption over the baseline. Susan B. asked if we go to using a typical metrological year, what effect would that have on savings. Dan responded that it would make the savings estimates more generalizable and comparable year over year. Phil said that we are currently comparing the post-baseline usage directly to the baseline. If the baseline year is cooler or hotter than the post-baseline year, then it isn't a good benchmark and we're not comparing apples to apples. We need to account for the average annual heating degree-days (HDD) and cooling degree-days (CDD) in both the baseline and post-engagement years so they can be compared. Ken commented that if you subtract out expected savings from capital improvements and overestimate those, you subtract out more, and could see consumption that is higher than expected. Dan responded that we hope to find out more about that interaction when we do impact evaluation on those measures.

When the percent savings are small, and if few measures are done, there is a lot of variability when a regression approach is used. The evaluator notes that engineering analysis may be more appropriate in situations like these. We don't want to use different methods, but there may be cases where it would be helpful and appropriate. For example, if a large building had only a few measures implemented, and regression analysis was questionable, then an engineering analysis could be used to investigate savings. Also, there is a lack of information about the actions taken, which makes it difficult to assess if savings make sense. For example, actions might involve an employee engagement campaign encouraging workers to turn off lights

(difficult to assess savings) or changing an HVAC system schedule (which is relatively easy to quantify if certain parameters are known). Right now this information is not being recorded.

Conclusions and Recommendations: Commercial SEM is a viable program. It enables the program to achieve savings in the short-term and build a pipeline of engaged customers doing capital projects.

Establishing SEM practices takes time, and customers value ongoing assistance from technical service providers. The evaluator recommends structuring SEM as a multi-year commitment – an intensive first year followed by regular meetings and review of practices.

The exchange of ideas and experiences between organizations was highly valued; time should be devoted for this during each workshop.

Most participants were suited to SEM. Multi-site customers are preferable, as there are more opportunities for diffusion out to more sites. The program should avoid recruiting customers with extensive capital projects or ongoing energy service contracts. The evaluator had some concerns about the non-standard CUSUM approach and confusing presentation of analysis results; they recommend using a standard CUSUM approach where the baseline period immediately precedes SEM participation.

The evaluator found savings reports difficult to interpret, and recommended that technical service providers give an explanation of information presented in tables and graphs and a description of actions taken and how actions resulted in energy savings. The evaluator noted that annual savings projections were made using too little data, and recommended modeling annual savings on expected operation or typical weather.

The evaluator also noted that setting negative savings to zero may bias the overall results, although the impact on claimed savings was insignificant in cases where this happened. They recommended examining reasons for increases in usage and factoring that into the analysis. Ken commented that looking at instances of negative savings but not looking at instances where savings were more than expected and factoring that into the analysis is selective. You need to understand the reasons for both over- and under-achievement of estimated savings, and adjust or don't adjust. It's important to know why you got what you got, and changing the answer because of it is questionable.

The evaluator found that in cases where the percent savings is small, savings analysis is more susceptible to error. Variance logs should document all operational changes so they can be tied to changes in usage to understand reasons for less or more savings, etc.

The evaluator found that use of MT&R tools slips over time, and recommends emphasizing the importance of monitoring and responding to energy use and providing alternative tools to track energy, which many participants are doing on their own.

Finally, SEM plans take time to create and implement. The program should do ongoing consultation on the energy plan during participants' second year of participation and the program could consider offering a milestone incentive when participants formally adopt a plan.

Energy Trust Take: SEM continues to be a success and is popular among participants. The program will be reviewing and refining its procedures for savings analysis. A continuous SEM offering is being developed, and will be multi-year in scope. Reporting templates will be revised based on the recommendations from this evaluation. Also, the program will undergo two large changes. The first is developing and implementing a new structure for SEM, with Program Delivery Contractors (PDCs) in lieu of technical service providers. The PDCs will be the same

companies currently serving as technical service providers, but they will be working in a different capacity, assuming responsibility for recruiting customers and achieving annual savings goals. The second is a revised SEM curriculum, which is in the process of being developed. Moving forward, SEM will be evaluated like other programs.

Alan asked about our plans moving forward for tools. Kathleen responded this is tricky. We don't want to make a particular tool a requirement because these tools can have significant costs (usually per meter costs, and many large customers have 50-100 meters). Ken asked about cost-effectiveness. Kathleen responded costs fell under $0.03 levelized, so the benefit-cost ratio is well over one. Chris asked who provided feedback on the report templates. Dan responded that Phil Willems and Michaels Energy reviewed them and provided feedback. Chris asked about the vetting process for new templates. Phil responded that the templates will likely be reviewed by the firm developing the curriculum, as well as implementers, the program, and evaluators. The templates should serve some purpose for customers (who should be the primary audience), implementers, and evaluators.

3. Trade Ally Network Evaluation

Presented by Sarah Castor

Background: TRC Energy Services is the evaluator for the Trade Ally Network Evaluation. This evaluation started in late 2013 in response to changes to Energy Trust's trade ally network that have been considered over last several years. Also, there are many new ideas for ways to engage and provide services to trade allies, but we don't have the budget to do everything that we want to do, and need to prioritize.

Evaluation Objective: This evaluation has a big objective: to identify opportunities for Energy Trust to minimize administrative burden and resources required to administer the network while maintaining or increasing energy savings, project volume, and customer and trade ally satisfaction. It's important to use resources wisely but meet goals.

Evaluation Tasks: Evaluation tasks included staff interviews with Energy Trust and PMC trade ally staff; review of program and Communications and Customer Service (CCS) documentation, and past trade ally survey reports; trade ally and project data, which we intended to link together to look at activity and savings by trade ally, and that proved to be extremely difficult for a variety of reasons; and interviews with a couple dozen staff members from administrators of trade ally networks at other utilities.

Topics Covered: The report has all of the detailed findings. This presentation will stick to high-level findings and conclusions and recommendations. Today the presentation will cover requirements for participating in the network, self-installs for Existing Homes, support offered to trade allies, rating system, referring customers to trade allies, quality control procedures, and opportunities for increasing the diversity of trade allies.

Overall Findings and Recommendations: No major changes are needed to the administration of the trade ally network. There are some modest changes that could benefit us, but we are not doing anything that seems inconsistent with practices of other utilities or that there are no good reasons for doing. Mark asked if this was corroborated by results from the trade ally survey, which seem to indicate high levels of satisfaction. Sarah responded yes, and noted that we made a conscious decision not to interview trade allies for this project, as it would have required extensive effort, and we felt we had sufficient information from those surveys.

Different Energy Trust programs can have different requirements and policies for their network; each program has different needs and it is more important to meet those needs than make the requirements the same across programs.

Our ability to track activity by trade ally versus non-trade allies is limited by our current data systems, but will hopefully improve with ISI Phase 2. This presented challenges for the data analysis section of the report, and for this reason, that analysis was not included in this presentation.

Program managers were generally satisfied with the size of the network. Over time there have been questions about whether the network should increase or be more restrictive, but in general the size of the network seems to be working for the staff administering it.

Many registered trade allies are not actively participating and a large percentage of savings and measures are contributed by non-registered trade allies. In general, there was no strong evidence that non-active trade allies or the participation by non-trade ally contractors was a significant problem.

Finally, in general, the evaluation recommended that Energy Trust not restrict incentives to trade allies only, beyond the current programs and tracks using that approach, or future tracks that would benefit from this approach.

Network Requirements: Staff reported that the current procedures are resource-intensive in relation to checking documents, which involves Construction Contractors Board licenses, insurance, and participation in trainings/certifications, both when a trade ally joins and then regularly to renew or maintain status. TRC found that other networks do not require as much documentation upfront or do not verify renewals. They suggested changing requirements to require less information upfront or on a regular basis. Energy Trust Communications and Customer Service group and Legal staff are discussing options to modify requirements. Susan B. responded that the current insurance requirements are nominal, and changing them could create a liability for Energy Trust. Alan commented that trade allies are effectively “approved” by Energy Trust; in other networks, it sounds like they are not representing the contractors that way, which is a different approach. Alan noted that the board will want to consider changes to the insurance requirement. Chris asked about which other networks were interviewed. Sarah responded that the appendix lists the companies that were interviewed. Marshall noted that in rural parts of the service territory, contractors have indicated that it is burdensome to transfer to a new type of insurance. Susan B. indicated that this is not a big burden and the increased premium amount is minimal. Steve noted that this process is a burden to enforce and verify for staff. Ken asked if we can spot check a random sample of insurance every year. This is something staff are still discussing.

Self-Installations for Existing Homes: Program staff report self-installs require more resources because 100% are QC’ed and there are more errors in paperwork and installation practices. The QC pass rate for self-installs was 56% in 2013 and looks to be about 58% in 2014. Only 4% of weatherization and equipment savings are from self-installs; this is 130 measures in 2013, and 210 so far in 2013. This represents 0.2% of total Existing Homes program savings in 2013 and less than 0.5% in 2014. TRC suggested the program consider eliminating the self-install option; the program is considering what to do. There is concern about perceptions associated with eliminating the self-install option, and that the elimination of this measure would result in customer complaints. Alan and Susan B. commented that this is such a small volume of projects it does not seem to be a savings risk; Susan B. noted that the perception risk is valid and should be part of the consideration. Alan asked if we could have the customer pay for QC visits; it’s unclear whether the cost of QC is less than the incentive. Alan noted that if there is no verification, we would risk scamming by people wanting to get money for free.

Network Support: Roundtables, INSIDER newsletter, and co-op marketing funds are used by some programs more than others. For example, commercial programs tend to not rely on roundtables and do their own outreach events and activities. The Communications and Customer Service group plans to do fewer roundtables next year (2 instead of 4) and is making improvements to INSIDER. They are also considering converting co-op marketing bunds into business development funds for more programs. These funds can be used for trainings, scholarships, conferences, and other activities meant to develop businesses. Alan asked if non-active trade allies are still eligible for the funds, or if active trade allies are eligible for a higher amount of funding. Sue responded that there is a strong correlation in the use of funds and level of activity of a trade ally. Trade allies have to invest in marketing in addition to what Energy Trust provides – we are helping to support their marketing strategies and other business development activities.

Star Rating System: This is a system that segments Existing Homes trade allies based on activity level, project quality, and customer complaints. No other utility networks interviewed offer a similar rating; a few classify contractors by activity level only, but this leaves out other important factors. The recommendation related to the star rating system is to focus resources on higher tier trade allies. Energy Trust is considering extending the rating system to other programs. The rating system started as a customer facing tool to help customers choose a trade ally, but has also been used internally for qualifying contractors for special offerings and pilots, and helping staff decide where to focus resources. Brooke noted that there is no recommendation about deactivating inactive trade allies, but programs are going through and removing or reengaging inactive trade allies, and are getting more targeted in our engagement with contractors. The Communications and Customer Service group will explore whether it is a good idea to develop some type of rating system for other programs on an as-needed basis.

Referrals: Only one other network interviewed has a direct referral system, and others rely on the web listing as their “referrals.” TRC recommends making referrals a benefit for most active trade allies. Currently, Existing Homes provides customers with a list of three trade allies based on location and star rating. Other programs do this on an ad hoc basis. The Solar program has also rolled out a tool called Mapdwell, and there is an option where customers can send information directly to a trade ally, and the trade allies can send them a bid; this is something that may be built on in the future. CRM capabilities are limited currently for referral management; this is a longer term strategy to develop this functionality. Alan commented that if we refer folks to trade allies, we want to make sure they are reliable. That may be the reason why referrals for other networks are very limited.

Engaging Trade Allies: Some of these tactics are done already at Energy Trust, some are emphasized by other networks as important. A recommendation is to emphasize compelling benefits to trade allies, such as the ability to participate in special promotions and access to a higher level of promotions. Another recommendation is continuing to offer sales and marketing trainings with different programs on as-needed basis; programs have found these to be popular with trade allies, and other networks reported this as an important service that they offered as well. Adopting a closed network for certain measures or tracks where a high level of engagement is desired was also recommended.

TRC also recommended providing a single a single point of contact for trade allies when possible. Energy Trust program managers would find this difficult to deploy for Existing Homes (with over 500 trade allies), but this approach could work for smaller networks. Existing Buildings uses a similar approach with Business Development managers for different sectors. TRC also recommended promotional incentives to recruit new trade allies and institute an annual recognition program. Existing Homes staff has done this in the past, and there is some

interest in renewing that was a way to engage. Brooke noted that the lighting program has a recognition event annually, which is extremely successful.

Quality Control (QC) and Complaint Procedures: The evaluation found that Energy Trust has documented processes for how customer complaints are resolved, beyond other networks, and we have quality control procedures in place for all programs that are consistent with other networks. However, the QC documentation is not always consistent or easy for trade allies to access. The Communications and Customer Service group will be collecting this information to make sure it is consistently available on the trade ally webpages.

Diversity: TRC asked other utilities managing trade ally networks about any efforts to recruit diverse trade allies, in terms of geographic diversity and minority- or women-owned, or emerging small businesses (MWESB is a certification some businesses elect to acquire). Some of the other networks make an effort to recruit trade allies in rural areas, but none reported recruitment of minority- or women-owned businesses. All Energy Trust programs mentioned striving for rural representation. Both the Existing Buildings and New Buildings programs reported efforts to recruit trade allies from diverse backgrounds. The Energy Trust 2015-2019 strategic plan identifies expanded participation as a goal. While this evaluation did not have a recommendation in this area, it will be a focus moving forward.

Energy Trust Take: Other networks approach management or development of contractor networks differently as a result of their needs or circumstances. The evaluation found that Energy Trust is operating its network in a manner that aligns with its priorities and program goals. There are possibly some changes in network requirements and offerings that may relieve some administrative tracking by staff. There is room to improve the quality of our data for trade allies by project and tracking program activity, which relies on changes to our tracking systems and reports.

Alan noted that in the report, it looked like non trade allies actually contributed more measures, although trade allies had larger projects. Brooke commented that when a company becomes a trade ally, they receive information on program changes, and training on filling out forms correctly. The same is not true for non-trade allies. We are trying to get our arms around how to communicate with non-trade allies for whom we still process applications, and who can cause operational inefficiencies because they aren't trained on forms, and do not receive updates through newsletters or other forums. Do we reduce barriers to get more non-trade allies to become trade allies? Do we open up communication lines more?

4. Short Take: Memory Care Evaluation

Presented by Dan Rubado

Background: The Multifamily program has been working on a Memory Care Lighting Pilot for some time, and got it off the ground in 2012. The program spent about a year recruiting facilities for the Pilot. The goal of the Pilot was to encourage assisted living facilities to make efficient lighting upgrades to meet new state requirements for memory care. A number of issues came up during the Pilot, including lack of enforcement of regulations and very few facilities doing upgrades.

Evergreen developed lighting templates, which specified lighting fixtures needed to meet the lighting requirement for memory care. These templates were used by the facilities and contractors hired by the program to provide bids to customers. The program offered facilities technical assistance, financial incentives, and lighting templates. Three facilities received bids based on the templates, and none moved forward. Two more facilities signed on, and one turned out to not be in Energy Trust's service territory. This facility did move ahead using the

template, while the other facility did not. As part of this evaluation, the evaluator spoke to the facility that used the template.

The major goals of the Pilot were not just to help improve efficiency and lighting quality in long term care facilities, but to test if lighting templates could be an effective method of doing lighting projects. The templates specified lighting levels, fixtures, and placement of fixtures in different space types, and were used by contractors to scope proposed projects.

The templates did minimize renovation planning and increased confidence that facilities would meet regulations, but facilities have little incentive to use these templates without enforcement or if they are not upgrading to memory care because they were grandfathered in. Facilities have an incentive to upgrade because they can get reimbursed at a higher rate from Medicare when they have memory care status. The one facility that completed a project found it easy to use, and did it primarily to comply with the regulation. Alan commented that it sounds like the concept was sound, but the targeting was not good. Dan responded that were just were not enough of the facilities that were motivated to make upgrades.

Barriers: Communication with customers was inconsistent, and resulted in confusion about the incentive offer. Also, the incentive offer was not fully finalized when the Pilot went to market. Facilities expressed concern with project costs and incentives that were lower than what they expected. More expensive fixtures were specified in the lighting template, which contributed to high project costs, and the templates did not easily allow for fixtures to be swapped out. Finally, facilities had limited motivation do to upgrades in general.

Energy Trust Take: This Pilot was conducted in advance of the market's readiness. The program has cancelled the offer in light of the result of the Pilot. Facilities are still eligible for Energy Trust's standard lighting incentives for upgrades. The lighting template was found to be useful, but it did not overcome market barriers. The template was turned over to the state office that oversees long term care facilities so that it can provide the template as a resource to these facilities.

The program is taking lessons learned from this evaluation and working on a new strategy for how to address long term care facilities. There are a lot of these facilities, and they don't have the most efficient equipment, so there is an opportunity to work with them. Ken commented that the template concept can help the program and contractors explain how easy it can be to be efficient and bring facilities up to newer standards. The idea is these facilities need a lot of light, and we want to make it efficient.

5. Short Take: Customer Engagement Pilot Evaluation

Presented by Erika Kociolek

This topic will be covered at the next committee meeting.

Wrap-Up & Next Steps

There are a number of upcoming evaluations to be discussed at future committee meetings. In the next week, Erika will send out a Doodle poll in with potential dates and times in mid-December.

Energy Trust of Oregon
Nest Thermostat Heat Pump Control
Pilot Evaluation

Prepared for Energy Trust of Oregon

Prepared by Apex Analytics LLC

10/10/2014

MEMO

Date: October 22, 2014
To: Board of Directors
From: Marshall Johnson, Residential Sector Manager, Existing Homes Program
Dan Rubado, Evaluation Project Manager
Subject: Staff Response to the Nest Thermostat Heat Pump Control Pilot Evaluation

The evaluation of the Nest thermostat heat pump control pilot showed that the Nest is a viable technology that received high marks from participants and achieved significant energy savings in homes heated with electric air source heat pumps. The realized electric savings are in line with engineering estimates for other advanced heat pump controls. Unlike other advanced heat pump controls, though, installation and setup of the Nest is much simpler and potentially less expensive. Although the pilot tested the Nest under ideal installation conditions by using a direct-install model, we believe that contractors, and in some cases homeowners, could be just as successful when paired with a simple, electronic verification process and customer support. There were some technical problems encountered early in the pilot, but these were quickly identified and resolved. In the end, the vast majority of pilot participants were happy with the Nest thermostat.

With the success of the pilot, the Existing Homes program is now planning to accelerate the deployment of the Nest and similar advanced thermostats in homes with heat pumps. The program currently offers an incentive for contractors to install advanced controls on existing heat pumps, which the Nest qualifies for, but this measure has not seen a lot of uptake. The program is working with PGE's contractor network to explore a variety of options to boost uptake of advanced thermostats with heat pumps. For instance, there is currently an incentive for contractors to install advanced controls with new, program qualifying heat pumps (≥0.9 HSPF) and there may be an opportunity to integrate advanced thermostats into this measure. A big expansion is coming in the form of a new incentive for contractor installed advanced controls with new, non-program qualifying heat pumps (<9.0 HSPF). This measure could provide substantial electric savings for less efficient new systems and could reach a large number of customers that might not otherwise be touched by the program.

An incentive for self-installed advanced thermostats for existing heat pump systems will be rolled out by the program beginning in 2015. Although self-install has a much lower cost, it may not always be successful, so some type of verification will be required along with follow up and technical support from the program or trade ally contractors. This type of incentive has the added benefit of potentially reaching a larger audience than contractor installs. Direct install by

the program has also been discussed as a potential option to be deployed in strategic market niches.

Regardless of the delivery method, any future incentives for advanced thermostats should require customers to pay a portion of the cost, which will help limit participation to those who really want one and are willing to learn how to use it. This could potentially increase the average energy savings and customer satisfaction above what was observed in the pilot. Higher savings may also be realized by targeting electric customers that are more tech savvy and who have more opportunity for savings, including those with higher annual usage, lower incomes, or that live in manufactured homes.

At the time of the pilot, the Nest was the only advanced thermostat that had the ability to adaptively lockout a heat pump's backup electric resistance heat based on weather conditions. However, with the rapid development of products in the advanced thermostat market, this is likely to change. The program should create a measure specification for advanced thermostats in heat pump applications and develop a process for vetting new products that have similar capabilities to the Nest and may provide comparable electric savings. Once there are clear criteria for products to qualify for the incentives, the measure can be expanded as new products become available.

The success of the Nest in heat pump homes got Energy Trust interested in whether advanced thermostats could produce energy savings in homes heated with gas furnaces. The opportunity for savings is lower with gas furnaces because they do not have a control challenge comparable to a heat pump's use of backup heat. However, there may still be some opportunity for savings in gas heated homes by setting back the temperature more frequently using strategies like automated schedule optimization, occupancy sensing, remote control, and feedback on energy use. A new pilot was launched in October 2014 to test 400 advanced thermostats in gas heated homes and determine the resulting gas savings and customer reactions. The Nest and Honeywell Lyric thermostats were selected for the pilot.

Executive Summary

This report details the results of the implementation and evaluation of Energy Trust of Oregon's Nest Thermostat Heat Pump Control Pilot. The pilot ran from the fall of 2013 through the spring of 2014, covering one entire heating season. A total of 185 Nest thermostats were installed, free-of-charge, in participating air-source heat pump-heated homes. The primary goals of the evaluation were to determine if installing the Nest thermostat is a viable strategy for properly controlling central electric heat pump operation in residential settings, and how much electricity it saves during the heating season. In addition, the evaluation effort is being used to help determine how customers interact with the Nest thermostat, their level of satisfaction with the device, and its control of the comfort of their homes.

There were three primary components associated with this evaluation effort: staff interviews, participant surveys, and a billing analysis. Staff interviews were conducted with the goal of collecting insight and feedback from those staff members most familiar with the pilot and to supplement the program summary report compiled by the program implementation contractor, CLEAResult. Interviews were held with four members of CLEAResult, and one was held with a member of the Energy Trust team. There were two separate participant surveys administered to the entire population of Nest participants, one in January of 2014 (midpoint of the heating season), with a very high response rate (110 total completes, or 62%), and one at the end of the heating season for those who had completed the first survey (a 79% response rate). Participant surveys were conducted to understand participant usage, perceptions, satisfaction and reactions to the Nest device, as well as changes in these metrics over time as participants became more familiar with the devices . Finally, a billing analysis was performed to estimate the impacts of the Nest device on electric usage. The analysis was performed by Energy Trust evaluation staff and reviewed by Apex Analytics.

The key findings associated with this report include the following:

- The preliminary, weather-normalized, annual electric savings attributable to the Nest thermostat were 781 kWh per year or 4.7% of total electric usage and 12% of heating load. Compared to the predicted savings of 836 kWh per year, the realization rate was 93%. Further sub-group analysis showed some interesting trends (some of these findings were based on relatively low sample sizes and lacked statistical significance):
  - Portland Metro area homes, which tended to have more and younger occupants, realized the highest savings.
  - Manufactured homes, which tended to be smaller, have lower household income, and use less energy, appeared to have very high savings, nearly double the overall average.
  - Homes where the Nest thermostat replaced a programmable thermostat appeared to save more energy than homes where it replaced a non-programmable thermostat, providing a directional indicator that Nest's scheduling features may boost savings.
  - The lowest income category, which tended to have more manufactured homes and less education, had the largest percent savings of any subgroup that the team analyzed. This

income category also had very large and significant differences in savings from the other two income categories.
  - The highest usage category, with the most opportunity for reduction, achieved the largest absolute electric savings, nearly double the overall average and statistically significant.
- There were successes and failures during the recruitment and installation phases of the pilot.
  - Site visits were conducted at 222 homes, resulting in 185 thermostat installations. Thirty-seven homes were disqualified on site due to various technical issues. Eleven of the 185 thermostats installed were removed at some point during the pilot period due to technical issues, and another 22 required a second visit to get them functioning properly.
  - The goal was to have 200 homes participate in the pilot; ultimately 174 homes had the Nest installed for the duration of the pilot study. Given that there were 1,589 participants selected as the treatment group population to recruit from, this translates to an achieved installation rate of 11%.
- Participants were very satisfied with the pilot study and the Nest device.
  - The satisfaction ratings with the installation process were overwhelmingly positive: over 90% of respondents indicated a satisfaction rating of either a 4 or 5 (out of 5).
  - Satisfaction with Nest thermostats was relatively high, as 79% of respondents in the first survey and 89% in the second provided satisfaction ratings of either 4 or 5 out of 5. Only 4% (three respondent's total) provided a rating score of 2 or below in the second survey compared to 9% (nine respondents total) in the first survey. Participants also felt increased comfort in their homes.
  - Over 60% of survey respondents in both the first-round survey (61%) and second-round survey (66%) described the temperature of their home to be either "somewhat more comfortable" or "much more comfortable" after installing the Nest thermostat. The percentage of survey respondents who felt the temperature was either "much less comfortable" or "somewhat less comfortable" decreased from 17% to 6% between the first and second surveys, suggesting that 1) the Nest thermostat participants learned how to better utilize the Nest thermostat features and functionality or 2) technical issues encountered during first survey had been resolved by the second survey.
- The most cited reason for participation in the Nest thermostat study was to lower energy bills, with 88% of respondents listing it among their top three reasons for participating. The next most frequent response provided was to save energy (49%), followed by increasing the comfort of the home (45%).
- The non-energy benefits of the Nest were perceived to be very large, as 34% of all respondents believed the Nest thermostat was worth the full retail price, even if no energy savings were realized. While the sample size is relatively small (at only 51 survey respondents who answered this question), the results do suggest that many study participants place a good deal of value in the Nest thermostat's features, including remote access and automation.

- The vast majority, comprising 92% of all second survey respondents, found operating the Nest thermostat to be either “somewhat easy” or “very easy.” Only 7% of second survey respondents found operating the Nest thermostat to be “somewhat difficult.”
- The favorite aspect of the Nest thermostat was the energy savings (45% of all second survey respondents); the ability to control remotely (27%) and Nest’s auto-learning feature (20%) were also popular aspects of the Nest thermostat.
- Some of the Nest thermostat features and functionality were used by most of the participants, though some features were used more frequently.
  - The Nest Leaf (94%), AutoSchedule (92%), Energy History (88%), and Early On (83%) features were frequently used by the study participants.
  - More than half of participants, in both the first- and second-round surveys, reported adjusting their thermostat with a smart phone or online, as well as using the filter reminder feature.
- In terms of the perceived usefulness of the various features, the AutoSchedule feature was perceived to be the most useful, with 81% of survey respondents in the first survey and 87% in the second survey reporting that the feature was either “somewhat useful” or “very useful.” The Nest Leaf was the next most cited feature (81% first survey, 84% second survey), followed by the Energy History feature (74% first survey, 83% second survey).
- When the Nest thermostat was installed, the Heat Pump Balance function was preset to “Max Savings.” Only a small minority of respondents (8% first survey, 13% second survey) reported changing this setting. Changing this setting has a negative impact on energy savings, as Nest Labs confirmed that backup heat runs approximately twice as much when the setting is not “Max Savings”. Furthermore, Nest labs also confirmed that 14% of users switched off the Max Savings setting, which is in line with the 13% of the second survey sample.
- The AutoAway function, which minimizes heating when no one is home, was preset to “On” when the unit was installed. In both the first and second surveys, a minority of respondents, 19% and 20%, respectively, indicated changing this setting.

Tab 5

Notes on October 2014 Financial Statements

November 19, 2014

Revenue

October revenues came in very close to budget, so our YTD status remains virtually the same.

Oct-14	YTD Actual	YTD Budget	YTD Var	YTD %
PGE	73,657,368	70,492,047	3,165,321	4%
PAC	45,125,599	42,799,988	2,325,611	5%
NWN	19,999,540	20,910,991	(911,451)	-4%
CNG	2,201,176	1,416,145	785,031	55%
Investment Income	173,876	58,500	115,376	197%
Total	141,157,559	135,677,671	5,479,888	4%

Reserves

Total Reserves at the end of October are shown below. There was a drop in overall reserves from September of almost $600,000 (less than 1%).

Reserves

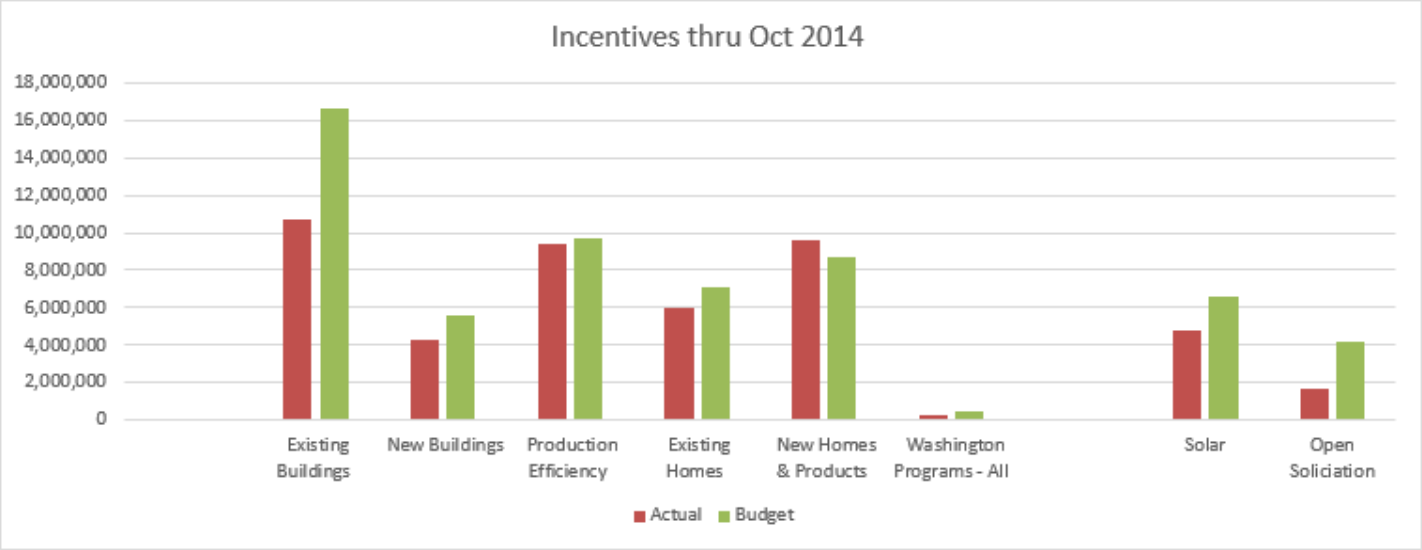
	Actual 12/31/13 Amount	Actual 10/31/14 Amount	YTD % Change	Actual 9/30/14 Amount
PGE	24,483,032	41,639,253	70.1%	42,497,581
PacifiCorp	11,560,814	23,170,627	100.4%	22,836,009
NW Natural	8,569,670	11,800,917	37.7%	13,015,882
Cascade	658,260	1,405,861	113.6%	1,522,748
NWN Industrial	356,235	1,897,213	432.6%	1,131,673
NWN Washington	473,674	701,069	48.0%	265,084
PGE Renewables	12,041,462	14,714,088	22.2%	14,747,417
PAC Renewables	11,793,715	12,768,881	8.3%	12,695,066
Contingency Reserve	5,000,000	5,000,000	0.0%	5,000,000
Contingency Available	2,993,710	3,209,239	7.2%	3,180,986
Total	77,930,572	116,307,150	49.2%	116,892,448

Expenses

We spent $2.7 million more in October 2014 than we did in October 2013. Year to date total spending is now $12 million higher than the same period one year ago. ($102.8 million vs. $90.8 million.) We spent very close to our October budget ($13.9 million spent vs. $14.2 budget) so we remain $18 million below our budgeted spending of $121 million year to date.

Incentive Expenses

Year to date incentives are 21% below budget. The $12.2 million shortfall makes up over 67% of our total underspending for the year. The following graph shows how each program is doing relative to the budgeted Y-T-D amount. The graph is similar to last month's status.



Total Incentives
Year-to-Date 2014

Incentives thru October 2014

	Actual	Budget	Variance	Var %
Existing Buildings	10,736,871	16,628,856	5,891,985	35%
New Buildings	4,270,403	5,621,084	1,350,681	24%
Production Efficiency	9,419,911	9,655,593	235,682	2%
Existing Homes	6,017,795	7,102,804	1,085,009	15%
New Homes & Products	9,577,975	8,683,229	(894,746)	-10%
Washington Programs - All	282,394	480,120	197,726	41%
Solar	4,747,082	6,633,779	1,886,697	28%
Open Soliciation	1,659,528	4,127,843	2,468,315	60%
Total Incentives	46,711,959	58,933,308	12,221,349	21%
Energy Efficiency Only	**40,305,349**	**48,171,686**	**7,866,337**	**16%**

Total Incentives
Year-to-Year Comparison

October 2014 v Oct 2013

	Current Year	Prior Year	Variance	Var %
Existing Buildings	10,736,871	8,868,644	(1,868,227)	-21%
New Buildings	4,270,403	4,604,856	334,453	7%
Production Efficiency	9,419,911	7,859,039	(1,560,872)	-20%
Existing Homes	6,017,795	5,558,414	(459,381)	-8%
New Homes & Products	9,577,975	7,471,392	(2,106,583)	-28%
Washington Programs - All	282,394	273,479	(8,915)	-3%
Solar	4,747,082	3,096,561	(1,650,521)	-53%
Other	1,659,528	1,506,577	(152,951)	-10%
Total Incentives	46,711,959	39,238,958	(7,473,001)	-19%
Energy Efficiency Only	**40,305,349**	**34,635,824**	**(5,669,525)**	**-16%**

Energy Trust of Oregon
BALANCE SHEET
October 31, 2014
(Unaudited)

	Oct 2014	Sept 2014	DEC 2013	Oct 2013	Change from one month ago	Change from Beg. of Year	Change from one year ago
Current Assets							
Cash & Cash Equivalents	63,313,945	68,193,921	76,484,638	92,847,355	(4,879,976)	(13,170,693)	(29,533,409)
Restricted Cash (Escrow Funds)				252,728			(252,728)
Investments	59,551,723	54,364,342	25,270,363	5,977,681	5,187,380	34,281,360	53,574,042
Restricted Investments (Escrow Funds)			77,988			(77,988)	
Receivables	240,318	193,214	8,276	4,314	47,104	232,042	236,004
Prepaid Expenses	488,183	582,006	526,087	553,744	(93,823)	(37,904)	(65,560)
Advances to Vendors	1,870,351	2,452,757	2,015,420	2,027,916	(582,406)	(145,069)	(157,566)
Current Portion Note Receivable	0	10,000			(10,000)	0	0
Total Current Assets	**125,464,520**	**125,796,241**	**104,382,771**	**101,663,737**	**(331,721)**	**21,081,748**	**23,800,783**
Fixed Assets							
Computer Hardware and Software	1,634,233	1,634,233	1,401,967	1,401,967	0	232,266	232,266
Software Development	704,911	549,063			155,848	704,911	704,911
Leasehold Improvements	313,333	313,333	313,333	313,333	0	0	0
Office Equipment and Furniture	600,662	600,662	600,662	600,662	0	0	0
Total Fixed Assets	**3,253,140**	**3,097,292**	**2,315,962**	**2,315,962**	**155,848**	**937,178**	**937,178**
Less Depreciation	(1,752,118)	(1,718,690)	(1,500,494)	(1,445,613)	(33,428)	(251,624)	(306,505)
Net Fixed Assets	**1,501,022**	**1,378,602**	**815,468**	**870,349**	**122,420**	**685,554**	**630,672**
Other Assets							
Rental Deposit	64,461	64,461	61,461	61,461	0	3,000	3,000
Deferred Compensation Asset	577,003	564,334	552,641	472,262	12,669	24,362	104,741
Long Term Portion Note Receivable	100,000	90,000			10,000	100,000	100,000
Total Other Assets	**741,464**	**718,795**	**614,102**	**533,723**	**22,669**	**127,362**	**207,741**
Total Assets	**127,707,006**	**127,893,638**	**105,812,341**	**103,067,809**	**(186,633)**	**21,894,664**	**24,639,197**
Current Liabilities							
Accounts Payable and Accruals	9,768,496	9,379,251	26,326,508	8,350,108	389,245	(16,558,011)	1,418,388
Salaries, Taxes, & Benefits Payable	695,780	691,885	631,548	630,720	3,895	64,232	65,061
Total Current Liabilities	**10,464,276**	**10,071,136**	**26,958,055**	**8,980,828**	**393,140**	**(16,493,779)**	**1,483,449**
Long Term Liabilities							
Deferred Rent	353,540	354,611	364,244	361,489	(1,070)	(10,703)	(7,948)
Deferred Compensation Payable	577,003	567,134	552,641	472,262	9,869	24,362	104,741
Other Long-Term Liabilities	5,035	8,308	6,830	6,690	(3,273)	(1,795)	(1,655)
Total Long-Term Liabilities	**935,578**	**930,052**	**923,714**	**840,440**	**5,526**	**11,864**	**95,138**
Total Liabilities	**11,399,854**	**11,001,189**	**27,881,769**	**9,821,268**	**398,665**	**(16,481,915)**	**1,578,587**
Net Assets							
Temporarily Restricted Net Assets			77,988	252,728		(77,988)	(252,728)
Unrestricted Net Assets	116,307,151	116,892,449	77,852,585	92,993,814	(585,298)	38,454,567	23,313,338
Total Net Assets	**116,307,151**	**116,892,449**	**77,930,572**	**93,246,541**	**(585,298)**	**38,376,579**	**23,060,610**
Total Liabilities and Net Assets	**127,707,006**	**127,893,638**	**105,812,341**	**103,067,809**	**(186,633)**	**21,894,664**	**24,639,197**

Energy Trust of Oregon
Cash Flow Statement-Indirect Method
Monthly 2014

	January	February	March	April	May	June	July	August	September	October	Year to Date
Operating Activities:											
Revenue less Expenses	12,906,165	10,113,897	6,583,587	6,287,830	215,826	(1,174,025)	1,620,932	1,407,466	1,000,196	(585,297)	$ 38,376,577
Non-cash items:											
Depreciation	27,123	27,123	28,713	28,418	28,418	28,473	28,298	62,618	(1,256)	33,428	291,356
Loss on disposal of assets											
Receivables	3,902	(49)	-	-	174	(1,003)	1,003	(1,096)	-	-	2,931
Interest Receivable	1,292	663	(27,109)	(112,939)	(33,215)	25,187	(12,245)	(13,634)	(15,869)	(47,104)	(234,973)
Advances to Vendors	680,371	678,630	(1,650,387)	365,028	768,936	(865,080)	165,479	679,314	(1,259,628)	582,406	145,069
Prepaid expenses and other costs	(151,035)	100,837	11,507	42,345	(28,712)	(209,651)	(5,022)	120,515	63,297	93,823	37,904
Accounts payable	(19,456,433)	(797,502)	1,417,700	(423,975)	1,401,061	464,334	(594,512)	(205,635)	1,321,061	389,245	(16,484,656)
Payroll and related accruals	70,280	(88,799)	76,891	(14,227)	38,978	15,743	(37,257)	(541)	13,762	13,764	88,594
Deferred rent and other	(3,988)	51,851	(945)	(10,714)	(13,739)	(113,739)	(9,882)	(13,739)	(7,953)	(17,013)	(139,861)
Cash rec'd from / (used in) Operating Activities	(5,922,323)	10,086,651	6,439,957	6,161,766	2,377,727	(1,829,761)	1,156,794	2,035,268	1,113,610	463,252	$ 22,082,941
Investing Activities:											
Investment Activity (1)	992,503	992,840	(232,102)	(18,552,646)	(4,712,080)	(713,502)	(5,178,372)	56,118	(1,742,101)	(5,187,381)	(34,276,723)
(Acquisition)/Disposal of Capital Assets	-		(46,620)	-	-	(368,159)	(162,039)	(190,275)	(53,967)	(155,848)	(976,908)
Cash rec'd from / (used in) Investing Activities	992,503	992,840	(278,722)	(18,552,646)	(4,712,080)	(1,081,661)	(5,340,411)	(134,157)	(1,796,068)	(5,343,229)	$ (35,253,631)
Cash at beginning of Period	76,484,637	71,554,817	82,634,307	88,795,542	76,404,658	74,070,305	71,158,883	66,975,266	68,876,378	68,193,921	76,484,637
Increase/(Decrease) in Cash	(4,929,820)	11,079,491	6,161,235	(12,390,880)	(2,334,353)	(2,911,422)	(4,183,617)	1,901,111	(682,458)	(4,879,977)	(13,170,695)
Cash at end of period	$ 71,554,817	$ 82,634,307	$ 88,795,542	$ 76,404,658	$ 74,070,305	$ 71,158,883	$ 66,975,266	$ 68,876,378	$ 68,193,921	$ 63,313,945	$ 63,313,945

(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 2014 - December 2015

	Actual										Adjusted Budget 2014	
	January	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**
Cash In:												
Public purpose and Incr funding	17,726,777	18,539,933	16,486,831	15,278,872	12,455,507	11,442,506	11,823,698	11,801,651	12,144,325	13,283,583	9,400,000	11,600,000
From other sources	3,902	(49)	12,500	-	1,074	(1,003)	1,003	(1,096)	-	-	-	-
Investment Income	12,036	10,159	(15,526)	(95,411)	(10,883)	49,508	12,626	11,234	12,264	(18,851)	25,000	25,000
Total cash in	17,742,715	18,550,043	16,483,805	15,183,461	12,445,698	11,491,011	11,837,327	11,811,789	12,156,589	13,264,732	9,425,000	11,625,000
Cash Out:	22,672,537	7,470,551	10,322,571	27,574,340	14,780,049	14,402,435	16,020,945	9,910,673	12,839,047	18,144,710	17,800,000	22,000,000
Net cash flow for the month	(4,929,822)	11,079,492	6,161,234	(12,390,879)	(2,334,351)	(2,911,424)	(4,183,618)	1,901,116	(682,458)	(4,879,978)	(8,375,000)	(10,375,000)
Beginning Balance: Cash & MM	76,484,640	71,554,817	82,634,309	88,795,543	76,404,659	74,070,305	71,158,882	66,975,263	68,876,378	68,193,922	63,313,945	54,938,944
Ending cash & MM	**71,554,817**	**82,634,309**	**88,795,543**	**76,404,659**	**74,070,305**	**71,158,882**	**66,975,263**	**68,876,378**	**68,193,921**	**63,313,945**	**54,938,944**	**44,563,944**
Future Commitments												
Renewable Incentives	20,900,000	21,000,000	14,200,000	14,200,000	14,300,000	17,100,000	16,800,000	16,100,000	14,500,000	13,900,000	13,200,000	11,700,000
Efficiency Incentives	39,500,000	47,800,000	44,400,000	44,100,000	43,000,000	49,400,000	49,400,000	48,500,000	52,200,000	53,600,000	61,600,000	50,900,000
Emergency Contingency Pool	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000
Total Commitments	65,400,000	73,800,000	63,600,000	63,300,000	62,300,000	71,500,000	71,200,000	69,600,000	71,700,000	72,500,000	79,800,000	67,600,000
Escrow Cash Balance												
Beginning Balance	77,989	77,989	77,993	4,637	4,637							
Net Escrow (Payments)/Funding			(73,356)		(4,637)							
Interest Paid on Escrow Balances		4										
Ending Escrow Balance (1)	77,989	77,993	4,637	4,637	-	-	-	-	-	-	-	-

(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 2014 - December 2015

	2015 Round 2 Projection (Final Draft Version)											
	Budget R2 January	**Budget R2 February**	**Budget R2 March**	**Budget R2 April**	**Budget R2 May**	**Budget R2 June**	**Budget R2 July**	**Budget R2 August**	**Budget R2 September**	**Budget R2 October**	**Budget R2 November**	**Budget R2 December**
Cash In:												
Public purpose and Incr funding	15,000,000	15,400,000	14,000,000	13,300,000	11,100,000	10,300,000	11,200,000	10,600,000	11,200,000	11,500,000	11,100,000	13,400,000
From other sources												
Investment Income	24,000	24,000	24,000	24,000	24,000	24,000	24,000	24,000	24,000	24,000	24,000	24,000
Total cash in	15,024,000	15,424,000	14,024,000	13,324,000	11,124,000	10,324,000	11,224,000	10,624,000	11,224,000	11,524,000	11,124,000	13,424,000
Cash Out:	43,300,000	10,400,000	11,900,000	11,400,000	11,300,000	13,600,000	11,300,000	11,300,000	14,200,000	13,100,000	13,900,000	30,600,000
Net cash flow for the month	(28,276,000)	5,024,000	2,124,000	1,924,000	(176,000)	(3,276,000)	(76,000)	(676,000)	(2,976,000)	(1,576,000)	(2,776,000)	(17,176,000)
Beginning Balance: Cash & MM	44,563,944	16,287,944	21,311,944	23,435,944	25,359,944	25,183,944	21,907,944	21,831,944	21,155,944	18,179,944	16,603,944	13,827,944
Ending cash & MM	**16,287,944**	**21,311,944**	**23,435,944**	**25,359,944**	**25,183,944**	**21,907,944**	**21,831,944**	**21,155,944**	**18,179,944**	**16,603,944**	**13,827,944**	**(3,348,056)**
Future Commitments												
Renewable Incentives	11,800,000	12,300,000	12,300,000	12,300,000	12,300,000	12,300,000	12,300,000	12,300,000	12,300,000	12,300,000	12,300,000	12,300,000
Efficiency Incentives	50,100,000	47,900,000	45,500,000	45,500,000	45,500,000	45,500,000	45,500,000	45,500,000	45,500,000	45,500,000	45,500,000	45,500,000
Emergency Contingency Pool	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000
Total Commitments	66,900,000	65,200,000	62,800,000	62,800,000	62,800,000	62,800,000	62,800,000	62,800,000	62,800,000	62,800,000	62,800,000	62,800,000
Escrow Cash Balance												
Beginning Balance												
Net Escrow (Payments)/Funding												
Interest Paid on Escrow Balances												
Ending Escrow Balance (1)	-	-	-	-	-	-	-	-	-	-	-	-

(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 Prior Yr Comparison
For the Ten Months Ending October 31, 2014
(Unaudited)

	October				YTD			
	Actual	Actual Prior Year	Prior Year Variance	Variance %	Actual	Actual Prior Year	Prior Year Variance	Variance %
REVENUES								
Public Purpose Funds-PGE	3,118,237	2,824,703	293,533	10%	31,528,820	28,976,966	2,551,855	9%
Public Purpose Funds-PacifiCorp	2,188,668	2,054,278	134,389	7%	23,113,455	21,732,357	1,381,098	6%
Public Purpose Funds-NW Natural	570,122	745,473	(175,351)	-24%	15,872,133	19,674,025	(3,801,892)	-19%
Public Purpose Funds-Cascade	48,362	100,688	(52,326)	-52%	2,201,176	1,686,608	514,567	31%
Total Public Purpose Funds	**5,925,388**	**5,725,142**	**200,246**	**3%**	**72,715,584**	**72,069,956**	**645,627**	**1%**
Incremental Funds - PGE	3,841,397	4,027,509	(186,112)	-5%	42,128,548	41,482,401	646,147	2%
Incremental Funds - PacifiCorp	1,965,269	2,021,140	(55,871)	-3%	22,012,144	21,669,171	342,974	2%
NW Natural - Industrial DSM	1,024,350	575,946	448,404	78%	3,073,052	1,727,838	1,345,214	78%
NW Natural - Washington	527178	645551	(118,373)	-18%	1,054,355	1,291,102	(236,747)	-18%
Contributions		12,500	(12,500)	-100%	13,400	13,430	(30)	0%
Revenue from Investments	28,254	9,776	18,478	189%	202,129	76,181	125,948	165%
TOTAL REVENUE	**13,311,835**	**13,017,564**	**294,271**	**2%**	**141,199,212**	**138,330,079**	**2,869,133**	**2%**
EXPENSES								
Program Subcontracts	4,670,255	3,973,444	(696,812)	-18%	39,971,758	37,267,913	(2,703,845)	-7%
Incentives	7,621,805	5,660,900	(1,960,905)	-35%	46,711,958	39,238,963	(7,472,996)	-19%
Salaries and Related Expenses	917,085	819,145	(97,940)	-12%	8,738,116	8,042,886	(695,230)	-9%
Professional Services	482,755	528,335	45,580	9%	5,451,568	4,017,701	(1,433,867)	-36%
Supplies	3,325	2,303	(1,022)	-44%	29,682	25,068	(4,614)	-18%
Telephone	4,817	4,741	(76)	-2%	46,383	44,436	(1,947)	-4%
Postage and Shipping Expenses	1,011	468	(543)	-116%	10,727	8,185	(2,542)	-31%
Occupancy Expenses	52,643	55,119	2,476	4%	537,833	554,095	16,262	3%
Noncapitalized Equip. & Depr.	70,598	45,946	(24,651)	-54%	584,861	528,821	(56,039)	-11%
Call Center	12,886	35,341	22,455	64%	124,833	510,238	385,405	76%
Printing and Publications	11,310	6,391	(4,919)	-77%	104,828	94,692	(10,136)	-11%
Travel	17,846	12,170	(5,677)	-47%	127,701	117,247	(10,454)	-9%
Conference, Training & Mtng Exp	7,164	12,020	4,856	40%	163,619	107,527	(56,093)	-52%
Interest Expense and Bank Fees			0	0%	2,000	5,443	3,443	63%
Insurance	8,630	8,622	(8)	0%	84,813	82,932	(1,881)	-2%
Miscellaneous Expenses		0	0	0%	3,316	1,090	(2,226)	-204%
Dues, Licenses and Fees	15,002	14,666	(337)	-2%	128,636	117,850	(10,786)	-9%
TOTAL EXPENSES	**13,897,134**	**11,179,610**	**(2,717,524)**	**-24%**	**102,822,633**	**90,765,087**	**(12,057,546)**	**-13%**
TOTAL REVENUE LESS EXPENSES	**(585,298)**	**1,837,954**	**(2,423,253)**	**-132%**	**38,376,579**	**47,564,992**	**(9,188,413)**	**-19%**

Energy Trust of Oregon
Income Statement - Actual and YTD Budget Comparison
For the Ten Months Ending October 31, 2014
(Unaudited)

	October				YTD			
	Actual	**Budget**	**Budget Variance**	**Variance %**	**Actual**	**Budget**	**Budget Variance**	**Variance %**
REVENUES								
Public Purpose Funds-PGE	3,118,237	2,682,199	436,038	16%	31,528,820	28,938,482	2,590,338	9%
Public Purpose Funds-PacifiCorp	2,188,668	2,042,942	145,726	7%	23,113,455	21,532,389	1,581,066	7%
Public Purpose Funds-NW Natural	570,122	572,896	(2,774)	0%	15,872,133	15,846,255	25,878	0%
Public Purpose Funds-Cascade	48,362	95,685	(47,324)	-49%	2,201,176	1,416,145	785,031	55%
Total Public Purpose Funds	**5,925,388**	**5,393,722**	**531,666**	**10%**	**72,715,584**	**67,733,270**	**4,982,314**	**7%**
Incremental Funds - PGE	3,841,397	4,051,042	(209,645)	-5%	42,128,548	41,553,565	574,983	1%
Incremental Funds - PacifiCorp	1,965,269	1,959,723	5,546	0%	22,012,144	21,267,599	744,546	4%
NW Natural - Industrial DSM	1,024,350	1,257,878	(233,528)	-19%	3,073,052	3,773,634	(700,582)	-19%
NW Natural - Washington	527178	645551	(118,373)	-18%	1,054,355	1,291,102	(236,747)	-18%
Contributions			0		13,400		13,400	
Revenue from Investments	28,254	6,500	21,754	335%	202,129	65,000	137,129	211%
TOTAL REVENUE	**13,311,835**	**13,314,416**	**(2,581)**	**0%**	**141,199,212**	**135,684,169**	**5,515,043**	**4%**
EXPENSES								
Program Subcontracts	4,670,255	4,494,668	(175,588)	-4%	39,971,758	41,656,508	1,684,751	4%
Incentives	7,621,805	7,795,058	173,254	2%	46,711,958	58,933,307	12,221,349	21%
Salaries and Related Expenses	917,085	938,782	21,697	2%	8,738,116	9,677,652	939,535	10%
Professional Services	482,755	732,419	249,664	34%	5,451,568	8,042,939	2,591,371	32%
Supplies	3,325	4,588	1,263	28%	29,682	45,883	16,201	35%
Telephone	4,817	5,484	667	12%	46,383	55,310	8,926	16%
Postage and Shipping Expenses	1,011	1,183	172	15%	10,727	11,833	1,106	9%
Occupancy Expenses	52,643	64,275	11,632	18%	537,833	642,749	104,916	16%
Noncapitalized Equip. & Depr.	70,598	70,758	160	0%	584,861	817,809	232,948	28%
Call Center	12,886	15,000	2,114	14%	124,833	150,000	25,167	17%
Printing and Publications	11,310	11,858	548	5%	104,828	118,583	13,755	12%
Travel	17,846	17,773	(74)	0%	127,701	202,475	74,774	37%
Conference, Training & Mtng Exp	7,164	39,578	32,414	82%	163,619	359,133	195,513	54%
Interest Expense and Bank Fees		417	417	100%	2,000	4,167	2,167	52%
Insurance	8,630	9,167	537	6%	84,813	91,667	6,854	7%
Miscellaneous Expenses		268	268	100%	3,316	2,683	(633)	-24%
Dues, Licenses and Fees	15,002	5,313	(9,689)	-182%	128,636	145,587	16,951	12%
TOTAL EXPENSES	**13,897,134**	**14,206,589**	**309,456**	**2%**	**102,822,633**	**120,958,285**	**18,135,652**	**15%**
TOTAL REVENUE LESS EXPENSES	**(585,298)**	**(892,173)**	**306,875**	**34%**	**38,376,579**	**14,725,885**	**23,650,695**	**161%**

Energy Trust of Oregon
Statement of Functional Expenses
For the Ten Months Ending October 31, 2014
(Unaudited)

	Energy Efficiency	Renewable Energy	Total Program Expenses	Management & General	Communications & Customer Service	Total Admin Expenses	Total	Budget	Variance	% Var
Program Expenses										
Incentives/ Program Management & Delivery	$80,098,506	$6,585,210	$86,683,716				$86,683,716	$100,589,816	$13,906,100	14%
Payroll and Related Expenses	2,551,929	786,868	3,338,796	1,595,851	792,486	2,388,337	5,727,133	6,158,860	431,727	7%
Outsourced Services	3,108,569	390,463	3,499,032	210,711	1,049,080	1,259,791	4,758,822	7,117,856	2,359,034	33%
Planning and Evaluation	1,995,600	68,792	2,064,393	1,446		1,446	2,065,839	2,241,047	175,208	8%
Customer Service Management	504,804	22,794	527,597				527,597	558,093	30,496	5%
Trade Allies Network	302,142	20,575	322,717				322,717	389,410	66,693	17%
Total Program Expenses	**88,561,549**	**7,874,701**	**96,436,251**	**1,808,008**	**1,841,565**	**3,649,573**	**100,085,824**	**117,055,081**	**16,969,257**	**14%**
Program Support Costs										
Supplies	8,408	2,431	10,839	7,422	3,074	10,496	21,334	32,379	11,045	34%
Postage and Shipping Expenses	3,621	1,178	4,799	1,512	862	2,375	7,174	6,895	(279)	-4%
Telephone	2,198	737	2,935	1,431	1,001	2,431	5,367	11,769	6,402	54%
Printing and Publications	89,718	2,716	92,434	1,128	8,429	9,557	101,991	114,477	12,486	11%
Occupancy Expenses	160,397	53,806	214,202	91,266	52,628	143,893	358,096	417,438	59,342	14%
Insurance	25,294	8,485	33,778	14,392	8,299	22,691	56,470	59,534	3,064	5%
Equipment	12,965	57,552	70,517	5,978	3,447	9,424	79,942	20,020	(59,922)	-299%
Travel	36,641	18,116	54,756	22,167	27,126	49,293	104,050	163,558	59,508	36%
Meetings, Trainings & Conferences	54,301	19,643	73,944	31,113	10,007	41,120	115,064	240,383	125,319	52%
Interest Expense and Bank Fees				2,000		2,000	2,000	4,167	2,167	52%
Depreciation & Amortization	39,988	13,414	53,402	22,753	13,121	35,874	89,276	87,083	(2,193)	-3%
Dues, Licenses and Fees	45,888	17,023	62,911	7,838	5,561	13,399	76,310	102,440	26,130	26%
Miscellaneous Expenses	3,316		3,316				3,316	1,953	(1,363)	-70%
IT Services	1,160,520	148,314	1,308,833	243,234	164,352	407,586	1,716,420	2,641,107	924,687	35%
Total Program Support Costs	**1,643,253**	**343,416**	**1,986,668**	**452,234**	**297,906**	**750,141**	**2,736,809**	**3,903,204**	**1,166,395**	**30%**
TOTAL EXPENSES	**90,204,803**	**8,218,118**	**98,422,921**	**2,260,242**	**2,139,470**	**4,399,712**	**102,822,633**	**120,958,285**	**18,135,652**	**15%**

OPUC Measure vs. 9% **4.5%**

ENERGY TRUST OF OREGON
Year to Date by Program/Service Territory
For the Ten Months Ending October 31, 2014
Unaudited

	ENERGY EFFICIENCY								
	PGE	PacifiCorp	Total	NWN Industrial	NW Natural	Cascade	Oregon Total	NWN WA	ETO Total
REVENUES									
Public Purpose Funding	$24,370,673	$18,038,330	$42,409,002		$15,872,133	$2,201,176	$60,482,311		$60,482,311
Incremental Funding	42,128,548	22,012,144	64,140,692	3,073,052			67,213,744	1,054,355	68,268,099
Contributions									
Revenue from Investments									
TOTAL PROGRAM REVENUE	**66,499,221**	**40,050,474**	**106,549,694**	**3,073,052**	**15,872,133**	**2,201,176**	**127,696,055**	**1,054,355**	**128,750,410**
EXPENSES									
Program Management (Note 3)	2,359,188	1,405,455	3,764,641	99,642	862,918	103,662	4,830,864	117,181	4,948,045
Program Delivery	18,165,052	11,133,604	29,298,658	500,044	3,926,992	532,293	34,257,984	225,074	34,483,058
Incentives	21,645,324	11,642,453	33,287,776	758,795	5,387,148	589,235	40,022,955	282,394	40,305,349
Program Eval & Planning Svcs.	1,822,020	1,042,653	2,864,671	46,978	607,994	58,297	3,577,940	47,986	3,625,926
Program Marketing/Outreach	1,756,839	1,065,570	2,822,409	18,747	702,650	57,482	3,601,289	45,920	3,647,209
Program Quality Assurance	32,746	31,158	63,905	0	33,761	1,452	99,117	0	99,117
Outsourced Services	322,414	196,120	518,536	15,735	101,380	10,252	645,901	0	645,901
Trade Allies & Cust. Svc. Mgmt.	332,819	234,927	567,746	3,853	192,301	12,810	776,709	30,237	806,946
IT Services	547,134	332,704	879,838	12,618	222,493	18,531	1,133,480	27,039	1,160,519
Other Program Expenses - all	247,256	138,859	386,114	10,005	63,234	7,370	466,724	16,009	482,733
TOTAL PROGRAM EXPENSES	**47,230,792**	**27,223,503**	**74,454,294**	**1,466,417**	**12,100,871**	**1,391,384**	**89,412,963**	**791,840**	**90,204,803**
ADMINISTRATIVE COSTS									
Management & General (Notes 1 & 2)	1,085,094	625,284	1,710,378	33,730	277,419	31,948	2,053,476	18,042	2,071,518
Communications & Customer Svc (Notes 1 & 2)	1,027,114	591,874	1,618,987	31,927	262,596	30,243	1,943,752	17,078	1,960,830
Total Administrative Costs	2,112,208	1,217,158	3,329,365	65,657	540,015	62,191	3,997,228	35,120	4,032,348
TOTAL PROG & ADMIN EXPENSES	**49,343,000**	**28,440,661**	**77,783,659**	**1,532,074**	**12,640,886**	**1,453,575**	**93,410,191**	**826,960**	**94,237,151**
TOTAL REVENUE LESS EXPENSES	**17,156,221**	**11,609,813**	**28,766,035**	**1,540,978**	**3,231,247**	**747,601**	**34,285,864**	**227,395**	**34,513,259**
NET ASSETS - RESERVES									
Cumulative Carryover at 12/31/13 (Note 4)	24,483,032	11,560,814	36,043,846	356,235	8,569,670	658,260	45,628,011	473,674	46,101,685
Change in net assets this year	17,156,221	11,609,813	28,766,035	1,540,978	3,231,247	747,601	34,285,864	227,395	34,513,259
Ending Net Assets - Reserves	**41,639,253**	**23,170,627**	**64,809,881**	**1,897,213**	**11,800,917**	**1,405,861**	**79,913,875**	**701,069**	**80,614,944**
Ending Reserve by Category									
Program Reserves (Efficiency and Renewables)	41,639,253	23,170,627	64,809,881	1,897,213	11,800,917	1,405,861	79,913,875	701,069	80,614,944
Assets Released for General Purpose									
Emergency Contingency Pool									
TOTAL NET ASSETS CUMULATIVE	41,639,253	23,170,627	64,809,881	1,897,213	11,800,917	1,405,861	79,913,875	701,069	80,614,944

Note 1) Management & General and Communications & Customer Service Expenses (Admin) have been allocated based on total expenses.
Note 2) Admin costs are allocated for mgmt reporting only. GAAP for Not for Profits does not allow allocation of admin costs to program expenses.
Note 3) Program Management costs include both outsourced and internal staff.
Note 4) Cumulative carryover at 12/31/2013 reflects audited results.

ENERGY TRUST OF OREGON
Year to Date by Program/Service Territory
For the Ten Months Ending October 31, 2014
Unaudited

	RENEWABLE ENERGY				TOTAL			
	PGE	PacifiCorp	Total	Other	All Programs	Approved budget	Change	% Change
REVENUES								
Public Purpose Funding	$7,158,148	$5,075,125	$12,233,273		$72,715,584	$67,733,270	$4,982,314	7%
Incremental Funding					68,268,099	67,885,899	382,200	1%
Contributions				13,400	13,400		13,400	
Revenue from Investments				202,129	202,129	65,000	137,129	211%
TOTAL PROGRAM REVENUE	**7,158,148**	**5,075,125**	**12,233,273**	**215,529**	**141,199,212**	**135,684,169**	**5,515,043**	**4%**
EXPENSES								
Program Management (Note 3)	326,737	493,464	820,201		5,768,246	5,556,756	(211,490)	-4%
Program Delivery	72,874	72,393	145,267		34,628,325	35,944,774	1,316,449	4%
Incentives	3,378,265	3,028,345	6,406,610		46,711,959	58,933,306	12,221,347	21%
Program Eval & Planning Svcs.	77,137	63,171	140,308		3,766,234	4,344,426	578,192	13%
Program Marketing/Outreach	65,761	37,718	103,479		3,750,688	5,058,106	1,307,418	26%
Program Quality Assurance	0	851	851		99,968	215,167	115,199	54%
Outsourced Services	147,359	67,258	214,618		860,519	1,891,428	1,030,909	55%
Trade Allies & Cust. Svc. Mgmt.	27,519	15,850	43,368		850,314	947,501	97,187	10%
IT Services	65,506	82,807	148,314		1,308,833	2,013,942	705,109	35%
Other Program Expenses - all	105,138	89,963	195,102		677,835	743,928	66,093	9%
TOTAL PROGRAM EXPENSES	**4,266,296**	**3,951,820**	**8,218,118**		**98,422,921**	**115,649,334**	**17,226,413**	**15%**
ADMINISTRATIVE COSTS								
Management & General (Notes 1 & 2)	95,024	93,699	188,724		2,260,242	3,010,825	750,583	25%
Communications & Customer Svc (Notes 1 & 2)	89,947	88,693	178,640		2,139,470	2,298,126	158,656	7%
Total Administrative Costs	184,971	182,392	367,364		4,399,712	5,308,951	909,239	17%
TOTAL PROG & ADMIN EXPENSES	**4,451,267**	**4,134,212**	**8,585,482**		**102,822,633**	**120,958,285**	**18,135,652**	**15%**
TOTAL REVENUE LESS EXPENSES	**2,706,881**	**940,913**	**3,647,791**	**215,529**	**38,376,579**	**14,725,884**	**23,650,695**	**161%**
NET ASSETS - RESERVES								
Cumulative Carryover at 12/31/13 (Note 4)	12,041,462	11,793,715	23,835,177	7,993,710	77,930,572	62,609,764	(15,320,808)	-24%
Change in net assets this year	2,706,881	940,913	3,647,791	215,529	38,376,579	14,725,884	23,650,695	161%
Ending Net Assets - Reserves	**14,748,343**	**12,734,628**	**27,482,968**	**8,209,239**	**116,307,151**	**77,335,648**	**8,329,887**	**11%**
Ending Reserve by Category								
Program Reserves (Efficiency and Renewables)	14,748,343	12,734,628	27,482,968	3,209,239	111,307,151			
Assets Released for General Purpose								
Emergency Contingency Pool				5,000,000	5,000,000			
TOTAL NET ASSETS CUMULATIVE	14,748,343	12,734,628	27,482,968	8,209,239	116,307,151	77,335,648	8,329,887	11%

Note 1) Management & General and Communications & Customer Service Expenses (Admin) have been allocated based on total expenses.
Note 2) Admin costs are allocated for mgmt reporting only. GAAP for Not for Profits does not allow allocation of admin costs to program expenses.
Note 3) Program Management costs include both outsourced and internal staff.
Note 4) Cumulative carryover at 12/31/2012 reflects audited results.

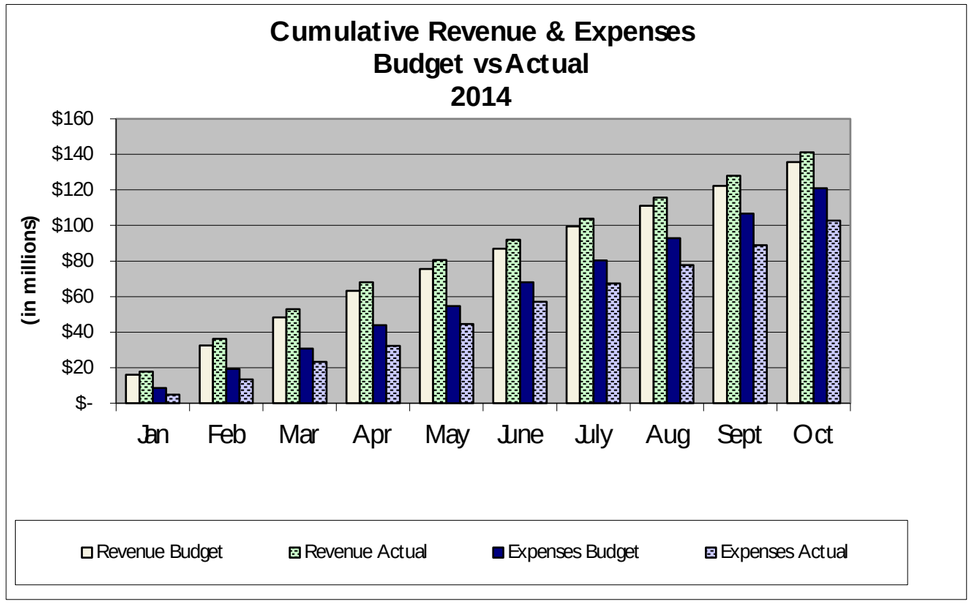
Energy Trust of Oregon
Program Expense by Service Territory
For the Ten Months Ending October 31, 2014
(Unaudited)

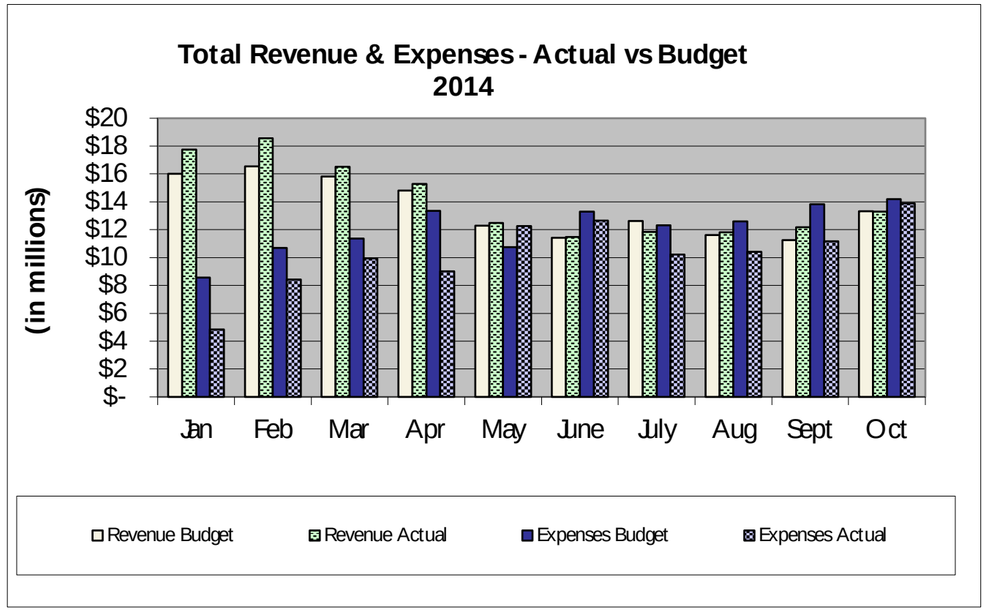
	PGE	Pacific Power	Subtotal Elec.	NWN Industrial	NW Natural Gas	Cascade	Subtotal Gas	Oregon Total	NWN WA	ETO Total	YTD Budget	Variance	% Var
Energy Efficiency													
Commercial													
Existing Buildings	13,773,219	7,378,971	21,152,190	321,204	2,552,621	472,455	3,346,281	24,498,471	297,649	24,796,120	31,829,940	7,033,820	22%
New Buildings	6,324,534	1,728,158	8,052,692	212,562	1,051,804	140,392	1,404,757	9,457,449		9,457,449	11,365,102	1,907,653	17%
NEEA	1,219,390	919,891	2,139,281		63,612	4,060	67,672	2,206,953		2,206,953	2,367,862	160,909	7%
Total Commercial	**21,317,143**	**10,027,020**	**31,344,163**	**533,766**	**3,668,037**	**616,907**	**4,818,710**	**36,162,873**	**297,649**	**36,460,522**	**45,562,904**	**9,102,382**	**20%**
Industrial													
Production Efficiency	11,365,859	6,438,865	17,804,724	998,308	434,690	239,990	1,672,988	19,477,712		19,477,712	20,383,447	905,735	4%
NEEA	478,077	360,654	838,731					838,731		838,731	1,164,747	326,016	28%
Total Industrial	**11,843,936**	**6,799,519**	**18,643,455**	**998,308**	**434,690**	**239,990**	**1,672,988**	**20,316,443**		**20,316,443**	**21,548,194**	**1,231,751**	**6%**
Residential													
Existing Homes	5,213,606	4,960,706	10,174,312		5,438,487	233,961	5,672,448	15,846,760	285,098	16,131,858	18,801,547	2,669,689	14%
New Homes/Products	8,978,728	5,152,500	14,131,228		3,036,057	358,656	3,394,713	17,525,941	244,212	17,770,153	17,699,068	(71,085)	0%
NEEA	1,989,584	1,500,914	3,490,498		63,614	4,060	67,674	3,558,172		3,558,172	3,619,278	61,106	2%
Total Residential	**16,181,918**	**11,614,120**	**27,796,039**		**8,538,157**	**596,677**	**9,134,834**	**36,930,873**	**529,310**	**37,460,183**	**40,119,893**	**2,659,710**	**7%**
Energy Efficiency Costs	**49,343,000**	**28,440,661**	**77,783,659**	**1,532,074**	**12,640,886**	**1,453,575**	**15,626,533**	**93,410,191**	**826,960**	**94,237,148**	**107,230,991**	**12,993,843**	**12%**
Renewables													
Solar Electric (Photovoltaic)	3,992,367	2,128,690	6,121,057					6,121,057		6,121,057	8,480,343	2,359,286	28%
Other Renewable	458,899	2,005,524	2,464,423					2,464,423		2,464,423	5,246,953	2,782,530	53%
Renewables Costs	**4,451,267**	**4,134,212**	**8,585,482**					**8,585,480**		**8,585,480**	**13,727,296**	**5,141,816**	**37%**
Cost Grand Total	**53,794,267**	**32,574,873**	**86,369,141**	**1,532,074**	**12,640,886**	**1,453,575**	**15,626,533**	**101,995,669**	**826,960**	**102,822,633**	**120,958,285**	**18,135,652**	**15%**

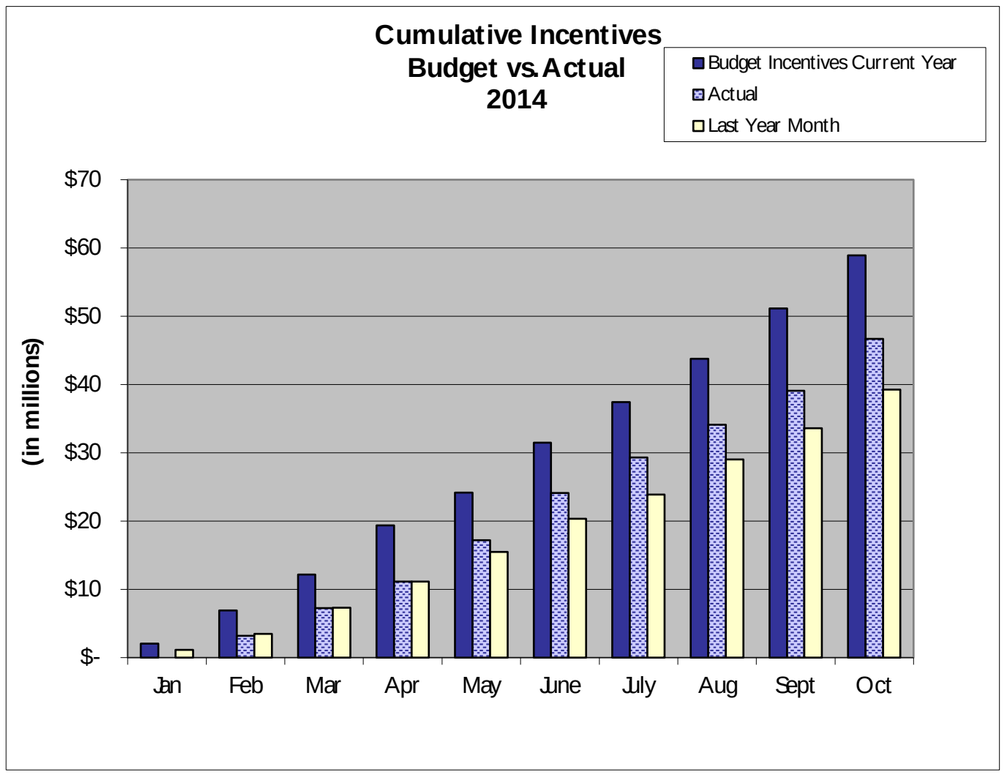
Energy Trust of Oregon
Administrative Expenses
For the 4th Quarter and Ten Months Ending October 31, 2014
(Unaudited)

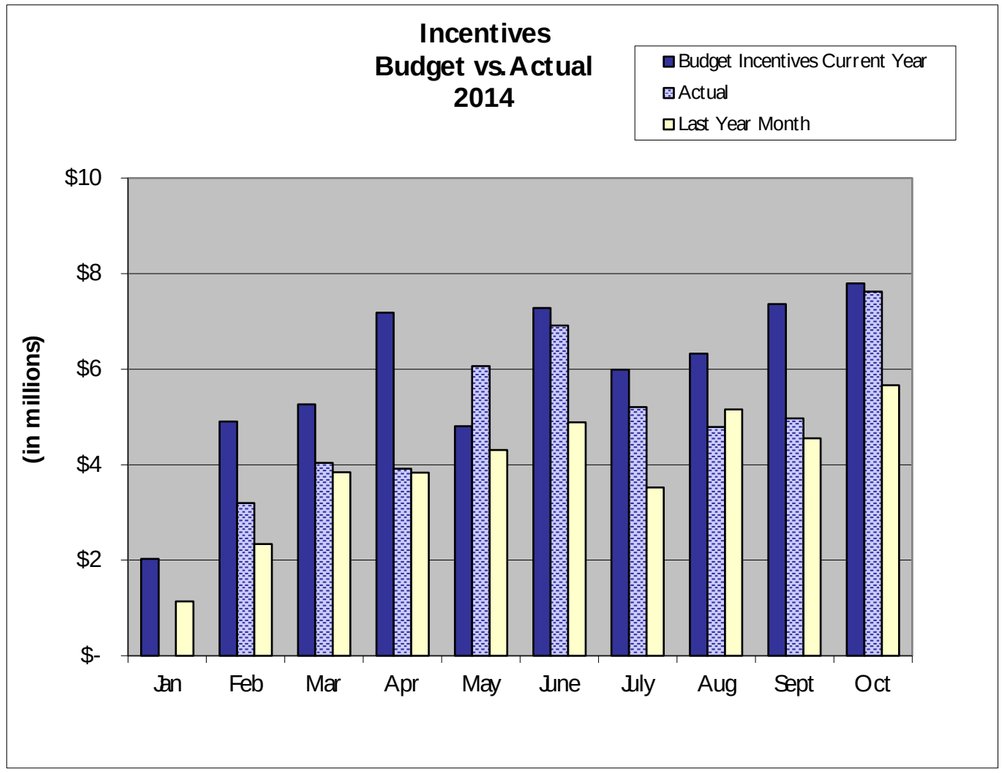
	MANAGEMENT & GENERAL						COMMUNICATIONS & CUSTOMER SERVICE					
	MONTHLY	QUARTERLY	QUARTER	YTD			MONTHLY	QUARTERLY	QUARTER	YTD		
	ACTUAL	BUDGET	REMAINING	ACTUAL	BUDGET	VARIANCE	ACTUAL	BUDGET	REMAINING	ACTUAL	BUDGET	VARIANCE
EXPENSES	-	-		-			-			-		
Outsourced Services	$10,830	$221,018	$210,188	$209,399	$471,725	$262,325	$45,514	$265,300	$219,787	$1,049,080	$884,333	($164,747)
Legal Services		13,750	13,750	1,312	45,833	44,522						
Salaries and Related Expenses	167,646	532,605	364,959	1,595,851	1,765,183	169,332	99,610	298,515	198,905	792,486	995,049	202,564
Supplies	1,242	1,950	708	3,299	6,500	3,201	226	240	14	696	800	104
Telephone		545	545	180	1,817	1,637		490	490	280	1,353	1,074
Postage and Shipping Expenses	20		(20)	44		(44)		250	250	16	833	818
Noncapitalized Equipment								250	250		833	833
Printing and Publications	22	75	53	373	250	(123)	1,010	1,750	740	7,993	5,833	(2,160)
Travel	1,342	13,305	11,963	22,167	44,350	22,183	9,018	9,500	482	27,126	31,667	4,541
Conference, Training & Mtngs	(2,964)	51,360	54,324	30,894	132,050	101,156	907	5,500	4,593	9,880	18,333	8,453
Interest Expense and Bank Fees		1,250	1,250	2,000	4,167	2,167						
Miscellaneous Expenses		180	180		600	600						
Dues, Licenses and Fees	140	2,150	2,010	7,838	7,397	(441)	595	400	(195)	5,561	1,333	(4,228)
Shared Allocation (Note 1)	14,272	46,358	32,087	142,206	155,189	12,984	9,674	31,325	21,651	82,002	104,864	22,862
IT Service Allocation (Note 2)	28,089	94,489	66,400	243,234	374,272	131,038	18,980	63,846	44,866	164,352	252,894	88,542
Planning & Eval	122	402	280	1,446	1,494	48						
TOTAL EXPENSES	**220,761**	**979,437**	**758,676**	**2,260,242**	**3,010,826**	**750,584**	**185,534**	**677,366**	**491,832**	**2,139,470**	**2,298,126**	**158,655**

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


Cumulative Revenue & Expenses
Budget vs Actual
2014
(in millions)
$160
$140
$120
$100
$80
$60
$40
$20
$-
Jan
Feb
Mar
Apr
May
June
July
Aug
Sept
Oct
Revenue Budget
Revenue Actual
Expenses Budget
Expenses Actual


Total Revenue & Expenses - Actual vs Budget
2014
(in millions)
$20
$18
$16
$14
$12
$10
$8
$6
$4
$2
$-
Jan
Feb
Mar
Apr
May
June
July
Aug
Sept
Oct
Revenue Budget
Revenue Actual
Expenses Budget
Expenses Actual


Cumulative Incentives
Budget vs. Actual
2014
Budget Incentives Current Year
Actual
Last Year Month
(in millions)
$70
$60
$50
$40
$30
$20
$10
$-
Jan
Feb
Mar
Apr
May
June
July
Aug
Sept
Oct


Incentives
Budget vs. Actual
2014
Budget Incentives Current Year
Actual
Last Year Month
(in millions)
$10
$8
$6
$4
$2
$-
Jan
Feb
Mar
Apr
May
June
July
Aug
Sept
Oct

R00407

For contracts with costs through: 11/1/2014

Energy Trust of Oregon
Contract Status Summary Report

Report Date: 11/19/2014

Contractor	Description	*City	Est Cost	Actual TTD	Remaining	Start	End
Administration							
		Administration Total:	**7,342,659**	**3,097,485**	**4,245,175**		
Communications & Outreach							
		Communications & Outreach Total:	**3,178,282**	**2,562,599**	**615,683**		
Energy Efficiency Programs							
Northwest Energy Efficiency Alliance	Regional Energy Eff Initiative	Portland	39,138,680	33,799,669	5,339,011	1/1/10	7/1/15
Northwest Energy Efficiency Alliance	Regional EE Initiative Agmt	Portland	33,662,505	0	33,662,505	1/1/15	7/1/20
ICF Resources, LLC	PMC BE 2014	Fairfax	9,008,736	6,780,821	2,227,915	1/1/14	12/31/14
CLEAResult Consulting Inc	2014 HES PMC	Austin	7,595,520	5,964,217	1,631,303	1/1/14	12/31/14
Portland Energy Conservation, Inc.	PMC NHP 2014	Portland	6,965,473	5,132,391	1,833,082	1/1/14	12/31/14
Portland Energy Conservation, Inc.	2014 NBE PMC	Portland	4,735,000	3,603,928	1,131,072	1/1/14	12/31/14
Intel Corporation	Intel D1X Megaproject	Hillsboro	4,000,000	4,000,000	0	11/15/12	12/31/14
Lockheed Martin Services, Inc.	2014 MF PMC	Cherry Hill	3,569,068	2,802,359	766,709	1/1/14	12/31/14
Portland General Electric	PDC - PE 2014	Portland	2,314,600	1,753,380	561,220	1/1/14	12/31/14
Oregon State University	CHP Project - OSU	Corvallis	2,024,263	1,982,682	41,581	12/20/10	1/31/16
Energy 350 Inc	PDC - PE 2014	Portland	1,996,000	1,555,751	440,249	1/1/14	12/31/14
NEXANT, INC.	PDC - PE 2014	San Francisco	1,429,461	1,162,623	266,838	1/1/14	12/31/14
Cascade Energy, Inc.	PDC - PE 2014 Small Industrial	Walla Walla	1,234,100	958,227	275,873	1/1/14	12/31/14
RHT Energy Solutions	PDC - PE 2014	Medford	1,145,000	901,772	243,228	1/1/14	12/31/14
Evergreen Consulting Group, LLC	PE Lighting PDC 2014	Tigard	1,092,000	882,066	209,934	1/1/14	12/31/14
Ecova Inc	Products PMC Transition	Spokane	976,090	371,765	604,325	7/31/14	12/31/14
Northwest Power & Conservation Council	Annual Work Plan		874,652	845,716	28,936	3/20/12	12/31/14
Evoworx Inc.	EnergySavvy Online Audit Tool	Seattle	472,500	432,969	39,531	1/1/12	12/31/14
OPOWER, Inc.	OPower Personal Energy Reports	Arlington	399,447	361,373	38,075	8/1/13	7/31/15
The Cadmus Group Inc.	PE Impact Eval 2012	Watertown	345,000	100,242	244,759	4/15/14	8/31/15
Cascade Energy, Inc.	SEM Curriculum	Walla Walla	329,080	131,655	197,425	5/1/14	4/30/16
Craft3	SWR Loan Origination/Loss Fund	Portland	305,000	5,850	299,150	6/1/14	6/30/15
Craft3	Loan Agreement	Portland	300,000	100,000	200,000	6/1/14	6/20/25
CLEAResult Consulting Inc	2014 HES WA PMC	Austin	277,600	196,607	80,993	1/1/14	12/31/14
Energy Market Innovations, Inc.	Lighting Controls Savings Est	Seattle	250,000	0	250,000	10/1/14	9/30/15
The Cadmus Group Inc.	BE Impact Evaluation 2012	Watertown	250,000	238,768	11,232	1/1/14	12/31/14
EnerNoc, Inc.	Commercial SEM curriculum	Boston	216,915	102,905	114,010	6/27/14	5/30/15
J. Hruska Global	Quality Assurance Services	Columbia City	215,000	199,450	15,551	1/1/13	12/31/14
HST&V, LLC	CSEM PDC Transition Agreement	Portland	200,000	79,392	120,608	9/1/14	12/31/14
The Cadmus Group Inc.	NBE Program Impact Evaluation	Watertown	196,000	185,605	10,395	1/15/14	12/31/14
ICF Resources, LLC	NWN WA BE 2014	Fairfax	191,538	116,988	74,550	1/1/14	12/31/14
Northwest Energy Efficiency Alliance	Product Funding Agreement	Portland	171,851	152,619	19,232	6/5/14	12/31/15
Abt SRBI Inc.	Fast Feedback Surveys	New York	118,000	42,996	75,004	1/31/14	2/29/16
Navigant Consulting Inc	CORE Improvement Pilot Eval	Boulder	115,000	103,719	11,281	9/1/12	9/1/15

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Contractor	Description	*City	Est Cost	Actual TTD	Remaining	Start	End
ICF Resources, LLC	NWN DSM Initiative 2014	Fairfax	113,850	84,820	29,030	1/1/14	12/31/14
Ecotope, Inc.	Gas Hearth Study	Seattle	105,104	105,096	8	10/10/13	9/1/15
The Cadmus Group Inc.	RTU Tune-up Evaluation	Watertown	105,000	102,841	2,159	1/1/14	12/31/14
ICF Resources, LLC	OSU CHP Performance Monitoring	Fairfax	100,000	33,390	66,610	7/1/13	6/30/16
CLEAResult Consulting Inc	QA Reinspection Services	Austin	96,116	24,531	71,585	4/28/14	3/30/15
PWP, Inc.	NBE Process Evaluation	Gaithersburg	95,000	83,880	11,120	1/15/14	12/31/14
Clean Energy Works, Inc.	EE Incentive & Services Agmt	Portland	94,600	0	94,600	7/1/14	12/31/14
1000 Broadway Building L.P.	Pay-for-Performance Pilot	Portland	88,125	0	88,125	10/17/14	11/1/18
The Cadmus Group Inc.	Commercial Op Pilot Eval	Watertown	85,000	85,000	0	7/1/11	9/1/15
The Cadmus Group Inc.	PE SEM Evaluation	Watertown	80,000	0	80,000	10/1/14	8/31/15
Research Into Action, Inc.	SWR OnBill Repmt Pilot Eval	Portland	60,000	0	60,000	11/1/14	3/30/16
PWP, Inc.	SEM Intro Pilot Evaluation	Gaithersburg	40,000	21,490	18,510	10/28/13	10/2/15
Research Into Action, Inc.	C&I Qualitative Research	Portland	40,000	7,576	32,424	10/1/14	2/28/15
CLEAResult Consulting Inc	New Homes QA Inspections	Austin	37,100	32,893	4,207	4/28/14	12/31/14
David Lineweber	Heat Pump Study	Tigard	35,250	24,000	11,250	3/20/14	3/31/15
The Cadmus Group Inc.	Lighting Pilot Evaluation	Watertown	35,000	32,082	2,918	4/1/12	12/31/14
Apex Analytics LLC	Delphi Panel Study	Boulder	30,000	0	30,000	9/1/14	3/31/15
Apex Analytics LLC	Gas Thermostat	Boulder	30,000	0	30,000	10/20/14	12/31/15
Btan Consulting	ESP Cert Boot Camp Evaluation	Madison	30,000	16,338	13,663	2/1/14	4/30/15
Energy Center of Wisconsin	Billing Analysis Review	Madison	30,000	1,110	28,890	11/1/13	12/31/14
MetaResource Group	Intel D1X Megaproject	Portland	30,000	9,485	20,515	10/10/11	12/31/14
Michael Blasnick & Associated	Billing Analysis Process	Boston	30,000	3,938	26,063	1/1/10	12/31/14
Seattle City Light	Lighting Design Lab	Seattle	30,000	30,000	0	1/1/14	12/31/14
The Cadmus Group Inc.	Pay For Performance Pilot Eval	Watertown	30,000	5,313	24,688	9/25/13	12/31/14
Pivotal Energy Solutions LLC	License Agreement	Gilbert	29,500	17,217	12,283	3/1/14	12/31/14
LightTracker, Inc.	CREED Data	Boulder	26,000	0	26,000	10/3/14	8/1/15
Evergreen Economics	Air Sealing Pilot Evaluation	Portland	25,000	0	25,000	10/15/14	12/31/15
Sustainable Northwest	Klamath PAC Ag Program Aware	Portland	24,992	3,124	21,868	10/1/14	6/10/15
Portland General Electric	PGE Efficiency Seminars 2014	Portland	24,950	24,950	0	1/1/14	12/31/14
Forrest Marketing	Small Manuf Market Research	Portland	24,500	4,900	19,600	9/30/14	3/30/15
Triple Point Energy Inc.	SEM workshops	Portland	24,240	12,328	11,912	6/10/14	1/31/15
MetaResource Group	Pay-for-Performance Pilot Eval	Portland	20,000	2,250	17,750	8/5/14	12/31/15
Northwest Energy Efficiency Alliance	NEEA Product Funding Agreement	Portland	20,000	20,000	0	2/1/14	3/1/15
WegoWise Inc	benchmarking license 2015	Boston	20,000	3,456	16,544	6/15/14	12/31/15
Consortium for Energy Efficiency	Membership Dues - 2014		18,889	18,889	0	4/16/14	12/31/14
Navigant Consulting Inc	SEM workshop	Boulder	14,900	14,443	457	6/15/14	11/30/14
CLEAResult Consulting Inc	Professional Services Agmt	Austin	11,613	5,640	5,973	10/15/14	10/15/16
Lane Community College, NEEI Science Division	2014 Scholarship Grant	Eugene	10,600	0	10,600	1/1/14	12/31/14
American Council for and Energy Efficient Economy	High Participation Rates		10,000	10,000	0	12/23/13	12/31/14

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Contractor	Description	*City	Est Cost	Actual TTD	Remaining	Start	End
American Council for and Energy Efficient Economy	Extended Motor Products Label		10,000	10,000	0	12/23/13	3/31/15
Pivotal Energy Solutions LLC	EPS New Home dbase construct	Gilbert	10,000	10,000	0	7/1/14	6/30/16
Research Into Action, Inc.	Professional Services	Portland	9,590	0	9,590	9/1/14	8/31/16
Bridgetown Printing Company	January 2014 Bill Insert	Portland	8,509	8,509	0	1/1/14	12/31/14
City of Portland Bureau of Planning & Sustainability	City of Portland Workshops	Portland	8,000	8,000	0	1/1/14	12/31/14
City of Portland Bureau of Planning & Sustainability	Sponsorships - 2015	Portland	8,000	0	8,000	1/1/15	12/31/15
TRC Engineers Inc.	SEM workshop	Irvine	7,400	6,545	855	6/15/14	11/30/14
Northwest Environmental Business Council	Future Energy Conference 2014	Portland	6,500	6,500	0	2/13/14	12/31/14
Cascadia Region Green Building Council	Cascadia Green Bldgs Sponsor	Portland	5,000	5,000	0	1/15/14	1/15/15
	Energy Efficiency Programs Total:		**127,942,407**	**75,944,032**	**51,998,375**		
Joint Programs							
D&R International LTD	Better Data Better Design	Silver Spring	133,500	25,000	108,500	4/30/13	7/31/14
Portland State University	Technology Forecasting		87,437	71,075	16,362	11/7/11	12/31/14
Research Into Action, Inc.	Residential Awareness Study	Portland	70,882	68,339	2,543	5/1/14	12/31/14
The Cadmus Group Inc.	Evaluation Consultant	Watertown	39,045	29,125	9,920	6/20/13	2/28/15
Watkins and Associates, Inc.	EPS & Solar Valuation Study	Portland	38,000	35,555	2,445	2/1/14	1/31/15
E Source Companies LLC	E Source Service Agreement	Boulder	36,500	36,500	0	2/1/14	1/31/15
Research Into Action, Inc.	EH Attic Air Sealing Pilot Eva	Portland	30,000	0	30,000	10/8/14	9/30/16
CoStar Realty Information Inc	Property Data	Baltimore	26,420	21,003	5,418	6/1/11	6/28/15
Research Into Action, Inc.	Fast Feedback Analysis	Portland	25,000	3,948	21,053	9/1/14	3/1/15
Navigant Consulting Inc	P&E Consultant Services	Boulder	22,530	22,530	0	1/15/14	12/30/15
Pinnacle Economics Inc	Economic Impacts Study	Camas	20,720	20,720	0	2/1/14	2/1/15
American Council for and Energy Efficient Economy	ACEEE Sponsorships - 2014		7,500	7,500	0	1/1/14	12/31/14
Bruins Analysis and Consulting	Fast Feedback Reporting	Bremerton	6,000	3,000	3,000	6/1/14	4/30/15
	Joint Programs Total:		**543,534**	**344,294**	**199,240**		
Renewable Energy Program							
JC-Biomethane LLC	Biogas Plant Project Funding	Eugene	2,000,000	676,056	1,323,944	10/18/12	10/18/32
Oregon Institute of Technology	Geothermal Resource Funding	Klamath Falls	1,550,000	0	1,550,000	9/11/12	9/11/32
Central Oregon Irrigation District	COID Juniper Phase 2	Redmond	1,281,820	0	1,281,820	7/19/13	7/19/33
Farm Power Misty Meadows LLC	Misty Meadows Biogas Facility	Mount Vernon	1,000,000	500,000	500,000	10/25/12	10/25/27
Three Sisters Irrigation District	TSID Hydro	Sisters	1,000,000	700,000	300,000	4/25/12	9/30/32
Farmers Irrigation District	FID - Plant 2 Hydro	Hood River	825,000	0	825,000	4/1/14	4/1/34
Tioga Solar VI, LLC	Photovoltaic Project Agreement	San Mateo	570,760	570,760	0	2/1/09	2/1/30
City of Medford	750kW Combined Heat & Power	Medford	450,000	225,000	225,000	10/20/11	10/20/31
City of Pendleton	Pendleton Microturbines	Pendleton	450,000	150,000	300,000	4/20/12	4/20/32
RES - Ag FGO LLC	Biogas Manure Digester Project	Washington	441,660	441,660	0	10/27/10	10/27/25
RES - Ag FGO LLC	Biogas Manure Digester - FGO	Washington	441,660	110,415	331,245	10/27/10	10/27/25
Oak Leaf Energy Partners Ohio, LLC	BVT Sexton Mtn PV	Denver	355,412	0	355,412	5/15/14	12/31/34

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Contractor	Description	*City	Est Cost	Actual TTD	Remaining	Start	End
CIty of Gresham	City of Gresham Cogen 2		330,000	0	330,000	4/9/14	7/9/34
K2A Properties, LLC	Doerfler Wind Farm Project	Aumsville	230,000	219,867	10,133	5/20/10	5/20/30
Confederated Tribes of the Umatilla Indian Reservation	Small Wind Project Funding	Pendleton	170,992	170,992	0	7/25/13	12/31/28
Klamath Basin Geopower Inc	Henley Proj Dev Assistance	Reno	150,000	42,490	107,510	4/10/14	8/31/15
City of Astoria	Bear Creek Funding Agreement	Astoria	143,000	0	143,000	3/24/14	3/24/34
Bloomberg LP	Insight Services	San Francisco	114,800	103,783	11,017	4/1/11	1/1/15
Klamath Basin Geopower Inc	Poe Valley Proj Dev Assistance	Reno	112,874	63,000	49,874	4/10/14	6/30/15
Clean Power Research, LLC	PowerClerk License	Napa	104,278	102,408	1,870	7/1/14	6/30/15
Gary Higbee DBA WindStream Solar	Solar Verifier Services	Eugene	100,000	9,590	90,410	8/1/14	7/31/16
Wallowa Resources Community Solutions, Inc.	Upfront Hydroelectric Project		100,000	15,790	84,210	10/1/11	10/1/15
Deschutes Valley Water District	Early Development Assistance	Madras	68,373	0	68,373	7/23/13	6/30/15
Mapdwell LLC	Mapdwell Account	Boston	66,381	48,195	18,186	3/17/14	3/31/16
Mariah Wind LLC	Development Assistance Funding	Victor	65,300	0	65,300	10/25/13	12/31/14
The Cadmus Group Inc.	Residential Solar Mkt Research	Watertown	60,000	58,794	1,206	3/18/14	12/31/14
City of Klamath Falls	Klamath Falls Biopower Project	Klamath Falls	49,927	0	49,927	1/9/14	12/31/14
State of Oregon Dept of Geology & Mineral Industries	Lidar Data	Portland	40,000	0	40,000	11/7/14	12/1/15
Clean Energy States Alliance	CESA Year 12 (2015)		39,500	39,500	0	7/1/14	6/30/15
Wallowa Resources Community Solutions, Inc.	Hydroelectric Pipeline		25,000	8,000	17,000	6/26/14	2/28/15
University of Oregon	UO SRML Contribution - 2014	Eugene	24,999	24,999	0	3/10/14	3/10/15
Robert Migliori	42kW wind energy system	Newberg	24,125	17,037	7,088	4/11/07	1/31/24
Solar Oregon	Education & Outreach Services	Portland	24,000	20,000	4,000	1/1/14	12/31/15
Bonneville Environmental Foundation	REC policy analysis	Portland	20,000	5,873	14,128	6/15/14	12/31/14
Ecofys US, Inc.	Renewable Energy Consultant	Corvallis	18,000	18,000	0	4/7/14	3/31/16
Warren Griffin	Griffin Wind Project	Salem	13,150	9,255	3,895	10/1/05	10/1/20
Clean Energy States Alliance	CESA ITAC		10,000	10,000	0	1/1/14	12/31/14
Garrad Hassan America Inc	RE Consulting Services	San Diego	6,841	6,841	0	6/11/13	2/28/15
OSEIA-Oregon Solar Energy Industries Assoc	OSEIA 2014 Conference		5,000	5,000	0	2/6/14	12/31/14
Solar Oregon	Solar Now! University Sponsor	Portland	5,000	5,000	0	3/28/14	12/31/14
eFormative Options LLC	RE Evaluation Consultant	Vashon	3,000	3,000	0	3/1/13	2/28/15
	Renewable Energy Program Total:		**12,490,852**	**4,381,303**	**8,109,549**		
	Grand Totals:		**151,497,735**	**86,329,713**	**65,168,022**		

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Financial Glossary

(for internal use) - updated April 16, 2014

Administrative Costs

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

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

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

Allocation

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

Allocation Cost Pools

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

Auditor's Opinion

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

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

Board-approved Annual Budget

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

Reserves

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

Committed Funds

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

Contract obligations

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

Cost-Effectiveness Calculation

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

Dedicated Funds

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

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

Direct Program Costs

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

Direct Program Evaluation & Planning Services

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

Escrowed Program (Incentive) Funds

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

Expenditures/Expenses

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

FastTrack Projects Forecasting

Module developed in FastTrack to provide information about the timing of future incentive payments, with the following definitions**:**

- Estimated-Project data may be inaccurate or incomplete. Rough estimate of energy savings, incentives and completion date by project and by service territory.
- Proposed-Project that has received a written incentive offer but no agreement or application has been signed. Energy savings, incentives and completion date to be documented by programs using this phase. For Renewable projects-project that has received Board approval.
- Accepted-Used for renewable energy projects in 2nd round of application; projects that have reached a stage where approval process can begin.
- Committed-Project that has a signed agreement or application reserving incentive dollars until project completion. Energy savings/generations, incentives and completion date by project and by service territory must be documented in project records and in FastTrack. If project not demonstrably proceeding within agreed upon time frame, committed funds return to incentive pool. Reapplication would then be required.
- Dedicated-Renewable project that has been committed, has a signed agreement, and if required, has been approved by the board of directors.

Incentives

I. **Residential Incentives**

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

II. **Business Incentives**

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

III. **Service Incentives**

- Incentives paid to an installation contractor which serves as a reduction in the final cost to the participant for the installation of an energy efficiency or renewable energy measure.
- Payment for services delivered to participants by contractors such as home reviews and technical analysis studies.
- End-user training, enhancing participant technical knowledge or energy efficiency practices proficiency such as “how to” sessions on insulation, weatherization, or high efficiency lighting.
- CFL online home review fulfillment and PMC direct installations.
- Technical trade ally training to enhance program knowledge.
- Incentives for equipment purchases by trade allies to garner improvements of services and diagnostics delivered to end-users, such as duct sealing, HVAC diagnosis, air filtration, etc.

Indirect Costs

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

IT Support Services

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

Outsourced Services

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

Program Costs

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

Program Delivery Expense

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

Program Legal Services

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

Program Management Expense

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

Program Marketing/Outreach

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

Program Quality Assurance

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

Program Reserves

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

Program Support Costs

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

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

Project Specific Costs (for Renewable Energy)

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

Savings Types

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

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

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

Total Program Expenses (line item on income statement)

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

Trade Ally Programs & Customer Service Management

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

True Up

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

Tab 6

Policy Committee Meeting

November 24, 2014, 3:00–4:30 pm

Attending by phone and videoconference
Roger Hamilton, Ken Canon, Debbie Kitchin, Alan Meyer, John Reynolds

Attending at Energy Trust offices
Amber Cole, Kim Crossman, Fred Gordon, Margie Harris, Steve Lacey, Dave McClelland, Debbie Menashe, Thad Roth, Jay Ward, Peter West

Policies for Review

1. Cost Effectiveness Policy

The board-approved "Cost-Effectiveness Policy and General Methodology for Energy Trust of Oregon" is up for routine, three-year review. Staff proposed changes to update terminology in the policy to be consistent with the recent Oregon and Washington utility commission orders regarding cost-effectiveness. The Policy Committee accepted the staff's proposed revisions and recommended that the revised policy be presented to the full board for approval as a consent agenda item.

2. Self-Direct Policy

At the request of a committee member, the board-approved policy on "Eligibility of Self-Direct Businesses for Energy Trust Incentives" was reviewed in advance of its routine, three-year review. The Committee asked for staff consideration as to whether the Self-Direct prohibition policy, in which participants are required to refrain from using self-direct credits for 36 months, should be increased. To evaluate this question, staff analyzed the costs and benefits of "mega-projects" approved by the board. The analysis showed that all of these projects took less than three years for the ratepayer system to recoup investment. Based on this, staff did not recommend extending the time required for mega project sites to refrain from self-direction compared to other projects. Committee members discussed whether individual customers may be able to time projects to take advantage of both self-direct credits and Energy Trust full incentives. Staff advised that it has not seen any evidence of this type of activity, but will monitor as possible and consider changes to the Self-Direct Policy if such activities appear to be a problem.

In presenting this policy for to the committee for review, staff also considered whether to suggest revising this policy in anticipation of hitting the large-customer funding cap. By removing service incentives from the policy, we could deploy technical resources and continue to get savings without spending as much. However, we concluded that it would be better to look at the large-customer-funding-cap issues comprehensively when the cap appears imminent, rather than dealing with them policy by policy.

As a result, staff proposed only format adjustments to the Self-Direct Policy, and the Policy Committee accepted staff's proposed revisions and recommended that the revised policy be presented to the full board for approval as a consent agenda item.

3. Combined Heat and Power (CHP) Policy

The board-approved "Fossil-Fuel Combined Heat and Power Policy" is up for routine, three-year review. Staff proposed three changes to: (1) clarify the reasons for the policy in the introduction; (2) clarify that incentives will be offered only if a CHP project reduces electricity or natural gas consumption through increased efficiency in energy use (consistent with Oregon's regulatory definition of energy conservation); (3) recognize that risks posed by CHP projects, like other

efficiency measures, can be managed with contract provisions, not just incentive adjustments, and (4) not require staff to compare fossil-fuel CHP incentives with renewable energy CHP incentives, because the comparison is impracticable. The Policy Committee has additional questions and expressed a desire for more time for a more robust discussion on this policy. As a result, a decision on any revisions to this policy is postponed and staff will return to the next Policy Committee meeting, scheduling more time for a discussion on the proposed changes, including a discussion regarding staff's draft technical guidelines which help staff to identify efficient and appropriate CHS projects for Energy Trust support. No action is proposed for the next full board meeting on this policy at this time.

Peter West then briefly updated committee members on preliminary thoughts and timing for a possible reconsideration of the Balanced Competition Policy in 2015. In Q1 2015, staff expects to outline plans and scheduling for rebidding of program management contracts. In connection with that planning, staff will report back to the committee regarding any proposed changes or considerations regarding the Balanced Competition Policy. No changes are proposed by staff at this time.

Staff Presentations

1. Presentation on Legislative and Outreach Strategy Plans for 2015

Jay Ward, Senior Community Relations Manager, who has been with Energy Trust since April, reported on his efforts and plans to expand and enhance Energy Trust of Oregon outreach to community leaders, policy makers, business and trade associations. Jay and Amber Cole explained how their efforts are focused on expanding opportunities for reaching and serving customers. Jay described his efforts to create and enhance relationships and to leverage relationships to provide support and outreach for Energy Trust's work. Jay and Amber also previewed activities related to the 2015 legislative session, and proposed ways for Board members to be involved as legislators express interest in Energy Trust activities.

2. Proposal Regarding Quarterly Reporting

Amber Cole summarized proposed changes to Energy Trust quarterly reports to the Oregon Public Utility Commission and the Board of Directors. The proposed changes respond to a Management Review recommendation to explore opportunities for streamlining reporting related to the first and fourth quarters of the year. Amber described the rationale for reduced reporting and workload impacts for the organization. Committee members were highly supportive of the new proposed approach.

Preview of Board Meeting Presentations

1. Amendment to Services Agreement with Energy Savvy

Debbie Menashe briefly previewed an upcoming board presentation regarding a proposed contract amendment to Energy Trust's existing contract with Energy Savvy. Energy Trust has engaged Energy Savvy since 2012 for design and maintenance of an on-line audit tool for residential customers. Staff will propose to extend this contract through 2015. This amendment will bring the contract with Energy Savvy over $500,000, thereby requiring board approval. In the short term, staff believes it is appropriate to utilize Energy Savvy's specialized experience and knowledge. Staff will conduct a competitive process for this service in the longer term and expects to issue a Request for Information in the first quarter of 2015 to begin the process. Committee members appreciated the presentation and support presenting this contract amendment approval to the full board for approval as a consent agenda item.

2. Solar RFP Proposal Recommendation

Dave McClelland, Energy Trust's Solar Program Manager, previewed a presentation regarding a solar project requiring full board approval. This project is recommended as a result of a

competitive solicitation for larger solar projects in PGE territory conducted by Energy Trust's solar program earlier in 2014. Three applicants responded with custom solar proposals. After review of each of the proposals, staff has selected one of the proposals to recommend to the Board for approval. The committee was provided information regarding the proposed structure of the project, as well as the costs and benefits of funding at the recommended level. Of note is that this is the first utility scale project supported by Energy Trust where Energy Trust incentives are the only state support involved; no BETC is included in the project finance profile of this project. Committee members were impressed with the relatively low cost of the proposal, and David explained that he believes that as Energy Trust has supported these projects throughout the state, a lot of learning and experience has occurred enabling developers to lower business planning costs. Equipment costs are also continuing to decrease.

Renewable Energy Advisory Council (RAC) Member Appointments

In accordance with RAC and board rules, Policy Committee consent is required for formal membership on Energy Trust's advisory councils. Staff requested Policy Committee consent for appointment of two new members to the RAC: Diane Broad and Kari Greer.

Diane Broad, Senior Policy Analyst at Oregon Department of Energy, has been nominated by ODOE to replace Matt Krumenauer. Staff supports this recommendation. Diane has nearly 20 years' experience in the energy industry. She has an engineering background and has designed transmission and distribution systems, interconnection facilities for renewable energy generation, and telemetry for integration of distributed generation. Prior to joining ODOE she served as the principal investigator for pilot projects in the Pacific Northwest demonstrating the thermal energy storage capability of residential, commercial and industrial loads to provide real-time balancing services to the grid, improving the ability of the transmission system to accommodate variable renewable energy. Ms. Broad holds a BS in Electrical Engineering from Colorado State University and is a registered Professional Engineer in Oregon. She brings to the RAC deep expertise and experience in interconnection, integration, transmission, and distribution for renewable energy projects.

Kari Greer, Pacific Power's Senior Community Relations Manager, has been nominated by Pacific Power to replace its former representative Tashiana Wangler. Staff supports this recommendation. As Senior Community Relations Manager, Kari primarily focuses on Oregon energy efficiency. This entails working closely with Energy Trust of Oregon on program implementation in Pacific Power service territory and customer service delivery. Kari has an 18+ year history with Pacific Power. Her work has encompassed customer service management, internal communications, power delivery and outage management, training department management, community outreach and government relations. Kari has received several awards during her tenure including Call Center of the Year Award, Oregon Main Street Leadership Award, and two-time winner of PacifiCorp's Spirit of Excellence Award. Kari brings to the RAC understanding of Pacific Power's policies and operations.

Committee members agreed that Diane and Kari will bring relevant expertise to the RAC and approved their appointments.

Update on REC Market Study

Thad Roth provided a brief update of a study of the Renewable Energy Certificate (REC) markets as presented to the Policy Committee in May of this year as part of the three year review of Energy Trust's REC policy. Staff contracted with Bonneville Environmental Foundation to conduct the study encompassing the following scope in two phases:

- Phase 1 will characterize the current markets for Renewable Energy Certificates (RECS) in Oregon. The report will provide a brief history of the REC market, the function of the compliance market as it is structured in Oregon, the role and function of the voluntary market and how it operates in Oregon, and a description of the regulatory environment established to direct the current and future market.

- Phase 2 will provide a description of how Energy Trust's REC policy functions, the current and forecast REC production, how Energy Trust's REC policy fits into the current and future compliance and voluntary markets in Oregon, and the status of existing efforts to deliver RECs to utilities.

Staff expects to return to the Policy Committee in February 2015 to present the study and to discuss what changes to the REC Policy might be considered in response to the report.

Update on GP Camas Situation

Margie and Steve updated the committee on discussions with the OPUC, Pacificorp and GP Camas regarding the GP Camas decision to leave the Pacificorp system and purchase power from Clatskanie Public Utility District (PUD) beginning in 2016. Energy Trust has several incentive commitments outstanding to this customer as well as additional completed technical studies. Energy Trust has briefed the OPUC staff and expects direction from the Commissioners in early December. Staff will keep the board informed.

The meeting adjourned at 4:40 pm. The next meeting of the Policy Committee will be scheduled soon.

Tab 7

Renewable Energy Advisory Council Meeting Notes

November 21, 2014

Attending from the council:
Bruce Barney, Portland General Electric
Kari Greer, Pacific Power
Robert Grott, Northwest Environmental Business Council
Juliet Johnson, Oregon Public Utility Commission
Elizabeth McNannay, Oregon Solar Energy Industries Association
Matt Mylet, Beneficial State Bank
Frank Vignola, Solar Monitoring, University of Oregon
Dick Wanderscheid, Bonneville Environmental Foundation
Peter Weisberg, The Climate Trust

Attending from Energy Trust:
Chris Dearth
Juliett Eck
Sue Fletcher
Matt Getchell
Fred Gordon
Jennifer Hall
Mia Hart
Jed Jorgensen
Betsy Kauffman
Dave McClelland
Elaine Prause
Thad Roth
Lizzie Rubado
Peter West

Others attending:
Rob Del Mar, Oregon Department of Energy
Bill Eddie, OneEnergy
Shawn Foster, Portland General Electric
Alan Meyer, Energy Trust board
John Reynolds, Energy Trust board
Laysan Unger, Cascade Policy Institute

Welcome and introductions
Betsy Kauffman called the meeting to order at 9:30 a.m. and reviewed the agenda. The agenda, notes and presented materials are available on Energy Trust's website at www.energytrust.org/About/public: meetings/REACouncil.aspx.

1. 2015 annual budget and 2015-2016 action plan
Thad Roth presented a summary of the 2015 annual budget and 2015-2016 action plan and minor changes that have occurred since the last presentation. This budget will go to the board for approval on December 12.

> In 2015, the renewable energy sector budgeted $16.2 million in expenditures. Other Renewables represents $4.7 million of that budget and Solar represents $11.5 million. The total generation in 2015 is forecast to be 3.47 aMW. Energy Trust cannot fully predict when projects will come online, and some dollars may shift from one budget year to the next when projects are delayed.
>
> New renewable energy funding for 2015 has increased by $1 million, split evenly between the two utilities. This is the result of an increase in forecasted revenue and more dollars available as a result of a canceled project.
>
> On an activity basis, the 2015 budget is just over $12 million for Other Renewables and just under $12 million for Solar program. For Portland General Electric, the budget in 2015 will be heavily weighted to support solar while continuing to provide resources for

other technologies. This is reflective of the opportunities in the territory. For Pacific Power, the allocation between technologies is the opposite. More opportunities exist for Other Renewables projects. We are committed to having a viable Solar program in Pacific Power territory, and we have flexibility to distribute any unallocated Other Renewables incentives to support the solar program.

Alan Meyer: Solar costs per average megawatt look lower in 2015 as compared to 2014. Are they lower?
Thad: The costs of solar projects are declining both for standard and utility-scale projects.

Peter Weisberg: How has the 2014 forecasted budget compared to performance?
Thad: It has been on target. Some dollars allocated for Other Renewables have shifted to standard Solar.
Alan: Can you shift money from solar to non-solar if demand shifted?
Thad: Yes, we can shift funds either way.

Juliet Johnson: Is the total budget lower in 2015?
Peter West: The total budget is slightly higher in in the round two budget than in the round one budget. This change reflects a little more money for renewables, and more money for residential energy efficiency with increased demand for LEDs. The overall budget is $3.6 million less than last year.

Thad: The Other Renewables budget will include incentives for four projects currently under contract and expected to complete next year. We expect ribbon cuttings for a number of these as a result. Two requests for proposals are scheduled. If we do not allocate all dollars through these efforts, we will shift Other Renewables resources to the Solar program. Outreach efforts will focus on hydropower and biopower projects, where we see the most opportunity for other funding. We will focus on building a pipeline of projects in these areas. We will also execute the first year of a hydropower initiative.

Bruce Barney: Will Other Renewables generation mostly be in Pacific Power territory?
Thad: Hydropower projects are more concentrated in Pacific Power territory, but wastewater treatment plans are located in both PGE and Pacific Power territories.

Juliet: Can you talk in detail about your hydropower initiative?
Jed Jorgensen: This is a continuation of what we have done with irrigation districts. We see other opportunities to promote hydropower as a strategy for water management. Last week, we closed a request for proposals for consultants to develop the next piece of this hydropower strategy. This approach will bring together the irrigation and development community. We want to include opportunities on farms and within pipes.
Kari Greer: Where are the respondent consultants based?
Jed: Most are in the Northwest and some are in the Southwest. Respondents included individual consultants and larger teams.

Thad: Standard solar installations were strong in 2014. In 2014, we made our 1,000th payment for a standard solar project and reached our annual generation goal. We expected to exceed goal with a total of 1200 to 1300 projects. We have the largest pipeline since 2009.

We expect that there may be challenges with Other Renewables allocating dollars to projects, and we want to move quickly to apply those dollars to bigger or more innovative solar projects. We will continue to help trade allies reduce the soft costs of

customer acquisition, such as marketing costs. Mapdwell is one example of a solution that we are testing. We will create a soft cost road map for solar in 2015.

Bruce: Do we have feedback on Mapdwell's performance yet?
Lizzie Rubado: It has been very well received, but we have had to make adjustments to how information is displayed. We are working with the developers on enhancements, and we will conduct marketing efforts once this development is completed in January 2015. We have heard that Mapdwell tool is bridging the gap that exists in the market. We need to determine if it is effective at generating projects and reducing customer acquisition costs. At this time next year, we will have more information to determine if we will expand Mapdwell more broadly.

1. Solar request for proposals for PGE
Dave McClelland: Energy Trust and the OPUC identified four funding priorities for the Solar program. The fourth funding priority is to reduce above-market costs associated with innovative and custom solar projects, as funds are available. In September, resources from an Other Renewables request for proposals were shifted to Solar for this purpose. The program issued an RFP for $2 million. Applications were due in October, and staff reviewed three applications.

We selected one project for funding, Steel Bridge Solar. The developer is Bill Eddie, OneEnergy Renewables, and is in attendance today. The project is a fixed-tilt system with expected generation of 3800 megawatt hours per year. This project is in Polk County. It is reasonably advanced in the development process. The developer has a contract agreement in place with PGE. The development team includes NRG Energy as the project owner and operator and Christensen Electric as the contractor. The goal is commercial operation in Q3 of 2015.

Steel Bridge Solar will be Energy Trust's first custom solar project with costs below $2 per watt. The request is for $2 million. The above-market cost is projected to be $3.1 million. Our proposal is to move forward with the full $2 million offer. Energy Trust will take 75 percent of Renewable Energy Certificates, RECs, with the majority coming in later years. If the project developer needed more of the RECs, that would be up for negotiation. This project will go to the board for approval on December 12.

Alan: The Steel Bridge Solar project financials look to be underwater by $1 million. Why would the developer move forward with this project?
Dave: There are a few factors. There is the opportunity to sell RECs. In fact, the developer expressed some interest in having us not cover all of the above market costs so that the developer can take procession of more RECs. We also modeled the project as 100 percent equity and the developer may have lower-cost funds. The developer is working with a large portfolio of projects and may be able to take a lower rate of return. We were also conservative in estimating the energy generation.
Bill Eddie: We have contracted to sell RECs for five years. It is a positive project for our company.

Rob Grott: They were able to negotiate higher rates in the Power Purchase Agreement?
Dave: Yes they are receiving higher rates but they are not negotiated. They received a prior rate that is no longer available.

Fred Gordon: The project is located 1,500 feet from the substation. Is there added value because this project reduces future needs for peaking resources?

Bruce: As we shift from winter to summer peaking utility, we will look at that. It is an intermittent resource and you cannot count on it fully. This project would not make much difference to us in that perspective.

Bruce: I am curious about the incentive award after portions of the project are already underway.
Dave: Clearly there are above-market costs. This project needs this funding to go forward. This incentive will still be awarded prior to construction and permitting.
Bill: Our approach is to find the best sites for solar installations and advance a project so that it is viable. We assume that we have to spend some money up front to know if a project is viable.
Alan: For Energy Trust, this is a low-cost project and we see value of the investment.

Frank Vignola: Has OneEnergy completed other projects?
Bill: This fits with a portfolio of projects. We have another project in Oregon that is going to Pacific Power for compliance.

Juliet: Who will the Renewable Energy Certificates go to?
Bill: They will go through an aggregator and then to PGE's Green Power Program.

Matt Mylet: Was single-axis tracking an option for this project?
Bill: This approach doesn't pencil out in the Willamette Valley yet as compared to fixed axis. The size limitation also pulled us in this direction, and it is a sloped site.

John: Is there possible agricultural purpose for the land once the solar is installed?
Bill: You can graze sheep on the site once the solar is in place.

2. Solar strategic plan

Dave McClelland presented on the Solar program's new strategic plan and requested input from council members. The plan's mission is "to create a vigorous and sustainable market for solar in Oregon that ultimately can thrive without incentives."

> The goals detailed in the plan include more solar installations than in the previous five years, 5 aMW of new solar generation, changes to lower soft costs and funding for some large, low-cost projects. The guiding principles for solar incentives in the plan include: make solar a reasonable investment, support as many installations as possible, support residential and commercial market, drive and respond to price reductions, adapt to changes in other incentives and provide long-term value for ratepayers.
>
> Some challenges will occur over the next five years. The first challenge is expiring tax incentives, which creates uncertainty and will change project economics. Future module pricing is also uncertain, and there has been a national debate about net-metering and the value of solar to utilities and ratepayers. There are possible policy changes being considered in Oregon. In this five-year timeframe, it is possible that the only incentives that will remain will be a federal 10 percent investment tax credit for commercial projects and Energy Trust cash incentives.
>
> Looking at applications to our program, we see a decline in the average incentive rate and an increase in aMW generated.

Alan: Why did aMW go up and costs go down?
Dave: We found the right spot for our incentives to drive demand and reduce costs.

Bruce: We have seen these data trends related to the end of the Volumetric Incentive Rate program.
Dave: We do see that occurring in the second half of this year, particularly for commercial.

Alan: What percentage of solar systems are third-party leased?
Dave: Last year it was two-thirds. This year it is 55 percent. We increased the incentive for direct-owned customer systems.

Juliet: What will cost reductions come from?
Dave: To date, most cost reductions have been from hardware. We anticipate soft costs will also contribute to future reductions.

Elizabeth McNannay: What is the impact of the Renewable Energy Development, RED, grant program going away?
Dave: The RED grant program has very little impact on our model.

Bruce: Did you include an escalation on utility rates?
Dave: Yes, we typically include a 2 percent escalation rate.

Dave: Strategies to achieve five-year goals are to reduce soft costs, maintain consistent marketing, support some large projects and participate in new opportunities. Reduction in soft costs will come from process improvements at Energy Trust, Oregon Department of Energy and with trade allies, and from educational tools like Mapdwell.

> A first step for utility and agency coordination is underway as Oregon Department of Energy and Energy Trust plan to use the same application processing tool next year, PowerClerk. Solar will have additional marketing budget next year. We also want to support some large scale projects when opportunities arise. We will be open to opportunities that come up, such as community solar, but need to balance these opportunities with our cost-reduction strategy. We want to support innovation where it adds value to the solar marketplace.

Rob Grott: The SunShot initiative with the U.S. Department of Energy sees interconnection costs as a challenge, but we don't see it. Oregon Department of Energy has a working group looking at this issue. We think a single inspection would be best. We also see integration on documentation as important. We have removed all documents that are not needed anymore. We are also following Energy Trust's lead to Power Clerk.

Dick Wanderscheid: Do you inspect all systems?
Dave: Yes. We find issues on many systems.
Matt Mylet: Are there repercussions for quality issues?
Dave: We have quality contractors in the Trade Ally Network, and we support them in the installation process. No contractor has failed. We need to determine how we can move forward at a lower cost without sacrificing quality.

Bruce: Do you expect to see additional efforts like Solarize?
Dave: There are some Solarize efforts in progress now around the state. We won't lead efforts, but we may provide marketing support.

Matt Mylet: Do you track on changes in racking, such as how panels are affixed to the roof? Is that information broadly disseminated?

Jennifer Hall: Changes to racking technology and approach are slowly moving into Oregon. Energy Trust can support getting that information out.

Elizabeth: What would a new opportunity for low-income customers look like?
Dave: We are interested in other people coming to us with ideas, and we will support others as they bring opportunities forward. We are going to focus on bringing down incentive costs.

Fred: Is it worth having a five-year goal to have a full dialogue with utilities about how to build solar technology into transmission and distribution planning?
Dave: I am getting data requests from utilities who want to know about our system installations over the last 10 years. That data will be important to the utilities. We are hearing from PGE that they want to look at that as part of the IRP process. We can play a role and support them.

Dick: Good job on this plan. It looks well positioned for adaptive management and to keep momentum going.

3. Public comment
No public comment.

4. Meeting adjournment
Betsy thanked the council members for their participation and adjourned the meeting at 11:45 a.m. The next full council meeting is scheduled for February 4, 2015.

Conservation Advisory Council Meeting Notes

November 21, 2014

Attending from the council:
Brent Barclay, Bonneville Power Administration
Warren Cook, Oregon Department of Energy
Wendy Gerlitz, NW Energy Coalition
Garrett Harris, Portland General Electric
Holly Meyer, NW Natural
Andria Jacob, City of Portland
Don Jones, Jr., Pacific Power
Juliet Johnson, Oregon Public Utility Commission
Don MacOdrum, Home Performance Guild of Oregon
Stan Price, Northwest Energy Efficiency Council

Attending from Energy Trust:
Tom Beverly
Amber Cole
Kim Crossman
Fred Gordon
Marshall Johnson
Oliver Kesting
Steve Lacey
Spencer Moersfelder
Ed Wales
Jay Ward
Peter West

Others attending:
Jeremy Anderson, WISE
Scott Davidson, Clean Energy Works
Cameron Gallagher, Nexant
Kendall Hansen, CLEAResult
Mark Kendall, Energy Trust board
Alan Meyer, Energy Trust board
Tim Miller, Clean Energy Works
Bob Stull, CLEAResult
Becky Walker, CLEAResult

1. Welcome and introductions

Kim Crossman convened the meeting at 1:30 p.m. The agenda, notes and presentation materials are available on Energy Trust's website at: www.energytrust.org/About/public-meetings/CACMeetings.aspx.

2. Old business

Kim asked the council if there were any changes to the October 2014 Conservation Advisory Council notes. The group adopted the previous minutes with no concerns.

3. 2015 Budget and Action Plan: Round 2 changes (discussion)

Peter West: This discussion is about the changes proposed as we finalize the 2015 Budget and Action Plan. The changes we are proposing are relatively small and can be characterized as cleanup from the draft R1 budget presented last month. The overall change is a cost increase of about two percent, with savings increases about 0.5 percent. The majority of the changes are due to shifts in the measure mix, including a much higher share of LEDs in lighting initiatives. We are still delivering low-cost, high-value resources across the board.

Mark Kendall: The biggest change is the revenue reduction in bullet number five.
Peter: This is what we proposed the last time and it has not changed. We proposed and worked out with the commission and utilities to have a lower SB 838 collection.
Mark: Not all utilities collections are going to be reduced by 12 percent.
Don Jones: We're using up carry over.
Peter: Yes.

Peter: There are no changes to the proposed budget focus areas, as we received supportive comments.

> We propose a slight increase in electric savings and a minor increase to gas savings. The slight increase in electric savings is largely due to market adoption of LEDs increasing more rapidly than expected. LEDs are more expensive than compact fluorescent light bulbs, and offer more energy savings per bulb. Our forecast for CFLs was too high, but the LED forecast too low. Consumers are buying more LEDs at a higher rate than they are purchasing CFLs. LEDs meet market needs that CFLs can't satisfy.

Don MacOdrum: Are there any implications to previous savings when CFLs are replaced early? It seems like you would discount savings from LED to account for shorter CFL life.
Mark: The power council does a very complicated look using NEEA data. It's kept very current and used as a baseline.

Peter: We realized that our R1 budget didn't fully account for the extension of gas measures through the end of April 2015. The revised R2 budget forecasts slightly better uptake of weatherization measures for electrically heated homes.

> On the gas side, the revised budget proposes an increase of 1,000 therms. This change is reflective of higher transformation savings in New Homes and Products. There's a tiny change in Existing Homes to increase the positive effect of retaining weatherization measures longer than we had expected.
>
> We also removed a couple of proposed pilots that won't get traction for NW Natural in Washington. These are small changes.
>
> The increase in goal for Cascade Natural Gas corresponds to a slight reduction in goal for NW Natural. We realized we had assigned some Strategic Energy Management savings to NW Natural that were more properly assigned to Cascade Natural Gas.
>
> Electric costs increased two percent in the R2 budget, largely due to extra cost for LEDs. Part of the budget increase reflects costs for delivery and services to support continued weatherization as we transition away from certain measures.
>
> The budget is lower on the gas side due to changes for Existing Buildings and some changes for New Homes. We realized we overestimated for Existing Buildings gas incentive costs. Overall, this correction will lower the natural gas budget by about $600,000.

Peter: We expect the same levelized costs as in the draft budget for all utilities except for NW Natural in Oregon. Levelized cost for NW Natural were reduced from 34 to 32 cents per therm. This is directly related to the revised incentive budget, as noted earlier. We believe the savings will remain the same for NW Natural, but we overestimated the necessary amount of incentives in R1.

Holly Meyer: What is New Homes and Products market transformation?
Peter: New Homes and Products market transformation investment is designed to drive new and more stringent building code standards. Once code is updated to reflect the changes we have promoted, we can count savings for a two- to three-year period.

Garrett Harris: Looking at the levelized cost for PGE and Pacific Power for renewables, there is a discrepancy. Levelized costs change drastically between years and utilities. Why is that?

Peter: In one year or in one utility territory, more solar projects may be installed, which have higher levelized costs. Other Renewables projects, such a hydropower projects and wastewater treatment plants, have much lower levelized costs. It is normal to see a range of levelized costs based on types of projects installed.

Peter: To summarize the R2 budget changes, we propose a slightly higher budget with electric savings of 53.1 aMW, similar gas savings and slightly higher renewable generation. Electric levelized cost is about the same, and gas levelized cost is slightly lower. Spending is reduced by 3.6 percent. Revenue is down by 12 percent.

Energy Trust will present the budget to the Oregon Public Utility Commission on December 3, 2014. Final revisions will follow, with the budget online by December 4. Energy Trust's board of directors will approve the final budget on December 12.

Mark: It should be noted that Energy Trust employee healthcare costs have gone down.
Peter: Healthcare costs will be 14 percent lower next year.

Mark: Is there anything notable about the public comments?
Amber: There have been few comments, and they are positive and supportive. A few questions and clarifications came in, which will be included in the budget packet.
Kim: Did we receive the same number of comments as in prior years?
Amber: We received slightly fewer comments.

Don Jones: Thanks you for involving the utilities during budget development.

4. Northwest Energy Efficiency Alliance gas market transformation (information)
Fred Gordon presented on NEEA's new gas market transformation initiative, including formation of the NEEA gas collaborative and 2015-2019 NEEA strategic plan development. Through NEEA's gas market transformation, NEEA will invest $18.3 million regionally over five years to save 280 million therms over 20 years. Energy Trust's will contribute about $500,000 in funding in 2015.

Juliet: Can you summarize the governance of the gas market transformation initiative? There won't be a separate board and it's within the committees?
Fred: NEEA has an electric regional portfolio advisory committee, and will create a parallel gas committee that approves specific projects. Gas funders will be welcome into the advisory committees. NEEA's board will still be the convening body and approver. Three of the gas funders are already on the board. With Energy Trust budget approval in December, work will begin on January 1, 2015.

Holly: We are excited to get started on it.

5. 2015 measure changes: Residential
Marshall Johnson provided updates to residential measure changes presented to Conservation Advisory Council in October.

Marshall Johnson: In October, we presented to the Conservation Advisory Council on Existing Homes measure changes for 2015, including eliminating the Home Performance with ENERGY STAR® assessment incentive and adding a $75 incentive for multiple upgrades and a $75 EPS incentive.

> In the October presentation, we proposed to sunset the Home Performance assessment at the end of 2014 and implement the EPS incentive and multiple measure incentives sometime in Q1 2015. Conservation Advisory Council members communicated that this

timing would leave a gas in the market, so we convened a stakeholder group with impacted contractors to discuss it.

Based on these stakeholder group discussions, we now plan to introduce the EPS and multiple measure incentives on January 1, 2015. On January 1, trade allies who currently have EPS agreements with us, including 25 Home Performance contractors, can begin receiving a $75 incentive for delivering EPS. Also on January 1, trade allies who install multiple measures can receive the multiple measure incentive of $100—increased from $75.

We will launch these incentives in a broader format next year. Stakeholders have expressed satisfaction with this compromise.

Jeremy Anderson: Sounds good to me.
Don MacOdrum: Thank you to the Existing Homes staff for making efforts to hear about the perceived impacts. These changes will make the multiple measure incentive more attractive. I'll be interested to track on these going forward.

Juliet Johnson: The multiple measure incentive is in addition to other measure incentives? With the measures going away in April, do they count until April?
Marshall: Yes to both.

Warren Cook: This group of Home Performance contractors will now be a new licensed group of assessors who didn't exist before.
Marshall Johnson: We need to collaborate with the Construction Contractors Board and others in the HB 2801 process to ensure this works for a full offering.

Mark Kendall: What percentage of residential measures do those 25 contractors represent?
Marshall: In 2015, we expect to see fewer contractors complete more projects. The vast majority of Home Performance comes through Clean Energy Works. Outside of Clean Energy Works, 81 percent of Home Performance assessments come from four contractors.

6. 2015 measure changes: Business
Spencer Moersfelder described changes to prescriptive incentives for Existing Buildings (including multifamily) and Production Efficiency programs.

Spencer: Incentives for most measures will increase. The measures that will be eliminated are not cost-effective and have not been a large source of savings. To determine measure changes, we use assumptions based on average costs and savings, including an internal rate of return metric with a five-year horizon. We also looked at the run-rate for each measure, or dollar saved per kilowatt hour or therm. A run rate is the unit amount paid for savings.

Kim: Sometimes we also call it acquisition cost, and it's very important to our budgeting process. It's dollars per energy unit for first year savings, not levelized cost.

Don MacOdrum: What is the discount rate that you used to calculate internal rate of return?
Spencer: 5.2 percent.

Kim Crossman: Production Efficiency just launched a leakage measure for compressed air and will increase the incentive amount to boost participation. The measure is still cost-effective.

Spencer: Prescriptive measures are a way to reach small to medium customers. Prescriptive incentive increases are intended to get customer attention and increase measure installation. These increased incentives still fit within the budget for 2015. We will increase incentives for

plug strips that shut down when computer equipment is not in use. We will raise cooler door incentives to include doors. We will eliminate incentives for night covers, which are not cost-effective. Night covers cover coffin coolers when not in use and are used mostly in small stores.
.

> We will raise incentives for buildings that have zero insulation and add incentives for buildings that have some existing insulation. Incentives for insulation are aimed at buildings under 50,000 square feet. If these measures prove cost-effective, we plan to add insulation incentives for buildings with more than 50,000 square feet. The incentives will be the same for buildings heated with gas and electricity. Production Efficiency is also raising the insulation incentive, but not as much as the Existing buildings program.

Holly: Why are Production Efficiency insulation incentives different from Existing Buildings?
Kim: Production Efficiency customers have different operating hours, internal heat loads and sometimes totally unconditioned space in manufacturing. Industrial doesn't always need insulation.

Spencer: Lodging and foodservice incentive increases are dramatic. In Multifamily, these measure often installed in dorms and assisted living facilities.

Brent Barclay: What is your max cap on incremental costs you'll pay?
Spencer: These prescriptive incentives have been configured with average costs in mind. We will pay up to 100 percent of incremental costs and we check against invoices.

Mark Kendall: These are rigorous tiers?
Spencer: Regional Technical Form and Energy Star.

Spencer: We are dropping residential refrigerator incentives align with residential on residential fridges. We are dropping ozone laundry because it isn't cost-effective.

Mark: Are the incentive amounts per system? They look close to custom incentive amounts.
Spencer: Incentive amounts are per system. They could still receive custom instead of prescriptive incentives for ozone laundry. We had to drop it on a prescriptive basis.

Spencer: The incentive for boilers in 2015 will be $6 per kBtu. The maximum incentive we can provide on a boiler would be $12 per kBtu. Boilers can be big and achieve a lot of savings. Sprinkler levelers are going away. We've only done four of them, so it wasn't a big change.

Jeremy Anderson: No changes to multifamily or small multifamily windows?
Spencer: No.
Juliet Johnson: Weren't there changes to windows?
Fred Gordon: I think they will sunset in April.
Peter: We will get back to the group with more information at the next Conservation Advisory Council meeting.

Spencer: Lighting incentives are aligned across the business programs. Lighting is a large part of business savings for electrical.

> Federal linear fluorescent ballast changes are going into effect this month. The Energy Trust baseline will change in mid-2015, consistent with our policy to continue to use the current baseline for 6 months after a change to give the market time to deplete existing stock. The baseline that we will use will be a blending of existing condition and federal standards. There will be fewer savings per ballast, making them less cost-effective. As a result, we will reduce incentives. Linear fluorescent lighting is not as captivating to the

market as LEDs at this time. We will track the LED opportunities in the market and adjust our offerings accordingly.

Brent Barclay: We've been talking about this for several years and have done a lot of work to get ahead.
Don Jones: T-8 and ballasts are it. T12 doesn't exist in our planning.
Spencer: LED marquee and cabinet lights will now receive custom incentives.

Spencer: We will continue to emphasize lighting controls. There will be more and higher incentives for occupancy sensors and daylighting sensors. Outdoor lighting has a lot of savings potential, and we will raise incentives within the boundaries of our cost-effectiveness requirements and budgets. There will be no change on the custom incentive side.

Kim: We made a big changes to custom lighting incentives last year.

Mark Kendall: Will the TLED lamp incentive will require de-wiring or will we offer a kit?
Spencer: TLEDs are presently eligible for custom incentives if they have internal and external drivers. We are looking at the possibilities of kits and are having extensive conversations about safety. We are also talking about safety stickers and other considerations.
Mark: Safety stickers should appear in French, English, Spanish, German and Japanese.

Holly: Is it a hard sell to get people to transition to TLEDs?
Spencer: The lighting market is really energized. New measures continue to drive the market. Customers who upgraded their lighting a few years ago can now install even more efficient LED products.
Kim: We will run a major marketing campaign next year for LEDs.

Brent: It looks like things are trending up in terms of incentives, but I didn't see that directly in the budget.
Kim: In Production Efficiency, we've seen a higher volume of projects with lower savings per project. To maintain the level of annual savings we need, we are increasing incentives. You don't see it in the budget due to tighter budgeting. The numbers are in the run rates.
Peter: A lot of these incentive increases were incorporated in the R1 budget. We are calling them to your attention at this time.

7. Commercial Pay for Performance update

Brian DiGiorgio: The Pay for Performance pilot will determine if paying incentives for capital and operations and maintenance improvements over a multiyear period will help contractors close projects and achieve additional energy savings from more comprehensive projects.

The pilot is focused on commercial office building only. Incentives will be paid annually for three years for verified savings, in contrast to Energy Trust's standard process of paying incentives at time of measure installation. The pilot structure allows us to pay for operations and maintenance and behavioral savings, and may provide some Strategic Energy Management-type solutions for certain customers who may not be well suited for SEM.

Objectives of the pilot include learning if this payment model encourages participation by customers who wouldn't normally participate, and whether this model helps sales professionals close more retrofit sales. Can paying for operations and maintenance generate more persistent savings? Does the multiyear payment stream generate deeper savings? We'll also see if we can use this pilot to enhance existing SEM offerings. The pilot has an element of whole building performance, although there are constraints on

the regulatory side: We can't bundle measures without each measure being cost-effective, although there is some flexibility for pilots.

We circulated a draft request for proposals to stakeholders for comment and received substantial and useful input. The OPUC held a public hearing, including a public comments period. As this is a new incentive payment model, the input we received led us to considerably stretch out the timeline for responses to the RFP. This was useful, as respondents told us they needed more time to educate their customers on the pilot funding model.

An RFP was released at the end of February 2014. Two buildings were selected at the end of June. One building has an executed contract. Another building is reviewing the contract draft.

We want to make the Pay for Performance offering scalable. We brought in Cadmus as a consultant on the RFP development and response evaluations, and we consulted MetaResource Group to help determine baseline and savings calculations. We'll agree on building energy use baselines, then after measure installation we'll have a 12-month performance measurement period followed by the savings and incentives calculation. We will pay incentives on the difference between baseline energy use and post-retrofit energy use.

In the RFP, we asked for respondents to propose a broad array of measures and gave them the freedom to suggest either behavioral and operations and maintenance measures, or a combination of capital and behavioral and operations and maintenance measures. The RFP generated six responses. Because the respondent buildings have been continually renewed, many of the proposed measures were cutting-edge, with long payback periods. Consequently, many of the projects were not cost-effective.

The two projects selected are in Portland. Because they are regularly renewed, the projects are not super cost-effective. One is a large, newer building, and will include a mix of capital and operations and maintenance HVAC measures. The second participant is a 100 year-old building proposing entirely capital measures, including interior and exterior lighting, HVAC and retro-commissioning. The proposed retro-commissioning measures were expensive, so we received from the OPUC a cost-effectiveness exception that allowed us to include these retro-commissioning measures in the pilot. Retro-commissioning means bringing systems back to their optimal performance parameters.

Alan Meyer: Will participants receive Pay for Performance incentives in addition to Energy Trust regular incentives?
Brian: Pay for Performance incentives are in lieu of standard incentives. We expect incentive costs to be reasonably aligned with our regular portfolio costs.

Brian: We wanted to encourage operations and maintenance and capital projects, so we requested both a capital incentive rate and an operations and maintenance/behavioral incentive rate from respondents. Because we have to reserve the incentive funds for three years, we needed to set boundaries around the incentive amounts. We also wanted to encourage the service providers to identify additional savings, so we are taking the proposed incentive cost amount and adding an additional cushion of 25 percent.

We have two tiers set up for payments. Since we will use a whole building analysis, we can't break payments down by savings for individual measures because we have no ability to verify the source of the savings. We will pay incentives at the higher, combined

rate for the first 110 percent of the proposed incentive cost amount, then pay at the lower incentive rate for the next 15 percent of the proposed incentive cost amount. We can capture more savings at a lower cost in the lower tier.

We have one project underway now, with measure installation expected to complete this month. The utility will read the meters in early December, and then we will begin the performance measurement period. After that 12-month measurement period, we will review the savings and calculate the first incentive payments.

Holly: This pilot is different and exciting. It brings up some of the same issues we dealt with in the cost-effectiveness docket. Maybe this is an experiment. It feels wrong that customers want to do cutting edge work and we are trying to promote energy-efficiency and have to shut down "that new thing" instead of embracing it. There's a rub there. It's the same rub as insulation. Paying for savings sounds like the utility cost test. If you pay for savings, what is the rate?
Brian: The cost effectiveness is based on the Total Resource Cost.
Kim: On custom measures, cost-effectiveness is a yes or no screen.

Brian: The incentive rate is negotiated with the customer. We ran them through the normal cost-effectiveness calculator. One retro-commissioning measure didn't pass.
Holly: Could they still do it and not tell you about it?
Brian: We will treat it like a normal cost-effectiveness tested project and cannot pay incentives.

Mark: If a customer installed a non-cost-effective measure at their own expense and claimed savings, would they get the Pay for Performance payment?
Brian: We will use the costs measures proposed to evaluate cost-effectiveness.
Oliver: We've asked that participants inform us if the project scope changes. If it changes substantially, we will have to reexamine cost-effectiveness. If they do something within our regular program structure and receive incentives, those savings would have to be netted out of the payment calculation.
Fred: They could do measures with one year of savings or 30 years or savings. We're paying them based on the balance of long- and short-term savings. The value changes massively if the measure life is different.
Brian: If the measurements change dramatically, we have the ability to change and renegotiate the incentives. We didn't want them to change measures between long and short measure life.

Brent: Were the proposers the building owners or intermediary?
Brian: We talked with the representatives of the building owners.

Stan Price: We were an early proponent of this and are happy to see Energy Trust moving forward. I have a little disappointment that we weren't asked to be more engaged in the process. We've been more involved in other Pay for Performance pilots. We had lessons learned that might have been helpful, in particular the possibility of participants gaming the system.
Brian: There is a lot of risk mitigation in everything we do.
Oliver: The risk with two customers isn't that great. We want to create a replicable pilot and a contract we can reuse in the future. If the measure mix shifts and the projects are not cost-effective, then we set up something we can't replicate as easily.
Holly: I know we're trying to manage risk, but I would like to open ourselves up to more risk and ability to learn from failure.
Oliver: We had six proposals. Two passed the cost-effectiveness test. Others were a lot more expensive. Going to that next level of customer was too expensive and not scalable.
Alan: I like your idea. In a pilot you're trying things to find out what doesn't work. You might have tried other things if you made it more open ended.

Brian: I wish we had received more responses with different options. If we had more time, we could have negotiated with the respondents who provided proposals that were not cost-effective.
Holly: Maybe there's a concession that in the future we can look at proposals differently. Maybe we can negotiate for lower payments.

8. Public comment
There was no additional public comment.

9. Meeting adjournment
The meeting adjourned at 3:55 p.m. The next Conservation Advisory Council meeting is scheduled on February 4, 2015.

Tab 8

Quarter Three 2014 Report to the Oregon Public Utility Commission & Energy Trust Board of Directors

ENERGY TRUST OF OREGON

NOVEMBER 14, 2014

This report covers activity between July 1 and September 30, 2014

Energy Trust of Oregon
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Energy Trust of Oregon

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I. Q3 2014 ACTIVITY AT A GLANCE

Residential activity in Q3 2014

New homes and major remodels	**479**
New homes constructed	454
New manufactured homes	25
Weatherization retrofits	**1,757**
Single-family site-built	1,411
Existing manufactured homes	346
Home Energy Reviews*	**267**
Total Sites	**2,961**
Heating systems	**871**
Water heaters	**135**
Solar	7
High-efficiency products	**3,712**
Washing machines	2,972
Refrigerators & freezers	740
High-efficiency lighting**	**672,463**
Refrigerators, freezers recycled	**3,715**
Energy Saver Kits sent	**7,928**
Total Other Activity	**16,361**

*Includes in-home reviews only; Home Energy Reviews are also available online and by phone
**Lighting excluded from totals

Commercial activity in Q3 2014

New Buildings sites served[1]	**93**
Whole building approaches	13
Packaged solutions for market segments	14
Standard/system-based approaches	66
Existing Buildings sites served[1]	**587**
Building Operator Certification	0
Custom[2]	106
Lighting	283
Prescriptive/standard[3]	198
SEM projects in progress	**21**
Existing multifamily sites served	**661**
Solar water heating sites served	**3**
Sites receiving technical assistance	**161**

[1]New Buildings and Existing Buildings total sites served may include sites that participated in more than one program track
[2]The most common custom improvements are building controls and HVAC
[3]The most common prescriptive/standard improvements are foodservice and grocery equipment

Industrial/agricultural activity in Q3 2014

Projects	**246**
Streamlined industrial[1]	162
Lighting	62
Custom[2]	22
Strategic Energy Management[3]	0
SEM projects in progress	**39**
Incentive offers made[4]	**229**

[1]The streamlined track delivers savings from irrigation measures, small compressed air, variable frequency drives and other prescriptive and calculated measures
[2]The most common custom improvements are compressed air system and process upgrades
[3]Savings from no-cost or low-cost operational steps (i.e., turning off equipment when not in use) identified through trainings in SEM approaches
[4]Incentive offers made to and accepted by customers in the quarter, giving customers two years to install upgrades and receive incentives

Renewable energy activity in Q3 2014

Solar electric installations	**270**
Residential	250
Commercial	20
Other renewable projects	**2**
Biopower projects	0
Wind projects	1
Hydropower projects	1
Geothermal projects	0
Total	**272**

Trade ally activity in Q3 2014

Regional trade ally roundtable meetings	**5**
Attendance	100
Trainings provided	**25**
Trade allies added to network	**44**
Trade allies accessing business development funds	**95**

Operations activity in Q3 2014

Project transactions completed in IT systems	**19,335**
Calls received	**6,434**
Website visits	**190,727**
info@energytrust.org inquiries	**487**
Complaints	**1**
News stories in print, broadcast	**131**

II. HIGHLIGHTS OF Q3 ACTIVITIES

A. Savings[1,2], generation and general highlights

Summary

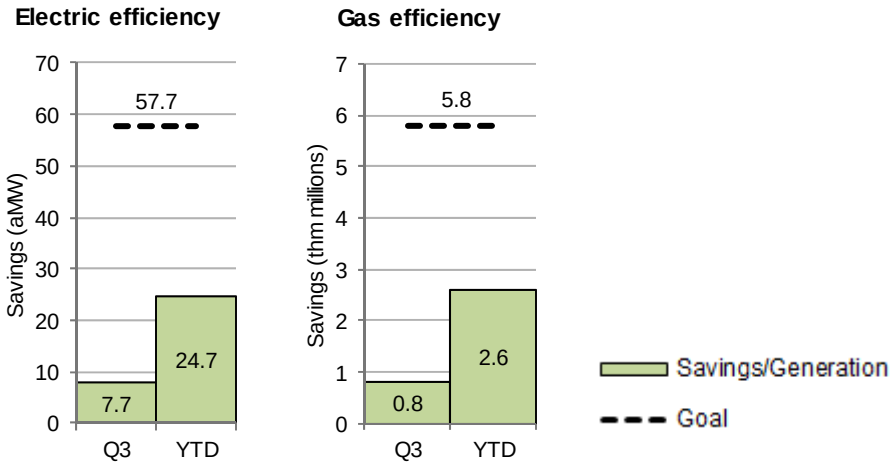
- **At the close of quarter three, Energy Trust is on track to exceed goal in Cascade Natural Gas territory and meet or nearly meet goals in all other utility territories in 2014**. Savings were much higher for all utility territories compared to this time last year.
- **Energy Trust is projected to achieve 97 percent of electric goal and 99 percent of gas goal** in 2014. With electric and gas savings goals slightly higher than 2013 goals, respectively, 2014 is forecast to be one of Energy Trust's highest energy-saving years on record.
- **The renewable energy sector expects to meet its generation goal in Portland General Electric territory** and fall short of its generation goal in Pacific Power territory in 2014 due to cancellation of two biomass projects and delay of one large-scale solar project in Q3, and delay of one large-scale project in Q2. Staff are confident in meeting or exceeding the annual OPUC performance measure for standard, net-metered generation.
- **Year-end efforts are underway to complete projects and achieve annual goals** in all territories, including bonus incentives for qualifying Existing Buildings, multifamily, Production Efficiency and Existing Homes projects. Historically, the majority of annual savings occurs in Q4, and that trend is expected to continue in 2014.
- **Noteworthy savings and generation activity occurred across programs in Q3**. Accomplishments detailed in this report include:
    - **Residential lighting sales were strong, supported by in-store promotions** at major retailers for compact fluorescent light bulbs and LEDs.
    - **Existing Buildings savings from lighting projects exceeded expectations** as LED prices continued to decline.
    - **New Buildings closed 204 projects through Q3, the most ever at this point** in the year. The program also enrolled 429 projects year-to-date—more than all projects enrolled in 2013.
    - **Production Efficiency saw record high Strategic Energy Management enrollments**, including for new cohorts in the Willamette Valley and Central and Southern Oregon.
    - **Existing Homes received 9 new customer applications for on-bill financing repayment under the Savings Within Reach initiative,** and trained 22 new trade allies to provide the offering. Through Savings Within Reach, Energy Trust provides enhanced incentives for moderate-income residents. In 2014, Energy Trust began to market on-bill repayment for Savings Within Reach customers after establishing voluntary agreements with PGE, Pacific Power and NW Natural.
    - **Three multifamily affordable housing projects completed upgrades to energy-efficiency features through MPower Oregon**, an on-bill financing repayment pilot providing Energy Trust incentives to owners of affordable housing and benefiting renters through lower energy costs.

[1]This document reports net savings, which are adjusted gross savings based on results of current and past evaluations.
[2]This report includes the best available energy savings data as of the date of submission. Energy savings reported here for periods prior to January 1, 2014, may be different than previously reported as a result of applying updated evaluation factors to Energy Trust funded program savings and generation in Oregon through the annual true up process. The full True Up 2014 Report will be available online at www.energytrust.org/reports.

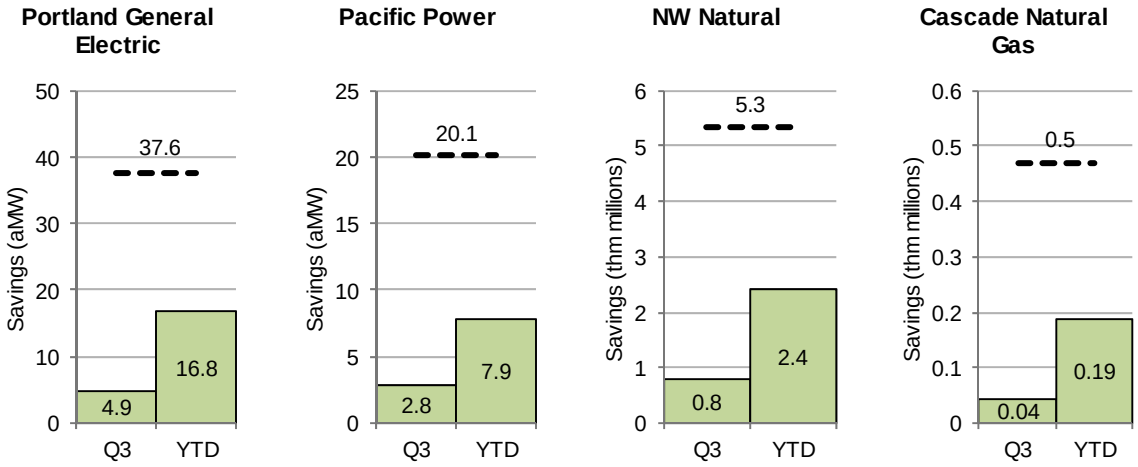
    - **Commercial solar installations doubled in Q3 compared to Q3 2013**, and new residential and commercial solar incentive reservations continued at a strong pace.
- **Energy Trust submitted a report on cost-effectiveness exceptions for gas programs** and measures to the OPUC on July 1 in response to OPUC Docket UM 1622, Order 13-256, and presented this proposal at OPUC public workshops. After the commission decision on the docket, staff developed a plan for implementation of the ruling, including modification and removal of several measures. In addition, Energy Trust expanded education on cost-effectiveness and program implications with trade ally contractors and stakeholders.
- **Efforts to reach and serve customers and engage trade allies in all regions were strengthened by hiring a new Southern Oregon outreach manager**. In addition, increased outreach to customers in rural and remote areas continued, with targeted events designed in cooperation with area utilities to engage commercial and industrial customers in Ontario, Enterprise and Hermiston.
- **Energy Trust implemented new strategies to improve operational systems and processes.** A few examples include:
    - **Evaluated incentive applications to make them easier and faster for customers and trade allies to complete**, including removing serial numbers from residential products applications. In 2013, serial numbers were missing in 28 percent of incomplete products applications; the modified form improves the efficiency of delivering incentive checks and maintains appropriate controls to protect ratepayer dollars.
    - **Enhanced systems for Existing Homes incentive application processing**, including automated notification for trade allies when a form is missing information, new instant incentives functionality and new web forms that speed data entry and reduce processing times.
    - **Transitioned to paperless Production Efficiency project files**, reducing waste and improving project processing times.
- **Staff began developing a draft 2015 Annual Budget and 2015-2016 Action Plan,** sharing early program concepts with utilities, the Renewable Energy Advisory Council and the Conservation Advisory Council in July, improving Energy Trust's approach to forecasting and tighter budgeting, and exploring options to redesign the Existing Homes program in response to the OPUC gas cost-effectiveness ruling.
- **The board of directors approved Energy Trust's 2015-2019 Strategic Plan** on October 1, following extensive outreach and promotion of the document in a variety of public forums held in July and August. Staff presented the draft plan to advisory councils and affiliated utilities, and promoted the draft plan to utility customers, community and business leaders and the general public during 13 presentations throughout the state. Pacific Power was instrumental in co-hosting events that also served to generate business customer leads for programs. More than two dozen written comments were received on the draft plan goals and strategies.
- **The board of directors reviewed throughout the summer and approved on October 1 an independent Management Review** report completed by Coraggio Group. Management Reviews provide evaluation of the efficiency and effectiveness of Energy Trust operations, and are completed every five years as required by Energy Trust's grant agreement with the OPUC. Staff will submit the review to the OPUC in Q4, and will report proposed follow-up actions on all recommendations to the board and OPUC.
- **This report addresses an OPUC request for quarterly updates on** a Pay for Performance pilot and deep retrofit projects in commercial and residential sectors, along with computer system upgrades and lending ally promotions. Find more information in sections 2C, 2E and 2G.

Quarterly progress to energy-efficiency goals

- **Electric efficiency improvements completed during Q3** will save 7.7 average megawatts of electricity, about 13 percent of the 2014 goal of 57.7 aMW. Q3 2014 electric savings were approximately 3 percent less than savings in Q3 2013.
- **Gas efficiency improvements completed during Q3** will save 819,260 annual therms of natural gas[3], about 14 percent of the 2014 goal of 5.8 million annual therms. Q3 2014 gas savings were approximately 15 percent greater than savings in Q3 2013.



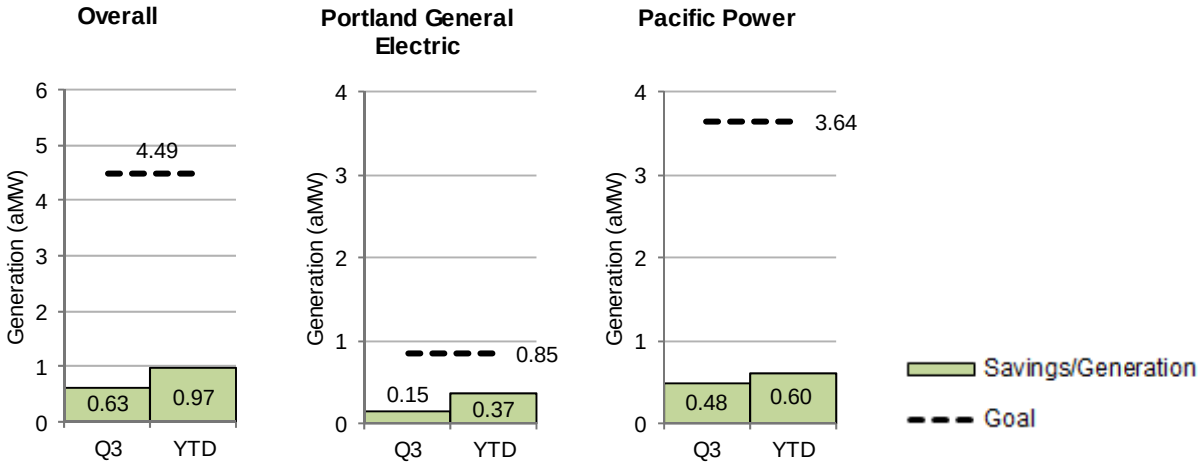
Quarterly progress to energy-efficiency goals by utility



[3]Gas savings do not include NW Natural results in Washington. These results are reported in Appendix 5.

Quarterly progress to renewable energy generation goals

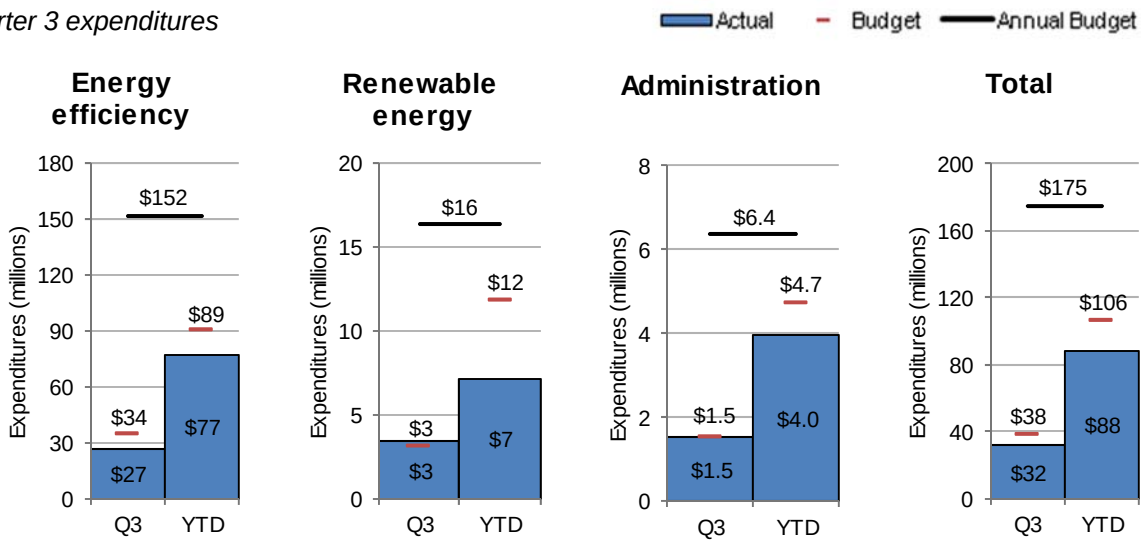
- **Renewable energy systems installed during Q3** will generate 0.63 aMW of electricity, 14 percent of the 2014 goal of 4.49 aMW. Renewable generation in Q3 2014 was more than double the generation in Q3 2013. Renewable generation is influenced by completion of large projects and can fluctuate significantly by quarter.



B. Revenues and expenditures

- **Overall revenue totaled $35.8 million for Q3 2014,** approximately on target with what was budgeted.
- **Q3 expenditures totaled $31.5 million**, of which $14.9 million or 47 percent was for incentives, compared to 46 percent at this time last year.
- **Q3 electric efficiency expenditures** were 19 percent below budget.
- **Q3 gas efficiency expenditures** were 27 percent below budget. Gas expenditures were largely impacted by fewer Clean Energy Works and Existing Buildings projects completed in Q3, and Existing Buildings savings acquired at lower-than-budgeted cost.
- **Q3 renewable energy expenditures** were 13 percent over budget.

Quarter 3 expenditures



C. Commercial sector highlights

- **The commercial sector, comprising the Existing Buildings program, New Buildings program and multifamily initiative**, expects to exceed goals in Pacific Power, NW Natural and Cascade Natural Gas territories and to approach its goal in PGE territory.
- **The sector completed five commercial deep retrofit[4] projects** out of 27 identified as renovations in Q3.
- **Contracts were negotiated for the first building to participate in the Pay for Performance** pilot, with measure installation and ongoing performance measurement expected to begin in Q4. This pilot will determine if paying incentives for capital and operations and maintenance improvements over a multiyear period will help contractors close projects and achieve additional energy savings from more comprehensive projects.
- **Savings from Energy Trust investment in Northwest Energy Efficiency Alliance activities comprised approximately 5 percent and 8 percent** of the sector's results in PGE and Pacific Power territories, respectively. NEEA anticipates savings from efficient computer equipment and building code initiatives to exceed expectations in 2014. These and the Building Operator Certification initiative are expected to be the primary sources of NEEA savings.

Existing Buildings

- **Savings from lighting projects exceeded expectations**, and LEDs increased as a portion of overall electric savings as prices continued to decline. The program developed a new direct-installation lighting offer for small commercial businesses—including lighting audits, installation and financing—to launch in Q4.
- **To further drive participation, the program increased its custom incentive offering** for projects that complete by year-end.
- **A large Strategic Energy Management pipeline is expected to deliver savings in Q4**, and the program recruited additional commercial SEM participants for 2015. In Q3, Existing Buildings selected two Program Delivery Contractors through a competitive request for proposals to deliver the commercial SEM initiative in 2015. In addition to supporting ongoing delivery of the commercial SEM offer for customers, the PDCs will enhance regional customer outreach and provide an educational curriculum designed to meet customer needs.
- **Existing Buildings hosted a first annual event for non-lighting trade ally contractors** to promote sales of energy-efficient equipment to small and medium-size businesses.
- **Staff continued collaboration with the Oregon Department of Energy to serve schools**, and completed several energy studies for schools that are expected to proceed with energy-efficiency installations by year-end. Rural outreach resulted in participation of several Eastern Oregon schools.
- **Installation of in-unit CFLs and efficient faucet aerators and showerheads** contributed nearly two-thirds of multifamily electric savings in Q3, followed by common-area lighting and prescriptive projects. This mix of savings is expected to continue through the remainder of 2014.

[4]Based on a working definition of commercial deep retrofits developed for the purpose of OPUC reporting, deep retrofit projects typically achieve approximate savings of 40 percent beyond market average by following a number of pathways. A project must be a major renovation of an existing commercial building and receive incentives for one of the following: market solutions package, LEED® achieving a 25 percent reduction for Energy and Atmosphere credit 1 points, Path to Net Zero or upgrades to at least two major building systems (such as HVAC, lighting or shell measures). The building can be large or small and the project can be simple or complex, applying multiple system-level upgrades or more holistic, customized energy-efficiency strategies.

- **Installation of energy-saving products provided 84 percent of multifamily gas savings**, with prescriptive projects contributing the remaining savings. Prescriptive and custom capital projects are expected to increase as a portion of multifamily gas savings as projects close in Q4.
- **To increase electric savings by year-end, multifamily will increase promotion of energy-saving products in electric utility territories and launched a bonus for custom projects** completed in 2014. The custom bonus will complement the prescriptive incentive bonuses launched in Q2 for foodservice and HVAC equipment (specifically boilers) and will be available through year-end. Multifamily also plans to begin installing LED bulbs in Q4, which are expected to achieve 12 percent higher savings per bulb compared to CFLs.
- **Three projects completed construction through MPower Oregon**, an on-bill financing repayment pilot developed to serve owners of affordable housing and benefit renters through lower energy costs. An additional 50 projects signed up, and another eight are expected to complete in Q4.

New Buildings

- **The program closed 204 projects through Q3, the most ever at this point in the year**.
- **The program enrolled 108 new commercial construction projects in Q3 for a total of 429 year to date**—more than all projects enrolled in 2013. Enrollments were especially strong in Cascade Natural Gas territory.
- **A thriving multifamily new construction market drove savings in Q3**. Retail projects contributed to electric savings, and gas savings came from restaurants and a large warehouse project. Activity was high in the Portland Metro area, Willamette Valley and Central and Eastern Oregon. Staff expects continued growth in multifamily and lodging projects in these areas.
- **New construction activity in the office sector continued to grow in the Portland Metro area**, where office vacancy rates are the lowest in the nation**.** Retail and restaurant sectors are showing related growth due to ground floor renovation projects.
- **New Buildings enrolled the 100th project for its market solutions offering**, launched in late 2012 to serve customers with pre-packaged incentives to achieve deeper energy savings in construction of small restaurant, grocery, multifamily, office, school and retail buildings.
- **Rural outreach efforts resulted in project enrollments in Hermiston, Central Point** and Powell Butte.
- **The program co-hosted an Allies for Efficiency training on passive building design** for commercial and multifamily buildings, attracting more than 130 attendees to remote training locations in Medford, Eugene and Bend.

D. Industry and agriculture sector highlights

Production Efficiency

- **As of Q3, the industry and agriculture sector may fall short of 2014 goals**, nearly reaching goal in PGE territory. Several Production Efficiency gas projects were canceled or delayed until 2015, impacting expected year-end gas savings.
- **Lighting comprised nearly one-half of all electric savings in Q3**, with the remaining savings from custom projects and trade ally-delivered streamlined projects. Continued growth in lighting projects followed lighting incentive increases launched in Q1. Gas savings consisted equally of custom and streamlined projects in Q3.

- **To boost year-end savings, the program will implement a 20 percent incentive bonus** for custom projects that complete from mid-October to mid-December 2014. This bonus aims to increase completion rates for projects currently in the pipeline.
- **The program saw record high Strategic Energy Management enrollments from customers around the state**, with 40 companies enrolled in Q3. Production Efficiency launched the first Willamette Valley SEM cohort with 15 participating businesses, seven of which are eligible for gas savings. The program also launched the first Central and Southern Oregon SEM cohorts, with five and 12 participating companies, respectively. More than 50 companies are expected to participate in SEM offerings in 2015, the most ever in a single year.
- **To promote a bonus for Cascade Natural Gas customers** completing projects in 2014, Production Efficiency used utility customer data to send direct mail marketing to 350 customers. This effort included follow-up calls and resulted in five meetings with prospective customers.
- **Outreach efforts in Q3 contributed to a strong pipeline of new projects expected in 2015**. Extensive outreach efforts in Wallowa County, Ontario and Hermiston helped build the pipeline of potential projects in rural areas.
- **Analysis of Q2 outreach indicated that program-sponsored outreach events in Salem and Medford resulted in 34 leads** from 19 companies, accounting for 2.5 million kilowatt hours of anticipated potential savings.
- **Staff presented at a Master Brewers Association course on energy-efficiency upgrades** at Oregon breweries, and presented a video produced in collaboration with Climate Solutions about Oregon's sustainable brewing supply chain. The video features an Oregon hops grower, brewer and distributor, each of which accessed Energy Trust incentives to help manage energy costs.
- **Savings from NEEA activities comprised approximately 1 percent and 3 percent** of the sector's results in PGE and Pacific Power territories, respectively. Improved motor standards are expected to provide slightly higher than expected savings in 2014.

E. Residential sector highlights

- **Savings in the residential sector, comprising Existing Homes and New Homes and Products programs**, are expected to exceed goal in Cascade Natural Gas and approach goals for all other utilities in 2014. Savings are notably higher in all utility territories than last year at this time.
- **Factors negatively impacting the sector's savings included** fewer Clean Energy Works projects completed than anticipated and lower savings expected from Opower efforts than forecasted. Existing Homes savings were also impacted by fewer and more restrictive measures due to low natural gas costs.
- **Savings from NEEA activities comprised approximately 15 percent** of the sector's savings in PGE and Pacific Power territories. As of Q3, NEEA efforts are expected to result in fewer savings than forecast for 2014 due to a drop in sales of efficient TVs. Specialty lighting and residential code improvements are expected to contribute savings.
- **Following a competitive request for proposals, Energy Trust selected two Program Management Contractors** to administer the New Homes and Products program in 2015. The incumbent, PECI (now CLEAResult), will manage New Homes and a new PMC, Ecova, will manage Products.
- **Staff provided technical information to the Oregon Department of Energy on House Bill 2801**. The legislation went into effect on July 1 and established a voluntary home energy performance score, recognizing Energy Trust's EPS™ as a qualified scoring tool. Energy Trust

also worked with stakeholders including Existing Homes trade ally contractors and the Home Performance Guild of Oregon to inform and advise on implementation strategies for the new law.

Existing Homes

- **Energy-saving light bulbs, faucet aerators and showerheads contributed 62 percent of electric savings and 60 percent of gas savings**, respectively. While these energy-saving products decreased as a portion of Existing Homes savings compared to Q2—indicating a gradual and planned diversification of savings sources to equipment and weatherization upgrades—further diversification of the program's savings portfolio is needed to meet year-end goals.
- **In 2014, Energy Trust invested in two Opower efforts, which generated fewer savings** than expected: a study to determine how long savings persist after a portion of PGE and NW Natural customers received reports for two years and a new effort targeting high energy users in Pacific Power territory. Overall savings related to Opower efforts were low due to fewer Pacific Power customers receiving reports than scheduled and preliminary results showing 1 percent average savings, compared to typical average Opower savings of 1.5 to 2 percent. In addition, analysis indicated that a portion of Opower persistence savings were attributable to participation in other Energy Trust programs, reducing estimated Opower savings. Representing 2 and 7 percent of the program's gas and electric savings, respectively, this shortfall significantly impacts Existing Homes savings for the year.
- **Early-year efforts including bonuses and outreach to trade allies and distributors**—and the start of heating season—are expected to boost savings from weatherization and HVAC upgrades in Q4. Weatherization and HVAC upgrades increased as a portion of savings in Q3 compared to Q2.
- **To further drive savings in Q4, the program launched fall bonuses** for windows, gas fireplaces, heat pumps, heat pump water heaters and ductless heat pumps.
- **In Q3, LivingWise Kits provided to sixth-grade students in Oregon schools included LEDs** for the first time, promoting public awareness about this new energy-saving technology. Energy Trust provides this free LivingWise science curriculum to teachers, and provides energy-saving products installed in student homes.
- **Though fewer than expected, Energy Trust completed 178 residential deep retrofits**[5], including Home Performance and Clean Energy Works projects. Clean Energy Works, representing the largest share of deep retrofit projects, indicates its results for the year will be significantly below expectations. Clean Energy Works offers access to financing for whole-home energy-efficiency improvement projects using standard Energy Trust incentives, with measures installed by Home Performance with ENERGY STAR® trade allies.
- **Existing Homes completed 11 projects for a ceiling insulation and prescriptive air sealing** pilot program to examine the combined effects of installing both measures together. Targeting results in mid-2015, the approach aims to increase cost-effectiveness of both measures given historically low natural gas prices.
- **The program began allowing select 3-star trade allies to offer instant incentives** for HVAC and water heating equipment, enabling customers to receive discounted equipment at time of purchase. This change shifts the responsibility for submitting incentive applications from

[5]Energy Trust defines residential deep retrofits as achieving a 20 percent or greater reduction in heating load through two or more weatherization or heating improvements installed at the same time. Many additional customers achieve whole-home savings through installation of a series of single upgrades over a period of months or years.

customers to trade allies, with the intent to increase the number of completed applications, speed incentive processing and lower program delivery costs per unit.

- **Existing Homes received 9 new customer applications for on-bill financing repayment under the Savings Within Reach initiative,** and trained 22 new trade allies to provide the offering, which includes enhanced incentives for moderate-income residents.
- **The program provided an orientation on Savings Within Reach incentives** for contractors participating in the Cully Weatherization Project 2.0, a collaborative effort to weatherize and perform repairs for 100 low- to moderate-income homeowners led by Native American Youth and Family Center, Clean Energy Works and other community groups.

New Homes and Products

- **General purpose CFLs accounted for 38 percent of electric savings in Q3**, followed by LEDs at 19 percent, specialty CFLs at 17 percent and refrigerator recycling at about 8 percent. Various in-store promotions supported lighting sales in Q3, including premium placement for CFLs and LEDs at The Home Depot and LED promotions at Costco and Fred Meyer.
- **Market transformation contributed nearly one-half of gas savings during Q3**, followed by EPS-rated homes and efficient showerheads at 22 percent each. Market transformation includes Energy Trust's influence on state building codes, guiding builders who do not work directly with Energy Trust to incorporate energy-efficient building techniques for the benefit of customers.
- **New home sales were strong in Q3, especially in Central Oregon**. More electrically heated homes were built in the market than staff predicted.
- **A high-volume home builder, DR Horton, announced it will build to meet EPS targets** and plans to leverage EPS as a marketing tool. In continued efforts to expand EPS statewide, staff met with three high-volume builders in Bend to promote building homes to EPS criteria.
- **The program launched an incentive to encourage real estate brokers to include EPS** information in RMLS listings, helping educate homebuyers about the value of energy-efficient homes. Staff also presented on EPS to real estate professionals and promoted Energy Trust's real estate agent and appraiser trainings at home tour events.
- **Staff provided training for students participating in the Columbia Basin Student** Homebuilder program, a career and technical program offered by the Hermiston School District. Students also travelled to Portland to tour energy-efficient new homes and learn about EPS.
- **The program recycled its 100,000th unit since the refrigerator and freezer** recycling initiative launched in 2008.
- **Staff hosted a September media event at Oregon Food Bank for Hunger Action Month** promoting refrigerator and freezer recycling incentive donations, resulting in evening news stories on three TV stations.
- **The program launched new instant incentives for efficient appliances at five Sears locations**, enhancing customer experience by providing incentives at point-of-sale and streamlining incentive processing. Preliminary results exceeded expectations.
- **For the first time, customers can buy Energy Trust discounted lighting products online**, through collaboration with www.costco.com and Ecotone. Targeted email promotion to Costco customers is planned for Q4.
- **Due to ENERGY STAR® refrigerator specification changes leading to a supply shortage** and a trend of flat appliance sales nationwide since 2013, the program saw fewer qualifying refrigerators purchased in Q3.

F. Renewable energy sector highlights

- **The renewable energy sector, comprising Solar and Other Renewables** programs, expects to meet its generation goal for PGE and fall short of its generation goal for Pacific Power in 2014. Staff are confident in meeting or exceeding the annual Oregon Public Utility Commission performance measure for standard, net-metered generation.
- **Q3 generation in Pacific Power territory was impacted by cancelation** of one biomass project earlier in the year and the delay of a large-scale solar project to 2015 or 2016.

Solar

- **Residential solar installations exceeded expectations statewide** through Q3.
- **Commercial solar installations doubled in Q3 compared to Q3 2013**, representing 40 percent of the program's new generation for the quarter. Commercial solar installations are on track to meet generation goals in Pacific Power territory and continue to gain momentum in PGE territory.
- **New residential and commercial solar incentive reservations continued at a strong pace**. With 520 reservations representing 1.0 aMW of new generation, the Solar program has the largest pipeline since the discontinuation of Oregon's Business Energy Tax Credit.
- **Residential solar installations were evenly split between customer-owned and third party-owned systems**. Demand for third-party owned systems is still strong, and demand for customer-owned systems grew following incentive structure changes designed to encourage them in early 2014.
- **Costs for most solar installations continued to decline in Q3**, with residential customer-owned installation prices down 15 percent and commercial installation prices down 24 percent from 2013. In the last five years, commercial and residential solar costs decreased by 56 and 46 percent, respectively.
- **Energy Trust selected the 6.2-megawatt$_{dc}$ Old Mill Solar project in Pacific Power territory** to replace the 5.88-MW$_{dc}$ Stone House solar project that was canceled in Q2. Energy Trust reserved $490,000 for the Old Mill Solar project to be developed in Bly, Oregon. With completion anticipated in 2016, Old Mill Solar will help Pacific Power meet its requirements under the Oregon Solar Capacity Standard.
- **Completion of the Bevans Point project was delayed to 2016**. The project will also help Pacific Power meet its requirements under the Oregon Solar Capacity Standard.
- **The program launched an online solar assessment tool** for Washington County customers. Mapdwell Solar System estimates the solar potential of commercial and residential rooftops based on advanced modeling and weather simulation data, providing customers estimated energy generation of installing a solar system. If Mapdwell is successful in generating customer interest and installations, staff will consider expanding the tool to additional areas of Oregon.
- **Solar provided funding to organizations promoting Solarize projects** in Wallowa County, Rogue Valley and the Columbia Gorge.
- **Staff provided technical assistance to the Klamath Tribes in support of a federal grant** application to install solar on a number of their facilities.

Other Renewables

- **Two projects completed in Q3 for a total of 750 kW of new capacity**: the Three Sisters Irrigation District hydropower project and the Confederated Tribes of the Umatilla wind project.
- **The 700-kW Three Sisters Irrigation District hydropower project features multiple benefits for the irrigation sector**. The project's achievements include a new fish screen and fish passage

facility, stream restoration to improve habitat, installation of nearly four miles of pressurized pipe and a new hydroelectric powerhouse. The hydropower system is estimated to generate more than 3.1 million kWh annually for delivery to Pacific Power.

- **Cancellation of one biopower project negatively impacted generation** in Q3. Market conditions remain challenging for non-solar projects that cannot net-meter, as the value of energy generated by net-metered projects is higher than the wholesale rates received by qualifying facilities.
- **The program approved Project Development Assistance for one wind project and three hydropower projects** in Q3, for a total of 11 projects signed for Project Development Assistance in 2014.
- **Wastewater treatment plants in both PGE and Pacific Power territories** expressed interest in biogas projects, and feasibility studies are expected in 2015.
- **Staff conducted outreach at eight sites considering hydropower, biogas and geothermal** projects, including municipal wastewater treatment plants in Salem, Roseburg, Hood River and Oregon City, a food processor in Stayton, potential hydropower and geothermal projects in Klamath Falls and Medford and a potential combined heat and power project in Lebanon.
- **Staff presented at the Northwest Hydroelectric Association Small Hydroelectric** Conference, Oregon Wave Energy Conference and a statewide meeting of U.S. Department of Agriculture employees.

G. Highlights of program support and internal operations

General Outreach, Communications, Customer Service and Trade Ally Network

- **Received 6,434 calls to the main hotline in Q3**, compared to 6,627 in Q3 2013 and 5,889 in Q2 2014. Calls increased compared to last quarter largely due to fall direct mail marketing promotions of Existing Homes windows and equipment bonuses.
- **Received and responded to 487 inquiries via info@energytrust.org in Q3**, compared to 329 in Q3 2013 and 375 in Q2 2014. The most common requests were for information about Existing Homes offerings, including Energy Saver Kits and residential bonuses.
- **Launched a statewide media campaign to promote awareness of Energy Trust offerings** through billboards in rural and remote areas and through TV, radio, online and print media advertising reaching the majority of Energy Trust service territory.
- **Received 190,727 website visits in Q3 2014**, a 29 percent increase over the 147,936 received in Q3 2013. Energy Trust's general program awareness media campaign drove the most website visits, with 21,660 views on the campaign's landing web page. Marketing promotions for refrigerator and freezer recycling and Energy Saver Kits led to 166 percent and 143 percent increases in visits on each web page, respectively.
- **Garnered 131 news stories about Energy Trust in print and broadcast** with a media value of $95,000—what it would have cost to purchase the equivalent advertising space and air time—as a result of media outreach and responses to reporter inquiries.
- **Completed 11 press releases in Q3**, featuring 2013 annual results, residential solar installation benefits, home tours, summertime energy-saving tips, energy-efficiency upgrades at Morrow County School District and a South Klamath Falls wastewater district, donating refrigerator and freezer recycling incentives to Oregon Food Bank, a solar electric installation at a veteran care facility in Lebanon, the launch of Mapdwell Solar System in Washington County and Energy Trust's light bulb switch-out event at The Home Depot.

- **In Q3, one complaint was escalated and resolved** in the quarter. This compares to two complaints received in Q3 2013.
- **Met with 100 trade allies at roundtables in Portland, Medford, Bend, Hermiston and Ontario.** Presentations included program updates, fall bonuses, a preview of the Existing Homes Trade Ally Portal tool, information on impacts of House Bill 2801 and guidance on business development.
- **Met with MBank, a local lender interested in financing commercial energy-efficiency** and renewable energy projects.
- **Enhanced outreach to customers and stakeholders in all regions of state** through efforts including:
    - **Hired a Southern Oregon outreach manager based in Grants Pass**, Karen Chase, who will serve as a resource to customers in Jackson, Josephine, Lake, Klamath, Coos and Douglas counties. Chase will connect customers to Energy Trust programs and represent Energy Trust in regional and local efforts that show potential for energy savings and generation.
    - **Developed and strengthened relationships with Strategic Economic Development Corporation, SEDCOR, and Business Oregon**. Staff presented at a luncheon of Salem-area SEDCOR members and guests, worked with Business Oregon to expand information about Energy Trust incentives available to businesses on the Business Oregon website, and provided incentives information for two business recruitment efforts.
    - **Attended the Oregon Coastal Caucus Conference in Florence** to expand awareness of Energy Trust programs that may be leveraged for projects in coastal communities.
    - **Held initial meeting with Rogue Climate and associated Rogue Energy Alliance**, a new initiative in Southern Oregon to address climate change at the community level, including energy conservation, efficiency and renewable options.
    - **Trained Eastern Oregon builders, contractors, real estate agents and appraisers** on energy-efficient new construction.

IT

- **Provided critical and ongoing foundational support for all Energy Trust program delivery**, including Business Intelligence services for reporting and evaluation data; Customer Relationship Management, CRM, systems; energy and incentive project tracking and accounting; and secure remote connectivity and functionality for Energy Trust and Program Management Contractor staff.
- **Continued investment in foundational IT system improvements** to help anticipate program needs and reduce future costs, including:
    - **Continued replacement of FastTrack with CRM**—Energy Trust's measure and project tracking functionality will be provided through expansion of the current CRM system and additional components developed by IT.
    - **Enhanced CRM system capability** to track new information about customers and trade allies.
    - **Upgraded Microsoft Dynamics Great Plains software,** Energy Trust's financial system.
    - **Upgraded all staff to Microsoft Office 2013** to improve work efficiencies.
- **Maintained protocol for accurate, appropriate use and tracking of utility customer data** to support Energy Trust and PMC direct marketing efforts.
- **Automated transfer of project forecast information from Program Delivery Contractor** systems to Energy Trust's tracking system, facilitating and expediting transfer of essential data.

- **Processed 19,335 completed and recognized projects in Energy Trust systems**, including 11,471 submitted through web applications.
- **Responded to 1,364 help desk tickets** submitted to IT by Energy Trust and PMC staff.

Planning and Evaluation

- **Created 81 new energy-efficiency measures** and revised 183 measures.
- **Completed 2014 True Up of savings reflected in 2013 and prior years.**
- **Completed one evaluation and market study:** The Cost-Effectiveness Review for Specific Gas Measures and Programs.
- **Collaborated with PGE to explore incorporating emerging technologies** in future Integrated Resource Plan energy-efficiency acquisition plans.
- **Analyzed new and updated measures for the 2015 budget process**, including residential and commercial lighting measure changes to accommodate changing federal standards.
- **Provided technical support for OPUC staff comments** on the U.S. Environmental Protection Agency's Clean Air Act 111(d) proposal on behalf of the state.

III. TABLES[6]

A. Revenues

Source	Q3 actual revenues received	Q3 budgeted revenues
Portland General Electric	$ 8,855,693	$ 7,946,652
PGE Incremental	$ 11,320,759	$ 11,622,293
Pacific Power	$ 6,645,123	$ 6,352,542
Pacific Power Incremental	$ 6,123,798	$ 6,246,428
Cascade Natural Gas	$ 139,028	$ 172,234
NW Natural	$ 1,660,925	$ 1,864,307
NW Natural Industrial DSM	$ 1,024,350	$ 1,257,878
Total	**$ 35,769,675**	**$ 35,462,333**

Incremental revenues are those authorized under SB 838 to support capturing additional cost-effective electric efficiency savings above the amount supported by funding through SB 1149.

B. Expenditures

Type	Q3 actual expenditures	Q3 budgeted expenditures
Energy efficiency programs	$ 26,619,942	$ 33,820,229
Renewable energy programs	$ 3,368,422	$ 3,015,502
Administration	$ 1,539,284	$ 1,534,730
Total	**$ 31,527,648**	**$ 38,370,461**

Source	Q3 actual expenditures	Q3 budgeted expenditures
Portland General Electric	$ 15,816,910	$ 20,438,848
Pacific Power	$ 11,096,915	$ 11,644,247
Cascade Natural Gas	$ 447,280	$ 597,564
NW Natural	$ 3,715,709	$ 4,912,746
NW Natural Industrial DSM	$ 450,834	$ 777,055
Total	**$ 31,527,648**	**$ 38,370,461**

C. Incentives paid

	Energy Efficiency				Renewable Energy		Total
Quarter	PGE	Pacific Power	NW Natural	Cascade Natural Gas	PGE	Pacific Power	
Q1	$ 3,333,343	$ 1,744,478	$ 1,076,423	$ 85,089	$ 664,033	$ 261,721	$ 7,165,087
Q2	$ 8,016,188	$ 4,361,563	$ 2,353,929	$ 229,014	$ 1,112,130	$ 731,143	$16,803,966
Q3	$ 6,258,657	$ 3,923,119	$ 1,763,692	$ 189,920	$ 1,026,857	$ 1,711,530	$14,873,774
Total	**$17,608,187**	**$10,029,160**	**$ 5,194,043**	**$ 504,023**	**$ 2,803,020**	**$ 2,704,394**	**$38,842,827**

[6]Columns may not total due to rounding.

D. Savings and generation

Q3 electric efficiency savings	PGE (aMW)	Pacific Power (aMW)	Total savings (aMW)	Expenses
Commercial	2.1	0.8	2.9	$ 9,726,677
Industrial	0.8	0.8	1.6	$ 5,335,319
Residential	2.0	1.2	3.2	$ 8,316,093
Total electric efficiency programs	**4.9**	**2.8**	**7.7**	**$ 23,378,089**

Q3 gas efficiency savings	NW Natural (thm)	Cascade Natural Gas (thm)	Total savings (thm)	Expenses
Commercial	272,082	11,137	283,219	$ 1,467,023
Industrial	97,898	0	97,898	$ 503,115
Residential	405,337	32,806	438,143	$ 2,643,685
Total gas efficiency programs	**775,317**	**43,944**	**819,260**	**$ 4,613,823**

Q3 renewable energy generation	PGE (aMW)	Pacific Power (aMW)	Total generation (aMW)	Expenses
Other Renewables program	0.00	0.37	0.37	$ 1,313,396
Solar Electric program	0.15	0.12	0.27	$ 2,222,339
Total renewable programs	**0.15**	**0.48**	**0.63**	**$ 3,535,736**

E. Progress toward annual efficiency and generation goals

	YTD expenditures	YTD savings/ generation	Energy Trust annual goal	Percent achieved
Electric savings	$ 67,320,406	24.7 aMW	57.7 aMW	43%
Natural gas savings	$ 13,417,386	2.6 million therms	5.8 million therms	45%
Renewable generation	$ 7,451,941	1.0 aMW	4.5 aMW	22%

F. Progress toward annual efficiency goals by utility

	YTD expenditures	YTD savings	Energy Trust annual goal	Percent achieved	Annual IRP target	Percent achieved
Portland General Electric	$42,228,756	16.8 aMW	37.6 aMW	45%	36.3 aMW	46%
Pacific Power	$25,091,651	7.9 aMW	20.1 aMW	39%	19.0 aMW	42%
NW Natural	$12,129,062	2.4 million therms	5.3 million therms	45%	5.3 million therms	45%
Cascade Natural Gas	$ 1,288,325	188,696 therms	470,561 therms	40%	470,561 therms	40%

G. Incremental utility SB 838 expenditures[7]

Utility	Q3 SB 838 Expenditures	YTD SB 838 Expenditures
Portland General Electric	$203,100	$598,922
Pacific Power	$419,990	$722,726
Total	**$623,090**	**$1,321,648**

H. Energy efficiency programs[8,9]

1. Total energy efficiency Q3 2014 savings and expenditures

	Q3 savings	YTD savings	Energy Trust annual goal	Percent achieved YTD
Electric	7.7 aMW	24.7 aMW	57.7 aMW	43%
Gas	819,260 therms	2.6 million therms	5.8 million therms	45%

	Q3 expenditures	Variance from Q3 budget		YTD expenditures	Variance from YTD budget	
Electric	$ 23,378,089	$ 5,564,480	19.2%	$ 67,320,406	$ 9,035,921	11.8%
Gas	$ 4,613,823	$ 1,673,543	26.6%	$ 13,417,386	$ 3,676,313	21.5%
Total	**$ 27,991,912**	**$ 7,238,023**	**20.5%**	**$ 80,737,793**	**$ 12,712,234**	**13.6%**

2. Existing Buildings Q3 2014 savings and expenditures

	Q3 savings	YTD savings	Energy Trust annual goal	Percent achieved YTD
Electric	2.0 aMW	5.1 aMW	15.9 aMW	32%
Gas	190,216 therms	506,622 therms	1.8 million therms	28%

	Q3 expenditures	Variance from Q3 budget		YTD expenditures	Variance from YTD budget	
Electric	$ 6,888,337	$ 1,848,173	21.2%	$ 18,524,465	$ 4,867,991	20.8%
Gas	$ 1,144,049	$ 514,517	31.0%	$ 2,902,481	$ 1,527,828	34.5%
Total	**$ 8,032,386**	**$ 2,362,690**	**22.7%**	**$ 21,426,946**	**$ 6,395,819**	**23.0%**

- Existing Buildings spent less than budgeted because fewer-than-expected projects were completed in Q3 and gas savings were acquired at a lower cost than budgeted. Spending is expected to better align with budget as more projects close by year-end. Gas incentive spending is expected to come in under budget due to low-cost savings for prescriptive projects and reduced custom study spending.

[7]Reflects expenditures by Pacific Power and PGE in support of utility activities described in SB 838. Reports detailing these activities are submitted annually to the OPUC.
[8]Levelized cost is Energy Trust's total cost to save or generate each unit of energy over the life of the measure (which ranges from two to 20 years or more). Levelized cost YTD is per kilowatt hour for electric and per annual therm for gas.
[9]Variance is expressed in total dollars *below* budget or (total dollars) *above* budget.

3. New Buildings Q3 2014 savings and expenditures

	Q3 savings	YTD savings	Energy Trust annual goal	Percent achieved YTD
Electric	0.7 aMW	2.3 aMW	5.0 aMW	46%
Gas	93,004 therms	366,431 therms	560,707 therms	65%

	Q3 expenditures	Variance from Q3 budget		YTD expenditures	Variance from YTD budget	
Electric	$ 2,293,763	$ 1,500,284	39.5%	$ 7,144,658	$ 1,742,971	19.6%
Gas	$ 278,005	$ 198,548	41.7%	$ 1,113,133	$ (75,366)	-7.3%
Total	**$ 2,571,769**	**$ 1,698,832**	**39.8%**	**$ 8,257,791**	**$ 1,667,606**	**16.8%**

- New Buildings spent less than budgeted in electric territories because some projects closed in Q2, earlier than anticipated, and closing of other projects was delayed until Q4. New Buildings gas spending was impacted by one project that closed early, in Q2, due to an accelerated construction timeline. The program's spending is expected to better align with budget in Q4.

4. Production Efficiency Q3 2014 savings and expenditures

	Q3 savings	YTD savings	Energy Trust annual goal	Percent achieved YTD
Electric	1.5 aMW	6.9 aMW	17.5 aMW	40%
Gas	97,898 therms	434,597 therms	1.2 million therms	36%

	Q3 expenditures	Variance from Q3 budget		YTD expenditures	Variance from YTD budget	
Electric	$ 5,131,527	$ 1,007,902	16.4%	$ 14,449,776	$ 1,206,501	7.7%
Gas	$ 503,115	$ 204,593	28.9%	$ 1,346,966	$ 406,401	23.2%
Total	**$ 5,634,642**	**$ 1,212,496**	**17.7%**	**$ 15,796,742**	**$ 1,612,902**	**9.3%**

- Production Efficiency gas spending was low in Q3 due to fewer industrial demand-side management project completions in NW Natural territory. The program's year-end bonus aims to increase savings and spending in this territory.

5. Existing Homes Q3 2014 savings and expenditures

	Q3 savings	YTD savings	Energy Trust annual goal	Percent achieved YTD
Electric	0.9 aMW	3.0 aMW	5.2 aMW	58%
Gas	169,294 therms	604,335 therms	1.2 million therms	49%

	Q3 expenditures	Variance from Q3 budget		YTD expenditures	Variance from YTD budget	
Electric	$ 2,991,674	$ 952,859	24.2%	$ 8,905,821	$ 1,389,687	13.5%
Gas	$ 1,480,594	$ 646,972	30.4%	$ 5,012,040	$ 1,114,559	18.2%
Total	**$ 4,472,268**	**$ 1,599,831**	**26.3%**	**$ 13,917,860**	**$ 2,504,247**	**15.2%**

- Existing Homes spending was low due to fewer Clean Energy Works projects completed.

6. New Homes and Products Q3 2014 savings and expenditures

	Q3 savings	YTD savings	Energy Trust annual goal	Percent achieved YTD
Electric	1.8 aMW	5.3 aMW	8.1 aMW	66%
Gas	268,849 therms	694,086 therms	1.0 million therms	67%

Includes gas market transformation savings associated with the 2008 and 2011 residential code changes.

	Q3 expenditures	Variance from Q3 budget		YTD expenditures	Variance from YTD budget	
Electric	$ 4,433,250	$ (472,305)	-11.9%	$ 12,436,512	$ (459,521)	-3.8%
Gas	$ 1,118,122	$ 166,315	12.9%	$ 2,920,751	$ 726,645	19.9%
Total	**$ 5,551,372**	**$ (305,989)**	**-5.8%**	**$ 15,357,263**	**$ 267,123**	**1.7%**

7. Northwest Energy Efficiency Alliance Q3 2014 savings and expenditures[10]

	Q3 savings	YTD savings	Annual energy target
Commercial	0.3 aMW	0.5 aMW	1.0 aMW
Industrial	0.1 aMW	0.1 aMW	0.2 aMW
Residential	0.5 aMW	1.5 aMW	4.8 aMW
Total	**0.8 aMW**	**2.0 aMW**	**6.0 aMW**

	Q3 expenditures	Variance from Q3 budget		YTD expenditures	Variance from YTD budget	
Commercial	$ 589,545	$ 175,365	22.9%	$ 2,066,970	$ 43,650	2.1%
Industrial	$ 203,792	$ 175,252	46.2%	$ 762,748	$ 259,138	25.4%
Residential	$ 936,137	$ 319,546	25.4%	$ 3,151,473	$ (38,251)	-1.2%
Total	$ 1,729,475	$ 670,163	27.9%	$ 5,981,191	$ 264,537	4.2%

- Energy Trust works with NEEA to estimate quarterly and total annual spending by sector. Expenditures may vary from budget in any given quarter, and are expected to balance out by the end of the year. High NEEA spending in Q3 is due to gas market transformation planning work and a shift in timing of NEEA invoices to Energy Trust.

I. Renewable energy programs[11]

1. Total renewable energy Q3 2014 generation and expenditures

	Q3 generation	YTD generation	Energy Trust annual goal	Percent achieved YTD
Electric	0.6 aMW	1.0 aMW	4.5 aMW	22%

[10]For the first time in 2014, Energy Trust has allocated budget to NEEA for gas market transformation activities. While there were no associated savings in Q3, savings are expected in subsequent quarters.
[11]Variance is expressed in total dollars *below* budget or (total dollars) *above* budget.

	Q3 expenditures	Variance from Q3 budget		YTD expenditures	Variance from YTD budget	
Electric	$ 3,535,736	$ (395,209)	-12.6%	$ 7,451,941	$ 4,816,250	39.3%

2. Solar Q3 2014 generation and expenditures

	Q3 generation	YTD generation	Energy Trust annual goal	Percent achieved YTD
Electric	0.3 aMW	0.6 aMW	2.7 aMW	23%

	Q3 expenditures	Variance from Q3 budget		YTD expenditures	Variance from YTD budget	
Electric	$ 2,222,339	$ 256,824	10.4%	$ 5,078,693	$ 2,542,663	33.4%

3. Other Renewables Q3 2014 generation and expenditures

	Q3 generation	YTD generation	Energy Trust annual goal	Percent achieved YTD
Electric	0.4 aMW	0.4 aMW	1.8 aMW	20%

	Q3 expenditures	Variance from Q3 budget		YTD expenditures	Variance from YTD budget	
Electric	$ 1,313,396	$ (652,033)	-98.6%	$ 2,373,248	$ 2,273,587	48.9%

- The Three Sisters Irrigation District hydropower project was budgeted to complete and receive an incentive payment of $700,000 at the end of Q2. Completion of the project and payment of the incentive was delayed by two months into Q3, resulting in the Q3 overspending variance.

Appendix 1: GEOGRAPHIC DISTRIBUTION OF SITES SERVED; CUSTOMER SATISFACTION

1. Energy Trust sites served by region in Q3 2014

	Commercial	Industrial	Renewables	Residential	Total
Central Oregon	64	24	18	710	816
Eastern Oregon	25	13	0	160	198
North Coast	72	3	0	206	281
Portland Metro & Hood River	882	104	176	12,171	13,333
Southern Oregon	83	33	38	1,892	2,046
Willamette Valley	191	88	43	3,574	3,896
Total	**1,317**	**265**	**275**	**18,713**	**20,570**

2. Customer satisfaction

From the middle of June 2014 through the beginning of August 2014, Energy Trust delivered a short telephone survey to 737 randomly selected participants in five programs who completed projects between April and June 2014. Below are results from Fast Feedback surveys of these customers. The survey asked participants about overall satisfaction with Energy Trust. Satisfaction rates for Q2 remained consistent with past quarters. Participants in the Existing Buildings, Production Efficiency and Solar programs were also asked about satisfaction with program representatives.[12]

Q2 2014 Results

Program	Respondent Count	Percent Satisfied Overall	Percent Satisfied with Program Representative
Existing Buildings, including multifamily	64	97%	95%
Production Efficiency	52	96%	96%
New Homes and Products[13]	184	91%	N/A
Existing Homes	410	89%	N/A
Solar[14]	27	96%	N/A[15]

New Buildings projects often involve numerous market actors (architect, engineer, developer, owner and more) at different project stages, so it is difficult to reach a project representative who is able to respond to questions about satisfaction. Satisfaction with the New Buildings program is obtained from interviews with program participants as part of annual program process evaluations. In the 2013 process evaluation, conducted in early 2014, 35 New Buildings project owners or representatives were surveyed about their overall program satisfaction and satisfaction with communications with program representatives. Of participants surveyed, 89 percent were satisfied with their overall program experience. Respondents were asked about five different aspects of their communications with program representatives, and these responses were averaged to determine that 96 percent were satisfied with program representatives.

[12]Since residential customers have varying degrees of interaction with program representatives (many may not have any interaction), and because it is not possible to identify customers who did have interaction to survey, residential customers are not questioned on this topic.
[13]Only Products customers were surveyed. Energy Trust does not track purchasers of new homes.
[14]Customers that installed solar using a third party are not surveyed.
[15]Only commercial solar customers are surveyed about satisfaction with program representatives. In Q2 2014, two commercial solar customers were surveyed and both were satisfied with the interaction with program representatives.

Appendix 2: OPUC 2014 PERFORMANCE MEASURES AND 2013 BENEFIT/COST RATIOS

1. OPUC 2014 performance measures

Following are the 2014 performance measures established by the OPUC for Energy Trust. Comparison of 2014 performance against these measures will be reported in the 2014 annual report.

Category	Measures
Electric Efficiency	PGE • Obtain at least 32.0 aMW • Levelized cost not to exceed 3.2 cents/kWh Pacific Power • Obtain at least 17.1 aMW • Levelized cost not to exceed 3.7 cents/kWh
Natural Gas Efficiency	NW Natural • Obtain at least 4.53 million annual therm savings • Levelized cost not to exceed 45.3 cents/therm Cascade Natural Gas • Obtain at least 0.40 million annual therm savings • Levelized cost not to exceed 52.0 cents/therm
Renewable Energy	• For project and market development assistance, report annual results, including number of projects supported, milestones met and documentation of results from market and technology perspective • For standard, net-metered projects, including solar and small wind, obtain at least 0.70 aMW in installed generation • For non-solar custom projects, the three-year rolling average incentive is not to exceed $29/allocated MWh • For innovative and custom solar projects, report sources of funding for projects and the selection criteria
Financial Integrity	• Receive an unmodified financial opinion from an independent auditor on annual financial statements
Administrative/Program Support Costs	• Keep below 9 percent of annual revenues
Customer Satisfaction	• Demonstrate greater than 85 percent satisfaction rates for: - Interaction with program representatives - Overall satisfaction
Benefit/Cost Ratios	• Report both utility system and total resource perspective • Report significant mid-year changes as necessary in quarterly reports

2. Benefit/cost ratios for 2013

The following benefit/cost ratios were calculated for and published in Energy Trust's 2013 Annual Report to the OPUC, which requires their publication as one element of its performance oversight. OPUC also requires Energy Trust to report significant mid-year changes in quarterly reports.

Program	Combined Utility System Benefit/Cost Ratio	Total Resource Benefit/Cost Ratio
New Homes and Products	1.9	2.4
Existing Homes	1.4	1.2
Existing Buildings	2.1	1.3
New Buildings	4.0	2.7
Production Efficiency	2.9	2.0
NEEA	3.2	0.8[16]

[16]In 2013, the combined total resource benefit/cost ratio for NEEA was below 1.0 due in part to difficulty in quantifying single-year societal costs given NEEA's portfolio includes multi-year market transformation initiatives at various stages of development. NEEA is redesigning its program portfolio to enhance and assure cost-effectiveness. Energy Trust cannot be certain that the total resource benefit/cost ratio is less than one, due to the limited ability to collect consumer cost data for NEEA's many and complex initiatives and limited information on non-energy benefits.

Appendix 3: CUMULATIVE AND TOTAL ANNUAL RESULTS

- **Including Q3 2014 results, total annual savings of 459 aMW** have been realized since electric efficiency programs began in 2002, accounting for 96 percent of Energy Trust's 2010-2014 goal of 479 aMW. This is equivalent to the annual electric consumption of approximately 355,670 Oregon homes. This total includes 22 aMW of savings from self-direct customers.
- **Including Q3 2014 results, total annual savings of 36.1 million annual therms** have been realized since gas efficiency programs began in 2003, accounting for 104 percent of the 2010-2014 goal of 34.7 million annual therms. This is equivalent to providing gas heat to approximately 71,172 Oregon homes for a year.
- **Including Q3 2014 results, total annual renewable energy generation of 113 aMW** has been installed since 2002, accounting for 91 percent of the 2010-2014 goal of 124 aMW of installed generation. This is equivalent to powering approximately 87,853 Oregon homes for a year.

Appendix 4: NEEA QUARTERLY PERFORMANCE REPORT FOR ENERGY TRUST OF OREGON

Third Quarter 2014

OVERVIEW

The Northwest Energy Efficiency Alliance (NEEA) is a voluntarily funded non-profit organization working in partnership with Energy Trust of Oregon, the Bonneville Power Administration, and more than 140 public and private Northwest utilities to accelerate energy efficiency in the Northwest. NEEA scans the market to identify emerging energy-efficient technologies, services and practices and works to create market conditions to accelerate and sustain their market adoption. In 2014, NEEA is forecasting to deliver 118 average megawatts (aMW) of energy savings to the region. For more information about NEEA's long-term value delivery, please visit neea.org/initiatives.

Energy Trust of Oregon (Energy Trust) is one of NEEA's key funders and has invested slightly more than $37 million to support NEEA from 2010-2014. This report summarizes NEEA's 2014 third quarter value delivery to Energy Trust. For additional information about NEEA's unique value to the region, history, structure and recent initiatives, please visit www.neea.org.

FILLING THE ENERGY EFFICIENCY 'PIPELINE' WITH ENERGY TRUST

NEEA scans the market for energy efficiency opportunities and conducts rigorous testing to verify product performance and energy savings. By pooling resources to pursue emerging technologies on behalf of the region, NEEA reduces development costs to Energy Trust and mitigates the risk associated with exploring new technologies.

In partnership with its funders, NEEA is investigating more than 15 different opportunities that have promising energy saving benefits for Energy Trust and the region. These projects currently represent a 20-year savings potential to the region of more than 1759 average megawatts (aMW).

Third Quarter Emerging Technologies Highlights

Heat Pump Clothes Dryers – In Q3, NEEA launched the Super-Efficient Dryer initiative following a full-consensus vote by NEEA's Regional Portfolio Advisory Committee (RPAC). The initiative leverages the collective voice of the region to influence the design and production of increasingly energy-efficient clothes dryers, and conducts testing and analysis of new products before widespread market distribution. In Q3, NEEA worked with two national manufacturers to develop a Northwest-specific market strategy to introduce products. NEEA also convened a work group to develop a tiered specification for energy-efficient dryers. Early coordination on a Northwest strategy allows NEEA, Energy Trust and partners to align supply chain and program offerings, and build market awareness to support the introduction of validated products into market.

Currently, Whirlpool is conducting detailed field testing of their heat pump dryer in Portland. NEEA is providing the data loggers and several Energy Trust staff and NEEA staff volunteered to participate in this testing, which will take about four months. Heat pump dryers have the potential to save Energy Trust residential customers 50 percent more energy over conventional electric dryers.

Combo Space and Water Heat Pump – Continued lab testing three sites with dual purpose ductless heat pump (DHP) and heat pump water heater (HPWH) systems. A dual purpose system may benefit Energy Trust's residential energy consumers through lowered installation costs and improved performance when compared to separate DHP and HWPH units. As of Q3, the test units are delivering

good consumer satisfaction, with feedback and monitoring data delivered to manufacturers. NEEA plans to continue monitoring through the end of December 2014.

Commercial Windows: Interior Secondary Glazing Systems (SGS) – Launched a project with Lawrence Berkeley National Labs developing standardized SGS product tests for the commercial window market to verify performance and analyze costs and energy savings. According to the U.S. Department of Energy, 25-35 percent of energy waste in commercial buildings is due to inefficient windows. SGS offer super-insulating double-glazed interior aluminum window installation without replacing the existing storefront or curtain glass, or altering the exterior appearance of the building. This is a newer product in the market, but has great energy savings and cost-effective potential for Energy Trust's commercial customers when applied to buildings as a stand-alone energy efficiency measure, or as part of an Integrated Measure Package with existing building renewal. Product completion expected December 2014.

Industrial Energy Management Information Systems (EMIS) – Released an inventory of EMIS tools to support industrial facility owners and utility programs implement and measure energy management. EMIS are powerful software tools that store, analyze and display energy consumption data, but they are not readily used in industrial facilities at this time. A wide variety of EMIS have shown promise for supporting industrial utility energy efficiency programs, specifically Strategic Energy Management programs and related behavior/operations and maintenance targeted programs. These systems also simultaneously provide energy savings data back to utility programs as demonstrated evidence of energy savings efforts. NEEA and its partners are promoting the use of these tools and working to address adoption barriers, including lack of availability and lack of public awareness. Click here for the recently released EMIS report.

ACCELERATING MARKET ADOPTION WITH ENERGY TRUST

In partnership with Energy Trust and its other funders, NEEA intervenes in markets to remove barriers to the adoption of energy-efficient products, services and practices. NEEA currently has market transformation initiatives designed to create efficiencies and lasting change in the residential, commercial and industrial sectors. NEEA is also pursuing long-term energy savings by raising the bar for state energy codes and federal appliance standards.

Third Quarter Residential Sector Highlights

Residential New Construction – Continued to promote the market adoption of energy-efficient building practices and technologies to pave the way for future, more stringent residential new construction energy codes. NEEA leverages relationships and training infrastructure originally established through its voluntary Northwest ENERGY STAR Homes program to set the stage for a new, advanced home specification. NEEA is currently working with builders in the region to build pilot homes to this advanced specification, which is 15 percent more efficient than existing building codes, and will be used to identify the most cost-effective methods for achieving energy savings in homes.

In Q3, NEEA continued recruiting builders for the second phase of advanced home specification and received signed participation agreements from eight new projects. To date, the initiative achieved 23 signed agreements with Northwest builders to build and pilot Phase II homes, including nine pilot homes in Energy Trust territory. The 2014 goal is 30 signed agreements for pilot homes. Thirty additional pilot homes will inform builder cost, experience, and best practices to meet the performance target, as well as generate consumer and builder awareness for advanced building practices and new technologies.

Heat Pump Water Heaters (HPWH) – Promoted adoption of energy-efficient HPWHs in Energy Trust territory by offering targeted training and education for local contractors, and coordinating promotions and quality assurance inspections for residential consumers. In Q3, NEEA:

- Delivered four Smart Water Heat orientations to contractors and facilitated two manufacturer trainings to train the contractor network and encourage availability of manufacturer product support
- Provided 24 upstream rebates on Tier 2 (currently the most stringent specification) HPWHs to engage the supply chain and overcome cost barriers to production
- Performed 13 retail visits (70 year-to-date) to place promotional materials and educate retail associates on communicating the benefits of HPWHs to consumers. NEEA also performed quality assurance inspections on Energy Trust and Smart Water Heat rebated sites to verify installation quality, contractor support and customer satisfaction

To further increase consumer awareness of HPWH technology, NEEA facilitated implementation of two HPWH manufacturer promotions, including a first-time partnership with A.O. Smith. The promotion provided customized point-of-purchase materials, including those for contractors serving Portland General Electric. Manufacturer promotions help to increase product availability in the market and overcome upfront cost barriers for consumers in Energy Trust territory and around the region. More than 2000 units are projected to sell during these two promotion periods.

Ductless Heat Pumps (DHP) – Accelerated the market adoption of DHP technology with Energy Trust contractors by providing training opportunities and best practices education and site inspections to verify quality. In Q3, NEEA and Energy Trust conducted three Northwest Ductless Heat Pump Project orientations and two Best Practices installation webinars for DHP installers serving Energy Trust customers. NEEA also partnered with Energy Trust, Portland General Electric, Oregon Department of Energy and Bonneville Power Administration to present information on ductless system opportunities to 82 installers.

As a result of these and other efforts, NEEA and Energy Trust have achieved 537 DHP installations year to date (302 in Pacific Power territory and 235 in PGE territory).

NEEA and Energy Trust further collaborated by working with Energy Trust's Existing Homes Program and the Ductless Heat Pump Project to recommend revisions on the Oregon Department of Energy's Residential Energy Tax Credit for HPWHs and ductless systems, which could simplify the application (?) process for installers and homeowners.

Third Quarter Commercial/Industrial Highlights

Healthcare – Coordinated with the Healthcare Utility Working Group (with representation from Energy Trust) in order to advise NEEA on the transfer of tools and materials to utility programs, and facilitate NEEA's exit from its Healthcare initiative in December 2014. As of Q3, 75 percent of transition activities were complete. Repackaged tools are now available on NEEA's BetterBricks Healthcare webpage.

Reduced Wattage Lamp Replacement – Extended its market test with five of the region's leading electrical distributors until the end of 2015. The market test is testing a midstream market shift strategy that could increase the market share of low-wattage lamps for the commercial lighting maintenance market. Based on what it has learned about the stocking and sales practices of these distributors, NEEA is currently adjusting its incentive structure and marketing bonus and continuing to assess the potential for a future upstream platform for the entire region.

Building Operator Certification (BOC) Expansion – Registered 81 operators serving Energy Trust territory in BOC courses and conducted two BOC Technical Webinars for 206 Northwest operators. These opportunities provide continued education and training in energy efficiency for operators in the Northwest. Through the BOC Expansion initiative NEEA provides skill enhancement training in Energy Trust territory to improve building energy performance through operation and maintenance best practices for HVAC, lighting, and controls systems.

In Q3, BOC achieved designation as a General Services Administration-aligned training. This designation provides increased opportunities for government sector building operators to earn the BOC credential, leading to increased market penetration across the region.

Commercial Real Estate – Developed strategy to transition the Commercial Real Estate initiative into an optional infrastructure program beginning in 2015. NEEA and its partners identified Commercial New Construction as a viable strategic market going forward during its fifth funding cycle (2015-2019). This market includes Commercial Real Estate and the community of businesses that develop, plan, design, build and commission new commercial buildings.

Existing Building Renewal (EBR) – Continued engagement with one demonstration project in Energy Trust territory as the building owner finalizes the implementation plan for this project. NEEA and its partners are leveraging work with this demonstration project, as well as others around the region, to create tools and a market-attractive pathway to integrated deep energy retrofits for existing office buildings. NEEA estimates that if 16 percent of commercial office space were renovated for energy efficiency, regional energy savings could reach at least 120 average megawatts (aMW) by 2025. Beginning in 2015, NEEA will transition this initiative into an optional commercial building strategic market

Food Processors – Transitioned the Food Processors initiative into Long-term Monitoring and Tracking having determined that desired market conditions have been met. NEEA will no longer invest in market transformation activities, but will continue to monitor market progress and report the resulting energy savings Legacy initiative tools and resources will become part of NEEA's Strategic Energy management infrastructure.

Commercial and Industrial Strategic Energy Management (SEM) – Developed a strategy with Energy Trust and other NEEA funders to address energy savings through infrastructure using a consolidated SEM savings methodology. The strategy enables savings capture and reporting from regional SEM across commercial and industrial sectors. The plan links transitioning NEEA initiatives in Food Processing, Hospitals & Healthcare, and Commercial Real Estate to strengthen market diffusion savings measurement methodology.

Third Quarter Codes and Standards Highlights

On behalf of the region, NEEA works at state and national levels to influence the adoption of increasingly stringent building energy codes and federal appliance and equipment standards. Working with its partners, NEEA gives the Northwest an independent regional voice in codes and standards processes and is often the only efficiency organization directly representing local energy efficiency programs in these forums. NEEA also conducts and shares critical research in support of codes and standards work.

Standards Highlights – Influence new proposed federal standard for electric pumps by participating in the Departments of Energy's working group. In June, the DOE announce a test procedure and standard level that will eliminate the bottom 25 percent of least-efficient pumps. Pump systems, which account for the highest share of industrial electricity consumption, have never been federally regulated. The new standard will allow NEEA and its partners to develop future initiatives and incentive programs.

DELIVERING ON REGIONAL ADVANTAGE WITH ENERGY TRUST

NEEA is an alliance of public benefits administrators, and public and private electric utilities with national and global upstream market partners that represents the entire four-state region in the Northwest. NEEA uses its unique role as a regional organization to leverage resources across the Northwest to accelerate energy efficiency. On behalf of the region, NEEA also conducts market research, and facilitates regional

collaboration and information sharing.

Third Quarter Highlights

Top Tier Trade Ally (TTTA) Advanced Training – Developed draft learning topics and objectives for TTTA Advanced Training and worked with stakeholders, including Energy Trust, to gather feedback for refinement. The learning objectives will be the cornerstone of the TTTA program and used to create the performance standards by which 'Top Tier' allies can be qualified.

Industrial Strategic Energy Management (SEM) – Hosted the 3rd Annual Northwest Industrial Strategic Energy Management (SEM) Collaborative workshop. The SEM collaborative is a region group, led by BPA, Energy Trust, and NEEA, among others, that helps energy efficiency program administrators accelerate the adoption of industrial SEM. Investigating in strategic partnership, such as the SEM collaborative, is a cost-effective way for NEEA to support regional industrial efficiency delivery capability, and is a key element of its 2015-2019 Business Plan.

Commercial and Industrial Stock Assessments – Completed drafts of the Commercial Building Stock Assessment and Industrial Facility Assessment reports and provided to stakeholders for review. NEEA's large-scale building and facility stock assessments provide critical information about energy use in the Northwest and inform energy efficiency planning and programming around the region. Final reports are anticipated for the end of 2014.

Retail Product Portfolio – Solicited and secured The Home Depot's participation in the Retail Product Portfolio pilot. Participation from major retailers outside of the consumer electronics space is critical for the success of the pilot, which seeks a diverse retail product portfolio.

NEEA 2015 Operations Planning – Continued to work with regional and sector advisory committees to gather feedback on NEEA's 2015 Operations Plan. NEEA's 2015 Operations Plan outlines program work and objectives, energy targets and budget for the first year in Cycle 5 (2015-2019). NEEA's Board of Directors will vote on the draft operations plan on December 2, 2014.

Market Research and Evaluation – Published five independent market research and evaluation reports to validate and evaluate its market transformation work, including:

- RETA CRES Initiative- Market Characterization, Baseline Study and Forecast Report
- NEEA Hospitals and Healthcare Initiative- Market Progress Evaluation Report 6
- Consumer Electronics Television Initiative Market Progress Evaluation Report #3
- NEEA Existing Building Renewal- Process Review Results
- Inventory of Industrial Energy Management Information Systems (EMIS) for M&V Applications

To view all of NEEA's Market Research and Evaluation reports visit neea.org/resource-center.

For additional information, NEEA's 2013 Quarterly Performance Reports and the 2013 Annual Report are available online.

Please contact Virginia Mersereau, Communications Manager, at vmersereau@neea.org, with any questions or comments.

Appendix 5: Q3 2014 REPORT ON ACTIVITIES FOR NW NATURAL IN WASHINGTON

July 1 through September 30, 2014

This Energy Trust of Oregon quarterly report covers the period July 1, 2014, through September 30, 2014. This report addresses progress toward 2014 goals for the NW Natural energy-efficiency program in Washington. It includes information on expenditures, therm savings, projects completed and incentives paid during the quarter and year to date.

I. PROGRAM SUMMARY

A. General

- **Energy Trust saved 36,600 annual therms in Q3 2014**—including 6,549 annual therms in Existing Homes, 11,109 annual therms in New Homes and Products and 18,941 annual therms in Existing Buildings. Savings in Q3 2014 were 30 percent higher than savings in Q3 2013.
- **Year to date, Energy Trust saved 102,920 annual therms**, approximately 47 percent of the 2014 conservative goal of 220,868 therms.
- **Typically, more than one-half of annual savings are achieved in the fourth quarter**, when the majority of projects complete. By the end of 2014, Energy Trust expects to approach conservative goal.

B. Commercial sector highlights

Existing Buildings

- **Existing Buildings saved 18,941 annual therms in Q3***,* primarily through custom projects and commercial foodservice equipment. Custom path projects accounted for 68 percent of Q3 savings.
- **The commercial program saved approximately 10 percent more energy in Q3 2014** than in Q3 2013.
- **Energy Trust initiated a campaign to expand participation for assisted living facilities** through increased outreach and promotion of energy-efficient showerheads. This market segment has been historically underserved by energy-efficiency programs.
- **Existing Buildings exhibited at the Asian American Hotel Owners Association** Northwest Region Conference.

C. Residential sector highlights

Existing Homes

- **Existing Homes saved 6,549 annual therms in Q3**, primarily through weatherization measures, high-efficiency furnaces and energy-saving faucet aerators and showerheads distributed through Energy Saver Kits and Home Energy Reviews.
- **Existing Homes savings in Q3 2013 were roughly on par with savings at this time last year**.
- **To drive savings in Q4, the residential program launched bonuses** for windows and gas fireplaces
- **Energy Trust promoted energy-saving opportunities for NW Natural customers** by hosting an informational table at the Camas Days event.

New Homes and Products

- **New Homes and Products saved 11,109 annual therms in Q3**, primarily through retail sales of showerheads in the regional Simple Steps program and ENERGY STAR certified homes.
- **New Homes and Products saved more than double the energy saved in Q3 2013**.
- **The program hosted a trade ally breakfast**, presenting updates to the Northwest ENERGY STAR homes program requirements precipitated by Washington state code changes.

D. Washington Utilities and Transportation Commission performance metrics

The table below compares quarterly results to 2014 program goals, as established in NW Natural's Energy Efficiency Plan for Washington (updated December 2013).

Metrics	Goal	2014 total YTD	Q1 results	Q2 results	Q3 results	Q4 results
Therms saved	220,868 – 259,845	102,920	34,786	31,534	36,600	
Total program costs	$1,298,699 – $1,527,881	$735,766	$214,349	$230,116	$291,301	
Average levelized cost per measure	Less than $0.65	$0.594	$0.527	$0.577	$0.673	
Dollars spent per therm saved	Less than $6.50	$7.15	$6.16	$7.30	$7.96	
Total resource cost and utility costs at portfolio level	Greater than 1.0	n/a	Reported annually	Reported annually	Reported annually	Reported annually

II. QUARTERLY RESULTS

A. Expenditures[17]

		Actual expenditures Q3	Budgeted expenditures Q3	Variance
Commercial programs	Existing Buildings	$ 113,556	$ 159,348	$ 45,792
	Subtotal	$ 113,556	$ 159,348	$ 45,792
Residential programs	Existing Homes	$ 105,555	$ 96,276	$ (9,279)
	New Homes	$ 58,140	$ 91,815	$ 33,675
	Subtotal	$ 163,694	$ 188,090	$ 24,396
Administration		$ 14,050	$ 14,729	$ 679
Total		$ 291,301	$ 362,167	$ 70,867

- Custom-path incentives in the Existing Buildings program are subject to a cap of 50 percent of total project cost, resulting in a variable cost per therm saved which may be less than the current incentive of $1.50 per therm. Many projects reached the 50 percent incentive cap in Q3, enabling Existing Buildings to achieve lower-cost savings than budgeted.

B. Incentives paid

		Actual incentives Q3
Commercial programs	Existing Buildings	$ 45,007
	Subtotal	$ 45,007
Residential programs	Existing Homes	$ 20,572
	New Homes	$ 25,533
	Subtotal	$ 46,105
Total		$ 91,112

C. Savings

		Therms Saved Q3	$/Therm	Levelized Cost/Therm
Commercial Programs	Existing Buildings	18,941	$ 6.30	$ 0.635
	Subtotal	18,941	$ 6.30	$ 0.635
Residential Programs	Existing Homes	6,549	$ 16.92	$ 1.193
	New Homes	11,109	$ 5.51	$ 0.499
	Subtotal	17,659	$ 9.74	$ 0.787
TOTAL		36,600	$ 7.96	$ 0.711

[17] Variance is expressed in total dollars *below* budget or (total dollars) *above* budget.

III. YEAR-TO-DATE RESULTS

A. Activity—sites served

	Q1	Q2	Q3	Q4	Total
Existing Commercial					
School/college retrofits	4	2	2		**8**
Other commercial retrofits	4	8	7		**19**
Studies	4	1	2		**7**
Existing Homes					
Weatherization (insulation, air and duct sealing and windows)	19	32	35		**86**
Gas hearths	26	32	12		**70**
Gas furnaces	32	67	28		**127**
Water heaters	4	5	10		**19**
Home Energy Reviews	16	9	3		**28**
New Homes					
Builder Option Packages	37	38	23		**98**
Clothes washers	83	179	141		**403**

B. Revenues

Source	Actual revenue YTD	Budgeted revenue YTD
NW Natural	$ 527,177	$ 645,551

C. Expenditures[18]

		Actual expenditures YTD	Budgeted expenditures YTD	Variance
Commercial programs	Existing Buildings	$ 256,772	$ 405,821	$ 149,049
	Subtotal	$ 256,772	$ 405,821	$ 149,049
Residential programs	Existing Homes	$ 238,734	$ 304,568	$ 65,834
	New Homes	$ 207,218	$ 275,404	$ 68,186
	Subtotal	$ 445,952	$ 579,971	$ 134,019
Administration		$ 33,041	$ 47,686	$ 14,644
Total		$ 735,766	$ 1,033,478	$ 297,713

[18] Variance is expressed in total dollars *below* budget or (total dollars) *above* budget.

D. Incentives paid

		Actual incentives YTD
Commercial programs	Existing Buildings	$ 88,034
	Subtotal	$ 88,034
Residential programs	Existing Homes	$ 72,737
	New Homes	$ 86,555
	Subtotal	$ 159,292
Total		$ 247,326

- **Incentives paid account for 39 percent of year-to-date program expenses**. The program expects incentives to represent a greater portion of expenditures in Q4, when project submissions increase.
- **Total program expense is adjusted down by 15 percent** to account for costs that a utility-delivered program would recover through rates.

E. Savings

		Therms saved YTD	Annual goal (conservative)	Percent achieved YTD	$/therm	Levelized cost/therm
Commercial programs	Existing Buildings	48,471	127,500	22%	$ 5.55	$ 0.505
	Subtotal	48,471	127,500	22%	$ 5.55	$ 0.505
Residential programs	Existing Homes	25,043	48,607	11%	$ 9.98	$ 0.717
	New Homes	29,405	44,761	13%	$ 7.38	$ 0.625
	Subtotal	54,449	93,368	25%	$ 8.58	$ 0.666
Total		102,920	220,868	47%	$ 7.15	$ 0.594

F. Program evaluations

No evaluations were completed in Q3 2014.

Glossary of Energy Industry Terms

Glossary provided to the Energy Trust Board of Directors for general use. Definitions and acronyms are compiled from a variety of resources. Energy Trust policies on topics related to any definitions listed below should be referenced for the most up-to-date and comprehensive information. Last updated May 2014.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Compact Fluorescent Light Bulbs (CFL)
CFLs combine the efficiency of fluorescent lighting with the convenience of a standard incandescent bulb. There are many styles of compact fluorescent, including exit light fixtures and floodlights (lamps containing reflectors). Many screw into a standard light socket, and most produce a similar color of light as a standard incandescent bulb.

CFLs come with ballasts that are electronic (lightweight, instant, no-flicker starting, and 10–15 percent more efficient) or magnetic (much heavier and slower starting).Other types of CFLs include adaptive circulation and PL and SL lamps and ballasts. CFLs are designed for residential uses; they are also used in table lamps, wall sconces, and hall and ceiling fixtures of hotels, motels, hospitals and other types of commercial buildings with residential-type applications.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Feed-in Tariff
A renewable energy policy that typically offers a guarantee of payments to project owners for the total amount of renewable electricity they produce; access to the grid; and stable, long-term contracts.

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

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

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

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

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

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

Green Tags are bought and sold every day in the electricity market. Tens of millions of dollars in Green Tags are under contract today. They are measured in units, like electricity. Each kilowatt hour of electricity that a wind farm produces also creates a one-kilowatt hour Green Tag. Wind farm owners may sell Green Tags to other purchasers, remote or local, to obtain the extra revenues they need for their wind farms to be economically viable.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Path to Net Zero Pilot (PTNZ)
The Path to Net Zero pilot was launched in 2009 by Energy Trust's New Buildings program to provide increased design, technical assistance, construction, and measurement and reporting incentives to commercial building projects that aimed to achieve exceptional energy performance. Approximately 13 buildings worked with New Buildings to develop strategies to save 60 percent more energy than Oregon's already stringent code through a combination of 50 percent energy efficiency and 10 percent renewable power. The pilot demonstrates that a wide range of buildings can achieve aggressive energy goals using currently available construction methods and technology, as well as by testing innovative design strategies.

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

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

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

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

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

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

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

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

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

SB 1149
The Oregon legislation enacted in 1999 allowing for the creation of a third party, nonprofit organization to receive approximately 74 percent of a 3 percent utility surcharge (public purpose charge) and deliver energy-efficiency and renewable energy programs to the funding Oregon ratepayers of Portland General Electric and Pacific Power. Energy Trust was approved by the OPUC to deliver the services. The rest of the surcharge is distributed to school districts and Oregon Housing and Community Services.

SB 838
SB 838, enacted in 2007, augmented Energy Trust's mission in many ways. Most prominently, it provided a vehicle for additional electric efficiency funding for customers under 1 aMW in load, and restructured the renewable energy role to focus on generation plants that produce less than 20 aMW. SB 838 is also the legislation creating the state's Renewable Portfolio Standard and extended Energy Trust's sunset year from 2012 to 2026.

SBW Consulting, Inc
A consulting firm based in Bellevue, WA, with expertise in facility energy assessments, utility conservation programs and program evaluations.

Sectors
For energy planning purposes, the economy is divided into four sectors: residential, commercial, industrial and irrigation.

Self-Directing Consumers
A retail electricity consumer that has used more than one average megawatt of electricity at any one site in the prior calendar year or an aluminum plant that averages more than 100 average megawatts of electricity use in the prior calendar year, that has received final certification from the Oregon Department of Energy for expenditures for new energy conservation or new renewable energy resources and that has notified the electric company that it will pay the public purpose charge, net of credits, directly to the electric company in accordance with the terms of the electric company's tariff regarding public purpose credits.

Societal Cost
Similar to the total resource cost as including the full cost to install a measure including equipment, labor and Energy Trust cost to administer and deliver the program, societal cost also includes any costs beyond those realized by the participant and Energy Trust associated with the energy-saving project. Typically additional societal benefits are seen with energy-efficiency projects that can be difficult to quantify and include in the Societal Cost Test for cost effectiveness.

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

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

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

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

Total Resource Cost
The OPUC has used the “total resource cost” (TRC) test as the primary basis for determining conservation cost-effectiveness as determined in Order No. 94-590 (docket UM 551). SB 1149 allows the “self-directing consumers” to use a simple payback of one to 10 years as the cost-effectiveness criterion.

Tidal Energy
Energy captured from tidal movements of water.

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

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

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

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

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

Tab 9

Energy Industry Acronyms

AAMA	American Architectural Manufacturers Association	Trade group for window, door manufacturers
A/C	Air Conditioning	
ACEEE	American Council for an Energy-Efficient Economy	Environmental Advocacy, Researcher
AEE	Association of Energy Engineers	
AEO	Annual Energy Outlook	
AESP	Association of Energy Services Professionals	Energy services and energy efficiency trade org
A+E	Architecture + Energy	Outreach program for architects
AFUE	Annual Fuel Utilization Efficiency	The measure of seasonal or annual efficiency of a furnace or boiler
AgriMet	Agricultural Meteorology	Program for soil moisture data
AIA	American Institute of Architects	Trade organization
AIC	Association of Idaho Cities	Local government organization
aMW	Average Megawatt	A way to equally distribute annual energy over all the hours in one year; there are 8,760 hours in a year
AOI	Associated Oregon Industries	
APEM	Association of Professional Energy Managers	
ARI	Air-Conditioning and Refrigeration Institute	AC trade association
ASE	Alliance to Save Energy	Environmental advocacy organization
ASERTTI	Assocation of State Energy Research and Technology Transfer Institutions, Inc.	
ASHRAE	American Society of Heating, Refrigeration, and Air Conditioning Engineers	Technical (engineers) association
ASME	American Society of Mechanical Engineers	Professional organization
ASiMi	Advanced Silicon Materials LLC	Manufacturer of polysilicon with plants in Moses Lake and Butte Mountain
AWC	Association of Washington Cities	Local government trade organization
BACT	Best Achievable Control Technology	
BCR	Benefit/Cost ratio	See definition in text
BEF	Bonneville Environmental Foundation	Nonprofit that funds renewable energy projects
BETC	Business Energy Tax Credit	Oregon tax credit
BOC	Building Operator Certification	Alliance funded project that trains and certifies building operators
BOMA	Building Owners and Managers Association	
BPA	Bonneville Power Administration	Federal power authority
C&RD	Conservation & Renewable Discount	BPA program
CAC	Conservation Advisory Council	
CARES	Conservation and Renewable Energy System	Defunct consortium of Pacific Northwest PUDs
CCS	Communications and Customer Service	A group within Energy Trust
CCCT	Combined Cycle Combustion Turbine	

CEE	Consortium for Energy Efficiency	National energy efficiency group
CEWO	Clean Energy Works Oregon	
CFL	Compact Fluorescent Light bulb	
CHP	Combined Heat and Power	
CNG	Cascade Natural Gas	Investor-owned utility
ConAug	Conservation Augmentation Program	BPA program
CHT	Coefficient of Heat Transmission (U-Value)	A value that describes the ability of a material to conduct heat. The number of Btu that flow through 1 square foot of material, in one hour. It is the reciprocal of the R-Value (U-Value = 1/R-Value.
COU	Consumer-Owned Utility	
COP	Coefficient of Performance	The Coefficient of Performance is the ratio of heat output to electrical energy input for a heat pump
CT	Combustion Turbine	
CUB	Citizens' Utility Board of Oregon	Public interest group
Cx	Commissioning	
DG	Distributed Generation	
DSI	Direct Service Industries	Direct Access customers to BPA
DOE	Department of Energy	Federal agency
DSM	Demand Side Management	
EA	Environmental Assessment	
EASA	Electrical Apparatus Service Association	Trade association
ECM	Electrically Commutation Motor	An Electrically Commutation Motor, also known as a variable-speed blower motor, can vary the blower speed in accordance with the needs of the system
EE	Energy Efficiency	
EER	Energy Efficiency Ratio	The cooling capacity of the unit (in Btu/hour) divided by its electrical input (in watts) at standard peak rating conditions
EF	Energy Factor	An efficiency ratio of the energy supplied in heated water divided by the energy input to the water heater
EIA	Energy Information Administration	
EIC	Energy Ideas Clearinghouse	Washington State University program that provides energy-efficiency information, Alliance funded project
EMS	Energy Management System	See definition in text
EPA	Environmental Protection Agency	Federal agency
EPRI	Electric Power Resource Institute	Utility organization

EPS	Energy Performance Score	Brand name used by Energy Trust for the rating that assesses a newly built or existing home's energy use, carbon impact and estimated monthly utility costs
EQIP	Environmental Quality Incentive Program	
EREN	Energy Efficiency and Renewable Energy Network	DOE program
ESS	Energy Services Supplier	
EUI	Energy Use Intensity	See definition in text
EWEB	Eugene Water & Electric Board	Utility organization
FCEC	Fair and Clean Energy Coalition	Environmental advocacy organization
FEMP	Federal Energy Management Program	
FERC	Federal Energy Regulatory Commission	Federal regulator
GHG	Greenhouse gas	
HER	Home Energy Review	A free visit to a customer's home by an Energy Trust energy advisor to assess efficiency and provide personalized recommendations for improvement
HSPF	Heating Season Performance Factor	
HVAC	Heating, Ventilation and Air Conditioning	
ICNU	Industrial Consumers of Northwest Utilities	Trade interest group
ICF	ICF International	Existing Buildings Program Management Contractor
ICL	Institute for Conservation Leadership	
IDWR	Idaho Department of Water Resources	State agency
IEEE	Institute of Electrical and Electronic Engineers	Professional association
IESNA	Illuminating Engineering Society of America	
IOU	Investor-Owned Utility	
IRP	Integrated Resource Plan	
ISIP	Integrated Solutions Implementation Project	
ISM	Instant-Savings Measure	See definition in text
kW	Kilowatt	
kWh	Kilowatt Hours	8,760,000 kWh = 1 aMW
LBL	Lawrence Berkeley Laboratory	
LED	Lighting Emitting Diode	Solid state lighting technology
LEED	Leadership in Energy & Environmental Design	Building rating system from the U.S. Green Building Council
LIHEAP	Low Income Housing Energy Assistance Program	
LIWA	Low Income Weatherization Assistance	
LOC	League of Oregon Cities	Local government organization
MEEA	Midwest Energy Efficiency Alliance	Midwest Market Transformation organization, Alliance counterpart
MLCT	Montana League of Cities and Towns	Local government organization

MLGEO	Montana Local Government Energy Office	Local government organization
MT&R	Monitoring, Targeting and Reporting	See definition in text
MW	Megawatt	Unit of electric power equal to one thousand kilowatts
MWh	Megawatt Hour	Unit of electric energy, which is equivalent to one megawatt of power used for one hour
NAHB	National Association of Home Builders	Trade association
NCBC	National Conference on Building Commissioning	
NEB	Non-Energy Benefit	See definition in text
NEEA	Northwest Energy Efficiency Alliance	
NEEC	Northwest Energy Efficiency Council	Trade organization
NEEI	Northwest Energy Education Institute	Training organization
NEEP	Northeast Energy Efficiency Partnership	Northwest market transformation organization, Alliance counterpart
NEMA	National Electrical Manufacturer's Association	Trade organization
NERC	North American Electricity Reliability Council	
NFRC	National Fenestration Rating Council	
NRC	National Regulatory Council	Federal regulator
NRCS	Natural Resources Conservation Service	
NRDC	Natural Resources Defense Council	
NREL	National Renewable Energy Lab	
NRTA	Northwest Regional Transmission Authority	
NWEC	Northwest Energy Coalition	Environmental advocacy organization
NWBOA	Northwest Building Operators Association	Trade organization
NWFPA	Northwest Food Processors Association	Trade organization
NWN	NW Natural	Investor-owned utility
NWPPA	Northwest Public Power Association	Trade organization
NWPCC	Northwest Power and Conservation Council	Regional energy planning organization, "the council"
NYSERDA	New York State Energy Research & Development Authority	New York public purpose organization
OBA	Oregon Business Association	Business lobby group
OEFSC	Oregon Energy Facility Siting Council	Authority to site energy facilities in Oregon
ODOE	Oregon Department of Energy	Oregon state energy agency
OPUC	Oregon Public Utility Commission	
OPUDA	Oregon Public Utility District Association	Utility trade organization
OPEC	Organization of Petroleum Exporting Countries	
ORECA	Oregon Rural Electric Cooperative Association	Utility trade organization
OSD	Office of Sustainable Development	
OSEIA	Solar Energy Industries Association of Oregon	Volunteer nonprofit organization dedicated to education/promotion
OTED	Office of Trade & Economic Development	Washington State agency
P&E	Planning and Evaluation	A group within Energy Trust
PDC	Program Delivery Contractor	Company contracted with Energy

		Trust to identify and deliver industrial and agricultural services to Energy Trust customers
PEA	Pacific Energy Associates	
PECI	Portland Energy Conservation, Inc.	Energy Trust Program Management Contractor
PGE	Portland General Electric	Investor-owned utility
PG&E	Pacific Gas & Electric	California investor-owned utility
PMC	Program Management Contractor	Company contracted with Energy Trust to deliver a program
PNGC	Pacific Northwest Generating Cooperatives	
PNUCC	Pacific Northwest Utilities Conference Committee	
PPC	Public Power Council	National trade group
PPL	Pacific Power	
PSE	Puget Sound Energy	Investor-owned utility
PTC	Production Tax Credit	
PTCS	Performance Tested Comfort Systems	Alliance project that promotes the efficiency of air-systems in residential homes
PTNZ	Path to Net Zero pilot	See definition in text
PUC	Public Utility Commission	Oregon and Idaho PUCs
PUD	Public Utility District	
PURPA	Public Utility Regulatory Policies Act	See definition in text
QF	Qualifying Facility	
RAC	Renewable Energy Advisory Council	
RE	Renewable Energy	
REIT	Real Estate Investment Trust	
RETC	Residential Energy Tax Credit	Oregon tax credit
RFI	Request for Information	
RFP	Request for Proposal	
RFQ	Request for Qualification	
RNP	Renewable Northwest Project	Renewable energy advocacy group
RSES	Refrigeration Service Engineers Society	Trade association
RTF	Regional Technical Forum	BPA funded research group
RTU	Rooftop HVAC Unit Tune Up	Rooftop HVAC unit tune up, an Existing Buildings incentive offering
SCCT	Single Cycle Combustion Turbine	
SCL	Seattle City Light	Public utility
SEED	State Energy Efficient Design	Established in 1991, requires all state facilities to exceed the Oregon Energy Code by 20 percent or more
SEER	Seasonal Energy Efficiency Ratio	A measure of cooling efficiency for air conditioners; the higher the SEER, the more energy efficient the unit

SGC	Super Good Cents	Alliance project & legacy BPA & utility program that promotes the sales of SGC homes
SIS	Scientific Irrigation Scheduling	Agricultural information program
SNOPUD	Snohomish Public Utility District	Washington State PUD
SEIA	Solar Energy Industries Association	Volunteer nonprofit organization dedicated to education/promotion
SWEEP	Southwest Energy Efficiency Partnership	Southwest market transformation group, Alliance counterpart
T&D	Transmission & Distribution	
TNS	The Natural Step	
TRC	Total Resource Cost	See definition in text
TXV	Thermal Expansion Valve	
	University of Oregon Solar Monitoring Laboratory	Solar resource database
U-Value		The reciprocal of R-Value; the lower the number, the greater the heat transfer resistance (insulating) characteristics of the material
USGBC	U.S. Green Building Council	Sustainability advocacy organization responsible for LEED
VFD	Variable Frequency Drive	An electronic control to adjust motion
WAPUDA	Washington Public Utility District Association	Utility trade organization
WNP	Washington Nuclear Power Plant	
WPPSS	Washington Public Power Supply System	Also called "whoops"
WUTC	Washington Utilities and Transportation Commission	
Wx	Weatherization	
W	Watt	