

Board Meeting Minutes—153rd Meeting

September 27, 2017

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

Board members absent: Anne Root

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

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

Business Meeting

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

General Public Comments

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

Consent Agenda

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

MOTION: Approve consent agenda

Consent agenda includes:

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

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

Moved by: Ken Cannon

Seconded by: Roger Hamilton

Vote: In favor: 9

Abstained: 0

Opposed:

President's report

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

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

NEEA Annual Report

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Mark Kendall arrived at 11:18 a.m.

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

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

Steve Bloom left at 11:23.

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

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

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

Steve Bloom returned at 11:26

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

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

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

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

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

Roger Hamilton left at 11:33 a.m.

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

Roger Hamilton returned at 11:35 a.m.

Free Ridership Study Presentation

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Oregon Department of Energy Update

The board reconvened at 12:37.

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

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

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

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

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

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

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

Eddie Sherman arrived at 12:53 p.m.

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

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

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

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

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

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

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

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

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

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

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

Committee Reports

Compensation Committee, Dan Enloe

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

Evaluation Committee, Alan Meyer

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

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

Finance Committee, Susan Brodahl

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

Policy Committee, Roger Hamilton

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

Staff Report

Highlights, Mike Colgrove and Staff

Lean Training Team Report (Mike Colgrove and staff)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

2017 Q2 Results (Mike Colgrove)

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

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

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

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

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

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

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

2018 Budget: Draft Action Plans (Peter West)

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

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

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

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

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

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

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

Janine Benner and John Reynolds left at 3:15.

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

Peter asked the board several discussion questions.

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

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

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

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

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

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

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

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

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

Adjourn

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

s/s Alan Meyer

Alan Meyer, Secretary