

## Board Meeting Minutes—157th Meeting

April 4, 2018

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**Board members present:** Susan Brodahl, Dan Enloe, Roger Hamilton, Lindsey Hardy, Mark Kendall, Debbie Kitchin, Alan Meyer, John Reynolds, Anne Root, Eddie Sherman, Steve Bloom (Oregon Public Utility Commission ex officio), Janine Benner (Oregon Department of Energy ex officio)

**Board members absent:** Melissa Cribbins

**Staff attending:** Gwen Barrow, Kathleen Belkhat, Shelly Carlton, Karen Chase, Scott Clark, Amber Cole, Michael Colgrove, Jack Cullen, Alison Ebbot, Andy Eiden, Becky Engel, Shannon Fabry, Sue Fletcher, Jeni Hall, Andy Hudson, Jessica Iplikci, Susan Jowaiszas, Oliver Kesting, Betsy Kauffman, Erika Kociolek, Steve Lacey, Dave McClellan, Debbie Menashe, Dave Moldal, Alex Novie, Pati Presnail, Becky Rein, Thad Roth, Lizzie Rubado, Zach Sippel, Kenji Spielman, Cameron Starr, Julianne Thacher, John Volkman, Jay Ward, Peter West, Whitney Winsor

**Others attending:** Jason Eisdorfer (OPUC), Kari Greer (Pacific Power), Rick Hodges (NW Natural), Whitney Rideout (Evergreen), BJ Monoham (Northwest Energy Efficiency Alliance), Elaine Prause (OPUC), Anne Snyder Grassman (Portland General Electric), Maria Alexandria Ramirez (NEEA), Becky Walker (CLEAResult)

### Business Meeting

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Debbie Kitchin called the meeting to order at 11:17 and asked for changes to the agenda.

Alan Meyer made a correction to the board notes to add that Ken Canon attended the meeting with the OPUC in January 2018.

### General Public Comments

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The president may defer specific public comment to the appropriate agenda topic. There were no public comments.

### Consent Agenda

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*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. February 22, 2018, Board meeting minutes (with amendment)
2. Authorizing Approved Bank Signers—R835

Seconded by: Debbie

Moved by: Anne

Vote: In favor: 10  
Opposed: 0

Abstained: 0

### President's Report

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Roger Hamilton reflected on how to assess the full benefits of energy efficiency, influenced by his 20-year term at the Regulatory Assistance Project. He discussed efficiency in an era of low-cost renewable energy. Energy efficiency investments are a foundation for renewable energy upgrades because they

reduce the overall energy load. Renewable energy is not emissions-free because the materials must be manufactured.

Eddie Sherman joined the meeting at 11:24 a.m.

Roger continued by describing the utility system benefits of energy efficiency, including reduced power supply costs, transmission and distribution system capacity increases, reduced environmental impacts and potential carbon tax liability, reduced wires losses and reserve requirements, reduced economic risk, and reduced credit and collection costs.

Participant benefits include avoiding costs of other fuels, lower electric bills, avoiding water and sewer costs, avoiding operations and maintenance costs, reducing health impacts, improving employee productivity and improving personal comfort.

Societal benefits of energy efficiency include improved air quality, improved water quality and stream flows, reduced solid waste disposal, improved energy security, economic development, and reduced health impacts of emissions and climate change.

Roger defined beneficial electrification, which is transitioning from fossil fuels to more efficient and renewable electricity generation. The U.S. power sector produces 30 percent more energy than in 1933 while emitting the same amount of carbon dioxide. Examples of beneficial electrification include pre-heating water when power demand is low at night and using water heaters as hidden batteries.

The board discussed the economic impact of the reduction of energy use, and noted that economic impact is an important metric for Energy Trust's success.

## **Staff Report**

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### ***Introduction of Becky Rein, Energy Trust's new executive assistant***

Mike Colgrove introduced Energy Trust's new executive assistant, Becky Rein. Mike and the board thanked Whitney Winsor for providing temporary executive assistance. Becky thanked the board for the opportunity and provided a brief background, describing her prior work as executive administrator with the Western U.S. Agricultural Trade Association. She grew up on a ranch in Eastern Washington and has a bachelor's degree in soil and environmental science.

### ***Preliminary 2017 Results***

Mike presented Energy Trust's official 2017 annual results. The full 2017 Annual Report will be submitted to the OPUC on April 13, 2018, along with audited financial statements. Mike described a recent project, Patriot Hall at Clatsop Community College in Astoria, which is enrolled in Energy Trust's Path to Net Zero offering. The board added that even Astoria, one of the rainiest places in Oregon, has great capacity for solar energy.

Mike continued that in 2017, Energy Trust helped customers save more electricity than ever before and save as much gas as in any other year, achieving 112 percent of electric efficiency goal and 95 percent of gas efficiency goal. Shortfalls in NW Natural and Cascade Natural Gas territories were largely due to an agreement with NW Natural to slow acquisition of savings from some customer types, plus delay of some large custom Existing Buildings projects.

The board asked if Energy Trust's contract with Cascade Natural Gas will end in 2019. Mike explained that Energy Trust renews all utility agreements on an annual basis.

Mike continued that the organization achieved 157 percent of its renewable energy generation goal, bolstered by the expiration of Renewable Energy Tax Credit at the end of 2017 that influenced customers to complete solar projects by year-end. Energy Trust also continued work to develop a pipeline of renewable energy projects.

The board asked about the RETC expiration timeline, noting customers had until April 1, 2018, to complete projects and receive the tax credit. Jay Ward, senior community relations manager, added that Energy Trust expects to see a significant decline in solar projects in 2018.

Mike provided a breakdown of energy savings and generation by sector. Energy Trust saw more small-to medium-sized businesses participate in 2017. Energy Trust also supported its largest megaproject in 2017, which brought in a high volume of savings earlier than expected. It was also an outstanding year for LEDs and NEEA.

Mike shared Energy Trust's expenditures and revenues for 2017. Energy Trust received slightly more revenue than budgeted and spent about 8 percent less than budgeted. This was due to lower-than-expected incentive spending given a large volume of very low-cost savings from LEDs and the industrial megaproject. Energy Trust spent \$10.1 million or 5.2 percent of total budgeted revenue on administrative and program support costs.

Energy Trust served fewer sites were served in 2017 compared to 2016, which was deliberate and due to fewer Energy Saver Kits.

Mike provided progress to Energy Trust's 2015-2019 Strategic Plan goals. Through 2017, the organization has achieved 74 percent of electric goal of 240 aMW, 83 percent of gas goal of 24 million therms and 114 percent of renewable generation goal of 10 aMW. The board noted Energy Trust could have set even higher Strategic Plan goals.

Mike added that Energy Trust pursued innovative new program strategies while taking steps to prepare the organization for future years, when market and policy changes will likely require new ways of working with customers to accomplish energy efficiency and renewable energy results.

The board congratulated Energy Trust on tremendous 2017 results.

### ***2018 Legislative Summary, Jay Ward***

Jay Ward answered questions about 2018 state legislation. The board asked for some background on the Portland Clean Energy Fund. The initiative would levy a 1 percent supplemental business license fee for the largest retailers in Portland. The fund would invest in energy efficiency and renewable energy projects plus workforce development. The initiative is described as supplemental to Energy Trust's efforts. The board noted that a number of potentially significant bills failed to pass, and asked if any of them may return. Jay acknowledge the cap and invest bills resulted in a joint committee on carbon reduction, with members yet to be announced. In addition, \$1.4 million was designated to start a carbon reduction task force. The HB 2141 residential energy efficiency home wrap bill is expected to return in the next legislative session. The board discussed a bill capping the rate of returns for utilities, which was determined to have unconstitutional elements. Janine added that it is too soon to say if

Oregon Department of Energy bills will come up again at the next session, and noted a bill that would make it easier for state agencies to install more electric vehicle charging stations.

The board suggested Energy Trust consider alternative carbon equivalency statements. At Intel, Dan Enloe came up with an equivalency of fleets of Hundai Excels.

The board asked if Jay works with other state agencies. Energy Trust staff sometimes participate in advisory committees and interacts with a number of agencies from the Oregon Liquor Control Commission to the Department of Agriculture.

### ***Portland General Electric Control Room Site Visit Options***

Mike asked for board member interest in taking a tour of the PGE control room either before or after the May board retreat. The board preferred Friday afternoon.

### ***July Board Meeting Proposal***

Mike proposed that Energy Trust explore holding its July board meeting in Klamath Falls, which could include a visit to Oregon Institute of Technology. Oregon Institute of Technology has invested in energy efficiency and renewable energy, and has expressed interest in a deeper partnership with Energy Trust.

Mike asked if board members would be able to attend a meeting in Klamath Falls. If board members could arrive early afternoon the day before, Energy Trust could arrange some customer site tours. The board liked a remote board meeting as a way to increase Energy Trust's presence in other areas of the state. Debbie, Janine, Susan, Steve and Dan would have to participate in the July meeting by phone. Anne noted that in her role on the Oregon Economic Development Commission, she travelled around the state for meetings and met with communities. It was enriching and supported stakeholder relationships. Mike added that Oregon Institute of Technology has offered to host the meeting. This is a test to see if Energy Trust could have one board meeting a year outside of Portland. Susan added that if the meeting is scheduled in January, it should not be a problem to travel for one meeting.

Mike emailed board members yesterday regarding re-examining Energy Trust's budget process and calendar to create additional opportunities for utility, OPUC and stakeholder engagement. Mike proposed two options to change board meetings dates to accommodate the budget schedule. Both options include pushing back the November board meeting one week to November 14. The first option is to add an additional meeting on October 17 to focus on the budget, and move the September 26 board meeting to September 12. The second option is to cancel the September 26 board meeting and replace it with an October 17 board meeting. With option two, the board would not meet in August or September. The board preferred the second option to cancel the September 26 board meeting and replace it with an October 17 board meeting.

The board took a break at 12:24.

## **Board Learning Papers Presentations**

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### ***Community Engagement, Sue Fletcher***

Sue Fletcher, communications and customer service senior manager, introduced Lee Rahr, energy programs director at Sustainable Northwest, and Carolina Iraheta Gonzalez, community energy advocate at Verde. Sue described the key topics in the paper and introduced Lee and Carolina to provide case studies.

Communities can be defined as a group, a system or a culture. Groups are united by a common characteristic. Organizing features for communities could be geographic and national, demographic and cultural, organizational, and social and political. Community engagement is the process by which individuals and organizations work collaboratively to identify community needs and priorities, build relationships, mobilize resources, and catalyze change in structures, policies, programs and practices. The paper describes a continuum of community engagement, from informing to empowering.

Sue described benefits of community engagement, including expanding participation, leveraging other resources, generating momentum, growing credibility and trust, ensuring resilience and maximizing impact. Challenges could include resources, ramp up time, customization, measurement, applicability to offers and alignment with structure.

Lee Rahr described Sustainable Northwest, which has four program areas: energy, water, forest and range. Sustainable Northwest's Making Energy Work coalition is a network of Oregon communities advancing innovative clean energy programs, projects and policies across the state. In 2015, Sustainable Northwest partnered with Energy Trust to launch a series of workshops, tours and symposiums in communities around the state. Workshops focused on community priorities and assets.

Sustainable Northwest believes that empowering local communities is the best way to reduce climate change. It believes in a bottom-up process. The Making Energy Work coalition has been successful by using the continuum of community engagement, including informing, collaborating and empowering. In addition to Energy Trust, Sustainable Northwest works with the U.S. Department of Agriculture, Resource Assistance for Rural Environments and Oregon Department of Energy. Leveraging public-private partnerships is key because parties can bring multiple funding sources and trusted relationships.

Carolina described Living Cully. Cully is a neighborhood in Northeast Portland and one of the most diverse neighborhoods in Oregon. It has 14,000 residents, with 17 percent of households below the federal poverty line. About 45 percent of households are renters. There are six mobile home parks. Living Cully was formed by Verde, Habitat for Humanity, Hacienda Community Development Corporation, and the Native American Family and Youth Initiative. The Living Cully partners believe that sustainability can be reinterpreted as an anti-poverty strategy to address multiple disparities in health, income, education, community engagement and natural resources by concentrating environmental investments and pairing those investments with traditional community development resources.

Living Cully developed a neighborhood-scale Community Energy Plan that identifies energy conservation and generation pilots for the Cully neighborhood. It was developed with technical energy experts including Energy Trust staff, community partners and neighborhood residents. All pilots must support Living Cully's anti-displacement strategies.

Carolina described how Living Cully worked with Energy Trust staff. Energy Trust provided energy consumption and renewable energy data for the neighborhood. One of the partners, St. Vincent De Paul, worked on Energy Trust's mobile home replacement initiative. Living Cully also ran a ductless heat pump cooperative for low-income families.

Carolina noted that collaboration with Energy Trust has felt very transactional. There are many Energy Trust staff contacts, which has been time consuming. Verde hopes to move toward strategic and programmatic alignment with both organizations, and to more easily access Energy Trust resources. Verde is working with Energy Trust staff to identify a model for greater alignment.

Steve asked if Living Cully will explore the state's community solar opportunities. Carolina responded that Living Cully has a vision for a community solar project specifically focused on low-income participation, and has already conducted surveys and focus groups with residents. The next step is to get technical assistance to identify a site and financing. It is important to provide meaningful bill savings

to low-income participants. Steve observed Living Cully could be appropriate for a community solar project.

The board asked about the Living Cully ductless heat pump cooperative. Some low-income families are slightly above the threshold to receive free low-income weatherization services. Verde is hoping to work with Energy Trust to make the rebates more accessible for these low-income families. Living Cully will explore creative solutions, such as bulk discounts or opportunities for people to join the coop and donate their rebate to a family that needs more support.

Eddie asked why Living Cully is such a successful community engagement effort. Carolina noted the commitment to support the community's potential. Energy is new to Living Cully, but Living Cully has successfully implemented several projects. Examples include the Cully Park, a multi-million dollar public-private partnership and community campaign. Living Cully listens to community members and keeps them involved through the whole process. Another example is the Living Cully plaza, which will be affordable housing.

The board would like to see Energy Trust partner with organizations like Living Cully to meet mutual goals.

Janine asked if Energy Trust has analyzed the cost-effectiveness of standard energy-efficiency measures compared to services delivered as part of community collaborations. Sue responded that all of Energy Trust's measures are cost-effective, and Energy Trust has used community engagement as an outreach strategy. Lee added that she is interested in measuring the rate of energy-efficiency upgrades in engaged communities before and after being involved in collaboration.

The board noted that projects can be more cost-effective with multiple benefits. An example is irrigation modernization projects with other benefits like water savings. Community solar is also a good opportunity for community engagement.

The board asked if there are standard community engagement best practices. Lee responded that there's a high demand from communities for help with baselines and energy planning. If Energy Trust could create templates or a toolkit that could be replicable for all communities, it would go a long way to support this need. Many small communities have a lot of interest but very little capacity and very few staff.

### ***Solar Plus Storage, Dave McClelland, Jeni Hall***

Dave McClelland, senior program manager, and Jeni Hall, senior project manager, summarized their Solar Plus Storage learning paper. Dave acknowledged Todd Olinsky-Paul with Clean Energy States Alliance for contributing to the paper.

Janine asked if solar plus storage systems all island. Dave explained that islanding is not inherent in all solar plus storage systems. There are systems where the focus is not resilience or backup power. Additional equipment is required to isolate from the grid.

Energy Trust's solar program has worked with solar plus storage for 15 years. Solar plus storage was the norm 15 years ago, because most systems were off grid. Inverters that connected to the grid had not yet been invented.

Since then, Energy Trust has seen an increase in customer demand for solar plus storage systems. Energy Trust does not offer an additional incentive for solar plus storage. Customers can only receive Energy Trust's standard solar incentive. Increased interest in solar plus storage systems is driven by new technologies and dropping prices have made solar plus storage more accessible, such as Tesla batteries. A new technology is advanced solar plus storage, which has larger capabilities. Another factor driving demand for solar plus storage is interest in resilience, such as from a large Cascadia earthquake. Solar plus storage also provides flexibility to meet peak demand.

Solar plus storage can provide greater benefits than either solar or storage alone, both to customers and to the grid. Solar plus storage still faces technical, market and informational barriers. Energy Trust is working with utilities, trade allies and customers to address these barriers in Oregon.

Mike asked how the solar system and batteries relate to each other. Do people put in bigger solar systems to meet their electricity needs and charge the battery at the same time? The board responded that a customer can program a controller to use the cheapest power source by hour as its default mode. Dave confirmed that there is technical capability to do this, but it depends on policies, rate structures and market.

The board asked if there is interconnection control uniformity across utilities. Jeni explained that capabilities to safely disconnect from the grid and island are built into equipment, so it is standardized. However, there's variability for utilities to implement different requirements for interconnecting with the grid. That's an opportunity for Energy Trust to work with the utilities to help standardize interconnection to meet everyone's needs.

The board asked about automatic transfer switch capability. It's built into the equipment, depending on the scale of the system, but there's opportunity for improvement in utility alignment.

## **Financial Audit Results**

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Jennifer Price, audit partner at Moss Adams, Ashley Osten, senior accountant at Moss Adams, reviewed Energy Trust's audit report. Energy Trust received a clean, unmodified audit opinion. There were no material weaknesses or significant deficiencies. Energy Trust has very strong controls, and it was an extremely clean audit.

The board asked for a survey of Moss Adams' overall clients. Moss Adams has surveyed its nonprofit clients and prospects, and this survey is included in the board packet.

The board acknowledged that the audit is very detailed and thorough, and congratulated Energy Trust's Finance staff on consistently excellent performance.

## **Budget Review Project Update**

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Pati Presnail, controller and interim chief financial officer, presented an update on Energy Trust's budget review project proposal. Staff already shared the proposal with the OPUC and received feedback and ideas. Next steps will be to share the proposal with Energy Trust's utility partners and advisory committees. Staff will report back to board in June.

## **Board Learning Papers Presentations, Continued**

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### ***Opportunities from Data, Scott Clark, Erika Kociolek, Alex Novie***

Scott Clark, IT director, introduced Erika Kociolek, evaluation project manager, and Alex Novie, senior project manager.

The board asked if Energy Trust could pull a list of all Portland residents without any Energy Trust measures installed and overlay that data with maps. Staff responded that this is possible and new tools have been introduced to allow mapping without advanced geographic information system (GIS) skills. Energy Trust has rooftop accuracy for most addresses, which increases the accuracy of mapping.

The board asked about the Solar program's rooftop mapping data. Lizzie Rubado explained that Energy Trust collaborated with a company, Mapdwell, to offer a customer tool to estimate solar energy potential at specific properties. Energy Trust ended that partnership because many other technologies are now available for customers.

The board asked about getting access to big data, and encouraged Energy Trust to explore growing its data. Erika explained that Energy Trust receives data from utilities, and also contracts with several vendors to receive data that supports data analysis. Data security is critical for all of these datasets. Proprietary data is very valuable. Energy Trust is exploring the cost and value of various proprietary datasets.

The board asked if Energy Trust has data about the demographics of residents and participants. Energy Trust can use its data in conjunction with Census information to identify geographic areas with certain demographic characteristics. Energy Trust is also looking into firmographic information to understand the demographics of businesses.

The board noted that Energy Trust may need more granular energy usage information about customers for targeted marketing as it seeks new sources of savings. The board asked if that information is proprietary. Erika explained that there is more Energy Trust can do with data already available from utilities. For now, Energy Trust's focus is on maximizing its currently available data.

### ***Community Resilience, Lizzie Rubado, Jessica Iplikci***

Lizzie Rubado, program strategies manager, introduced a guest speaker, Dan Bihn. Dan is a former engineer who spent several years living in Japan.

Dan presented on Japan's relationship with energy efficiency. In 2011, Japan was hit with a 9.0 magnitude earthquake. Japan's power plants are designed to shut down during an earthquake, which was effective during the 2011 earthquake. However people were still using energy, so the electric grid collapsed. More than 20 million people were without power. People couldn't turn on TVs or cell phones. Traffic lights went out. Train crossings automatically closed. Three minutes after the earthquake, a tsunami warning was issued. Most of the devastation was from the tsunami, with 18,000 people killed from the tsunami compared to 300 people killed directly from the earthquake. Because the grid collapsed, people could not escape the tsunami quickly. The earthquake also kicked off the Fukushima meltdown.

It took about one week for Japan to get power back, but there was not enough energy during peak periods so the power companies operated a rolling blackout. Every few hours, a different location would go dark. Elevators, traffic lights and trains stopped working. It took another year to restore generation capacity because the plants were damaged in the tsunami. The earthquake occurred in March, which is a low month for energy demand. Utilities predicted a 15 percent energy shortage in summer, when energy use peaks. To avoid rolling blackouts in summer, Japan mandated energy efficiency. Daily news included an energy report, stating whether there would need to be a blackout that day. This provided real-time visibility of energy use and gave residents the ability to immediately respond. People bought LEDs and replaced air conditioners with fans. The country exceeded 15 percent and achieved 18 percent reduction.

The earthquake also affected Japan's energy policies. Japan started getting rid of nuclear power and installing solar, increasing from 0.5 percent of energy from solar to 5 percent energy from solar. Resilience became a major energy priority for Japan. Utilities were able to get people to shift their energy use by communicating the value and availability of energy, and measuring, monetizing and mechanizing energy use. All of Tokyo now has smart meters.

To prepare for a natural disaster, Oregon could prepare to take on more solar power from California by interconnecting the grids. Last year, California threw away 3 percent of our solar energy generated.

Mike asked how Japan mobilized so quickly after the disaster. Japan had three months to prepare for the summer energy shortage. Many of these activities had already been in the works on a much slower timeline. Japan has directed and centralized disaster response, whereas the United States' disaster response lies with states and local governments.

The board asked if the smart meters in Japan are two-way or interactive. Japan's smart meters are the same technology as in the U.S. Japan focused more on energy flexibility than overall reduction.

The board observed that demand response and flexibility could be more important tools than battery storage. Dan prefers the term demand over demand response. If everyone cut power use by half instantly after the Japan earthquake, Japan would have kept the lights on. Automation and mechanization are needed for that.

The board noted that U.S. systems are designed to island. Dan responded that Japan's systems are also designed to island, but it didn't work very well after the earthquake.

The board observed that some of the changes in Japan were very simple, such as growing trees and shrubs for shading buildings and switching from air conditioning to fans.

### ***Cost-Effectiveness, Fred Gordon***

Fred Gordon, director of planning and evaluation, provided a high-level summary of his cost-effectiveness paper. Cost-effectiveness is a regulatory pass/fail test for efficiency investments. It is a ratio of benefits divided by costs. If the ratio is above one, Energy Trust may invest. If the ratio is below one, Energy Trust may not invest.

State utility commissions govern cost-effectiveness. In Oregon, cost-effectiveness is evaluated on a measure-by-measure basis and for programs as a whole. In Washington, cost-effectiveness is primarily evaluated at the portfolio level.

Societal benefits, such as economic benefits to the state as a whole that do not go directly to the utility or participants, are not included in Oregon's cost-effectiveness tests. In Oregon, efficiency investments must pass the utility cost test, which focuses on costs and benefits to the utility system, and the total resource cost test, which considers benefits to the system and to the participants. In Washington, the primary focus is on the total resource cost test. Twenty states use the total resource cost test. The societal cost test (with varying definitions of societal) is used by 14 states. Twelve states use the utility cost test. Eleven states use ratepayer impact as a measure. Eight states use a participant cost test. Some states use more than one test.

In their cost-effectiveness rule, the Oregon Public Utility Commission provides some cost-effectiveness exceptions in Oregon, such as for difficult-to-quantify benefits or measures that are forecast to be cost-effective in the future with market development. Energy Trust requests exceptions on a measure basis from the OPUC. Energy Trust receives a small portion of annual savings from measures currently under exception criteria.

There are four types of non-energy benefits: incremental measures (building on something the customer would do anyway), quantifiable customer or utility benefits (such as water savings), difficult-to-quantify benefits (such as comfort) and societal benefits. In Oregon, quantifiable customer or utility benefits are included in cost-effectiveness calculations. Difficult-to-quantify benefits are not included in Energy Trust's cost-effectiveness calculations, but the OPUC may consider them when making exceptions. Societal benefits are not used in Oregon or Washington.

Carbon dioxide emissions present a special case of non-energy benefits. In Oregon, utilities are required to consider the potential future cost of carbon regulation to the utility in forecasts of gas and electric costs. Thus, these carbon compliance costs are included in the avoided costs used in the utility cost test and the total resource cost test to show the benefits of efficiency. If passed, carbon legislation might have a modest additional impact of Energy Trust's efficiency cost-effectiveness calculations if the resulting value is larger than these forecasts.

The board asked about the most likely destination of a carbon tax dollar. That would be a legislative decision.

An advocacy group published an update to the California Standard Practice Manual, called the National Standard Practice Manual. Oregon and Washington comply in many respects, except Oregon uses exceptions to balance costs and benefits.

Historically, most of the value of electric savings came from reducing energy generated by fossil fuel plants, regardless of the time of day, week or year. Most of the savings were from reduced generation, while small portions were from reduced losses on power lines and transformers, and from reduced transmission and distribution construction due to smaller loads. Likewise, almost all of the value of gas savings was associated with a therm of gas savings, regardless of the timing. Additionally, OPUC permits an additional 10 percent adder to value based on the premise that not all efficiency benefits can be quantified.

More recently, there's less value from energy use from reduced generation on average and more value in reduced generation during peak energy use times. There's locational value from reduced construction of transmission and distribution systems for both electricity and gas. The OPUC is working on guidance for locational value through the resource value of solar docket. It's not yet clear how much will be applicable to energy efficiency.

The Pacific Northwest is catching up to the rest of the country in quantifying peak savings. For many years, the Pacific Northwest used dams as batteries to meet peak demand. The region has outgrown that resource, so power during peak times costs more. Increasingly, demand for power has shifted to summer, when water in rivers is low.

Energy Trust is working to improve estimates and quantification of peak savings. The Northwest Power Council's Seventh Power Plan shows that efficiency can save more demand than demand management over the next 20 years because efficiency follows load shape.

The board asked for a simpler explanation of how efficiency saves more energy than demand management. Fred explained that energy efficiency saves energy all the time, including during peak times. If efficiency is increased, it automatically reduces peak load. Efficiency is an automatic every day peak control. There are also opportunities to build demand management into control systems for efficiency measures. The board added that demand management implies shifting the timing of energy use, not reducing the energy use. Demand response is paying an industrial consumer to use less energy during peak.

Fred continued that Energy Trust is working to improve how we value efficiency based on both when it saves energy and how much energy it saves.

The board stated that Energy Trust should use only the utility cost test, not the total resource cost test because the customer is better suited to define benefit than the OPUC.

The board asked about the timeframe for improving estimates of the load shape of efficiency. There will be some improvements in 2018, but improvements will continue for three to five years.

## **Committee Reports**

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### ***Audit Committee, Anne Root***

The only opportunity for improvement identified in the financial audit is to look into cyber security risks. Debbie Menashe is exploring cyber security policies.

The board asked about the Secretary of State audit. Mike explained it is still underway and there are no new updates. The audit committee requested more frequent updates on the Secretary of State audit.

### ***Compensation Committee, Dan Enloe***

Energy Trust is transitioning management of its retirement plan from The Standard to Principal and Cable Hill. There will be a blackout period from May 24 to June 24. The committee reviewed a business plan to transition employee investments. After transition, participants will have online access to manage their accounts and make adjustments. The costs of new funds are much lower than with The Standard. The committee approved the qualified default investment alternative.

***Evaluation Committee, Lindsey Hardy***

The committee looked at an evaluation of cannabis efficiency, which indicated that most customers were interested in and valued energy efficiency as something to set their business apart.

The committee reviewed an operations and maintenance persistence study. The study concluded that operations and maintenance measures are estimated to last three years, and made recommendations to increase the persistence of savings.

Another study looked at the load shape of water heaters and explored heating water to a higher temperature to shift energy use from peak periods. Savings were minimal.

The board commented that the cannabis market is over capacity on production and asked how Energy Trust ensures investment in viable cannabis businesses. Mike explained that Energy Trust anticipates that cannabis facilities will persist even if the company does not. The board suggested that the cannabis industry is volatile, and noted that insurance regulation will increase for cannabis growers.

***Policy Committee, Alan Meyer***

The policy committee discussed strategic planning. There were a few routine policy reviews. No changes were recommended.

The committee discussed how Energy Trust uses reserve funds, and made progress to develop policies to govern Energy Trust's use of reserve funds. A policy is in development stating steps needed before pursuing new business. This policy will come to the full board when ready.

Mike added that he shared this thinking regarding the reserve funds with Avista and Cascade Natural Gas, and both utilities were receptive.

***Strategic Planning Committee, Mark Kendall***

The committee reviewed the agenda for the board retreat and reviewed board learning topic papers. A board retreat agenda will go out soon to the full board.

***Conservation Advisory Council, Lindsey Hardy, Alan Meyer***

There were three new members added to the Conservation Advisory Council. At the last meeting, the Conservation Advisory Council saw presentations from staff, discussed potential topics for 2018 meetings and discussed how the role of the council has evolved over time.

***Renewable Energy Advisory Council, Alan Meyer, John Reynolds***

The renewable energy sector exceeded goals in 2017 due to two large custom solar projects moving from 2016 to 2017. The solar program had its busiest year ever, with almost 1,800 solar systems installed. Energy Trust reached 100 MW of installed solar capacity at homes and business. Energy Trust also has a contract with Oregon Department of Energy to support increasing access to solar for low- and moderate-income customers.

The board asked about the impact of solar tariffs, and noted that steel or aluminum tariffs could also impact solar systems. Energy Trust expects the tariffs to have minimal impact on commercial and residential solar markets.

The board asked if the Renewable Energy Advisory Council also discussed its role and influence on the board. Renewable Energy Advisory Council did not have that discussion, because it is a smaller group

with a different approach. Mike added that Renewable Energy Advisory Council did a similar examination a few years ago.

The board asked if Don Jones is retired from Pacific Power. Kari Greer, Pacific Power, responded that Don is not retired. Don is focusing primarily on Washington and California. The board recognized Don's participation.

### **Adjourn**

The board adjourned at 3:56 p.m.

**The next meeting of the Energy Trust Board of Directors** will be on Thursday, May 17, 2018, and Friday, May 18, 2018, at 8:00 a.m. at Mercy Corps, 45 SW Ankeny St, Portland, Ore. 97204.

/s/ Mark Kendall  
Mark Kendall, Secretary