Energy Trust Board of Directors

November 14, 2018

421 SW Oak Street, Suite 300 Portland, OR 97204 1.866.368.7878 503.546.6862 fax energytrust.org

161st Board Meeting

Wednesday, November 14, 2018
421 SW Oak Street, Suite 300, Portland, Oregon

	Agenda	Tab	Purpose
10:30 a.m.	**Board Meeting—Call to Order** (Roger Hamilton) • 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 a regular agenda upon the request of any member.* • October 17, 2018, Board Meeting Minutes • Board Committee Appointments—R856 (Roger Hamilton; R856 replaces R852)	**1** **Resolution distributed at meeting**	Action
10:35 a.m.	**President's Report** (Roger Hamilton)		Info
10:40 a.m.	**Staff Report** (Michael Colgrove) • Draft 2019 Budget—Summary of Public Comments Received • ACEEE 2018 State Scorecard Rankings Update • Community Solar Program		Info Info Info
11:05 a.m.	**Planning and Evaluation** • Energy Trust-NEEA End Use Load Research Project Annual Update (Sarah Castor, Erika Kociolek) • Execute a Contract with Michaels Energy—R857 (Phil Degens, Erika Kociolek)	**2**	 Info Action
11:40 a.m.	**Energy Programs** • Authorize Additional Incentives for a 300-kW Hydropower Project Funding Agreement—R858 (Jed Jorgensen)	**3**	Action
12:00 p.m.	**Lunch and Executive Session** *The board will meet in Executive Session pursuant to bylaws section 3.19.1 to discuss internal personnel matters.* ***The Executive Session is not open to the public***		

1:30 p.m.	**Staff Committee Updates**		Info
	• Diversity, Equity and Inclusion Data and Baseline Analysis Report (Andy Griguhn, Alex Novie, Dan Rubado)		
2:30 p.m.	**Committee Reports**		
	• Compensation Committee (Melissa Cribbins)	**4**	Info
	• Evaluation Committee (Lindsey Hardy)		Info
	• Executive Director Review Committee		Info
	• Finance Committee (Susan Brodahl)	**5**	Info
	• Policy Committee (Alan Meyer)	**6**	Info
	• Strategic Planning Committee (Mark Kendall)	**7**	Info
	• Conservation Advisory Council (Lindsey Hardy, Alan Meyer)	**8**	Info
	• Renewable Energy Advisory Council (Alan Meyer, Ernesto Fonseca)	**9**	Info
3:30 p.m.	**Adjourn**		

The next meeting of the Energy Trust Board of Directors will be Friday, December 14, 2018, at 10:30 a.m.-3:30 pm at Energy Trust, 421 SW Oak, Suite 300, Portland, OR 97204

Table of Contents

Tab 1

Board Meeting Minutes—160th Meeting

October 17, 2018

Board members present: Susan Brodahl, Melissa Cribbins, Ernesto Fonseca, Roger Hamilton, Lindsey Hardy, Eric Hayes, Elee Jen, Mark Kendall, Debbie Kitchin, Henry Lorenzen, Alan Meyer, Roland Risser, Anne Root, Steve Bloom (Oregon Public Utility Commission ex officio), Ruchi Sadhir (Oregon Department of Energy special advisor)

Staff attending: Amber Cole, Michael Colgrove, Hannah Cruz, Sue Fletcher, Steve Lacey, Pati Presnail, Peter West, Cheryle Easton, Fred Gordon, Jed Jorgensen, Betsy Kauffman, Debbie Menashe, Dave Moldal, Julianne Thacher, Wendy Bredemeyer

Others attending: Janice Boman (Embertec), Lynne Chicoine (Clackamas County Water Environment Services), Angela DeVita (Northwest Bank), Joe Esmonde, Anna Kim (OPUC), Dani Ledezma (Diversity, Equity and Inclusion consultant), Brendan McCarthy (PGE), Elaine Prause (OPUC), Kandi Young (OPUC), Linda Woodley (member of public)

Business Meeting

Roger Hamilton called the meeting to order at 10:35 a.m. and reminded the board that consent agenda items can be changed to regular agenda items at any time.

The board motioned to change the agenda order so that the president's report is first. Anne Root moved and Debbie seconded.

President's Report

Roger described the recent resignation of Energy Trust Board Member Eddie Sherman. He expressed regret about the resignation, and summarized Eddie's feedback to the board.

The board had recently convened to discuss Eddie's resignation and next steps. Roger expressed regret that Eddie felt isolated. Roger noted that he has reached out to Eddie several times and had not heard back. This morning, the board participated in a training and discussion session hosted by diversity, equity and inclusion consultant Dani Ledezma. She previously provided cultural competency training in February 2018.

Roger said the board is committed to enhancing diversity, equity and inclusion and continuous improvement, and agrees that Energy Trust has a responsibility to serve all communities. Last December, the board adopted a diversity, equity and inclusion policy. This commitment must permeate every aspect of Energy Trust's business. Staff are reaching out to communities of color, renters and moderate-income customers, and providing new ways to serve customers, such as through a new manufactured homes pilot. Staff developed a diversity, equity and inclusion lens to bring this thinking into operational decision-making.

Eddie's resignation signals the need to strengthen and continue the board's commitment to diversity, equity and inclusion. Roger referenced three efforts underway that support this commitment.

First, the board took steps to ensure greater board diversity through a new process developed this year to engage candidates. The new process seeks referrals from a broad network and seeks to ensure increased racial and geographic diversity on the board. The board nomination committee will continue building a pool of diverse candidates for future vacancies. The board is excited to present four exceptional board candidates today. As specified in Energy Trust's Diversity, Equity and Inclusion Operations Plan, Energy Trust's current focus is on understanding and improving services and outcomes for people and communities of diverse races, ethnicities, incomes and geographic representation. Diversity includes numerous other dimensions. It is incumbent on the board to reflect and respect a multitude of viewpoints.

Second, Energy Trust is establishing a new Diversity Advisory Council in early 2019 to provide advice to the board and staff in supporting Energy Trust's diversity, equity and inclusion goals. The board will identify members to attend Diversity Advisory Council meetings and bring insight and information back to the board.

Third, the board will continue to support Energy Trust's diversity, equity and inclusion goals in Energy Trust's Diversity, Equity and Inclusion Operations Plan. The plan was drafted in 2017 with input from stakeholders, and includes a three-year roadmap to accelerate diversity, equity and inclusion work across programs and internal operations.

Roger addressed staff. The board has discussed the impact of Eddie's letter on the organization and the staff. While Eddie's feedback was directed to the board, board members recognize that it impacts staff as well. The board respects and supports staff's work, especially regarding diversity, equity and inclusion, and will work with staff to ensure Oregon's diverse population is effectively represented on board and staff. The board is also working to arrange a time to meet with staff for more discussion on this topic.

General Public Comments

Linda Woodley as a member of the public described her prior consulting work with Energy Trust developing diversity, equity and inclusion initiatives and goals in 2016. She observes that Energy Trust has made little progress on its diversity, equity and inclusion work, and believes this is largely because the board has pushed back on staff's efforts. These efforts include hiring people of color and reaching underserved markets. Linda requested that the board delay a vote on the four new board members until more diverse communities can have more input on the selection process. She noted one board nominee has an inherent conflict of interest as an Energy Trust trade ally. Linda said she believes Energy Trust is not serving all customers, does not reflect diversity in requests for proposals, and does not have diverse suppliers.

Roger thanked Linda for her input, and noted the board takes her concerns seriously. Roger also clarified that trade allies are not contracted with Energy Trust.

Debbie Kitchin disclosed that her company is a trade ally and general contractor, and noted she discloses this every year. She does not see her status as a trade ally as a conflict of interest, and Energy Trust has conflict of interest policies and procedures to manage this, such as abstaining from votes where it could be an issue.

There were no additional 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. July 25, 2018, Board Meeting Minutes
2. Balanced Competition Policy Amendment—R851
3. Board Committee Assignments—R852

RESOLUTION 851
AUTHORIZING EDITORIAL CHANGES
IN THE BALANCED COMPETITION POLICY

WHEREAS:

1. **The Energy Trust Policy Committee reviews Energy Trust policies every three years to see if they require amendment.**
2. **The Balanced Competition Policy prohibits any Energy Trust contractor from being a prime contractor of more than three programs. The purpose of the policy is to ensure competition for Energy Trust program management contracts.**
3. **The policy is based on several years' experience managing program management contracts as the efficiency industry has grown and consolidated.**
4. **Currently, no single entity operates more than two Energy Trust program management contracts, which is consistent with the policy.**
5. **The Policy Committee and staff have reviewed the policy and recommend only editorial changes.**

It is therefore RESOLVED that the Energy Trust Board of Directors authorizes editorial changes in the Balanced Competition Policy as shown in the attached.

Moved by: Anne Root Seconded by: Debbie Kitchin

In favor: 9 Abstained: 0

Opposed: 0

RESOLUTION 852
BOARD COMMITTEE APPOINTMENTS
(*SUPERSEDES RESOLUTION 843)*

WHEREAS:

1. **Energy Trust of Oregon, Inc. Board of Directors are authorized to appoint by resolution committees to carry out the Board's business.**
2. **The Board President has nominated new directors to serve on the following committees.**

It is therefore RESOLVED:

1. **This resolution supersedes Resolution 843, adopted by the board at its June 6, 2018, meeting.**
2. **That the Board of Directors hereby appoints the following directors to the following committees for terms that will continue until a subsequent resolution changing committee appointments is adopted:**

Audit Committee
Anne Root, Chair
Melissa Cribbins
Mark Kendall
Karen Ward, outside expert
Roger Hamilton *(*ex officio*)*
Pati Presnail, staff liaison
Board Nominating Committee
Debbie Kitchin, Chair
Alan Meyer
Anne Root
Melissa Cribbins
Steve Bloom, OPUC *(*ex officio)
Roger Hamilton *(*ex officio*)*
Greg Stokes, staff liaison

Compensation Committee *(formerly 401(k) Committee)*
Melissa Cribbins, Chair
Mark Kendall
Roger Hamilton *(*ex officio*)*
Debbie Goldberg Menashe, staff liaison
Executive Director Review Committee
Melissa Cribbins, Chair
Debbie Kitchin
Roger Hamilton (ex officio)
Amanda Sales, staff liaison
Finance Committee
Susan Brodahl, Chair
Ernesto Fonseca
Debbie Kitchin
Anne Root
Roger Hamilton *(*ex officio*)*
Pati Presnail, staff liaison
Policy Committee
Alan Meyer, Chair
Ernesto Fonseca
Anne Root
Elaine Prause *(*ex officio*)*
Roger Hamilton (ex officio)
Debbie Goldberg Menashe, staff liaison
Program Evaluation Committee
Lindsey Hardy, Chair
Susan Brodahl
Alan Meyer
Ken Keating, expert outside reviewer
Jennifer Light, expert outside reviewer
Dulane Moran, expert outside reviewer
Jamie Woods, expert outside reviewer
Warren Cook *(*ex officio*)*
Roger Hamilton *(*ex officio*)*
Sarah Castor, staff liaison
Strategic Planning Committee
Mark Kendall, Chair
Susan Brodahl
Lindsey Hardy
Janine Benner, ODOE *(*ex officio)
Elaine Prause, OPUC *(*ex officio*)*
Roger Hamilton *(*ex officio*)*
Debbie Goldberg Menashe, staff liaison

3. **The executive director, general counsel or chief financial officer are authorized to sign routine 401(k) administrative documents on behalf of the board, or other documents if authorized by the Compensation Committee.**
4. **The board also acknowledges that the following board members have committed to attend advisory council meetings:**
   a. **Conservation Advisory Council: Lindsey Hardy and Alan Meyer**
   b. **Renewable Energy Advisory Council: Alan Meyer and Ernesto Fonseca**

Moved by: Anne Root	Seconded by: Debbie Kitchin
In favor: 9	Abstained: 0
Opposed: 0	

Introduction of New Board Members

Debbie introduced a resolution to add four new members to the board, and described the board's process for seeking and evaluating new board members. Debbie invited potential new board members to introduce themselves.

Elee Jen, principal marketing and business development manager at Energy Performance Engineering LLC in Newberg, is excited to join the board because her company works with customers who have benefited from Energy Trust incentives. Elee said she is excited to help Energy Trust distribute more benefits to low-income customers and underserved customers.

Eric Hayes, state organizing coordinator for the International Brotherhood of Electrical Workers, has been with IBEW for 23 years and was also president of electrical workers minority caucus, which helps provide services to communities. Eric expressed a desire to serve the community and Oregon in this board position, and an interest in directly addressing issues, such as the diversity issues raised earlier, as a board member.

Roland Risser has more than 40 years of energy-related experience, including 31 years at Pacific Gas and Electric. After Pacific Gas and Electric, he worked at the U.S. Department of Energy for seven years and ran several programs. He created many of the innovations that allowed LEDs to be in market today and also started the Better Buildings Initiative.

Henry Lorenzen is an attorney, a dry land wheat farmer in Pendleton and an electrical engineer. His family has farmed in the Pendleton area for 118 years. He worked in Portland as an attorney, including with Bonneville Power Administration. He was recently the chair of the Northwest Power and Conservation Council. Henry said he is eager to help Energy Trust deliver energy efficiency, which is the least-cost, least-risk energy resource for the region.

Debbie described the new board recruitment process, including more outreach to different groups to identify candidates. The board intends to continue to broaden outreach for future board candidate searches.

Debbie explained the board nominating committee was seeking to add two board members at this time, and the committee expanded the number to four because of these excellent candidates nominated through the new process. The board is interested in receiving input from new board members and community groups as it continues to improve the outreach and nomination process. The board looks for diversity in geographic location, building expertise, political perspective, race and ethnicity. The board also seeks a variety of different skills and experience, and to represent Oregon as a whole.

In November, there will be an orientation session for new board members, and existing board members are invited to participate.

RESOLUTION 853
ELECTING ERIC HAYES, ELEE JEN, HENRY LORENZEN AND ROLAND RISSER TO THE ENERGY TRUST BOARD OF DIRECTORS

WHEREAS:

1. **Ken Canon resigned his position on the board effective February 6, 2018. His position on the board has remained open and unfilled since that time.**

2. **The board Nominating Committee has reviewed candidates for the board seat vacated by Ken Canon and nominates Eric Hayes, Coordinator of International Brotherhood of Electrical Workers to fill the remaining term through 2019.**
3. **Dan Enloe resigned his position on the board effective June 2018. His position on the board has remained open and unfilled since that time.**
4. **The board Nominating Committee has reviewed candidates for the board seat vacated by Dan Enloe and nominates Elee Jen, Principal of Business Development of Energy Performance Engineering to fill the remaining term though 2020.**
5. **John Reynolds resigned his position on the board effective June 2018. His position on the board has remained open and unfilled since that time.**
6. **The board Nominating Committee has reviewed candidates for the board seat vacated by John Reynolds and nominates Henry Lorenzen, former member and past chair of the Northwest Power and Conservation Council to fill the remaining term through 2019.**
7. **Eddie Sherman resigned his position on the board effective August 28, 2018. His position on the board has remained open and unfilled since that time.**
8. **The board Nominating Committee has reviewed candidates for the board seat vacated by Eddie Sherman and nominates Roland Risser, retired US Department of Energy Deputy Assistant Secretary, Renewable Power to fill the remaining term through 2021.**

Moved by: Debbie Kitchin	Seconded by: Anne Root
In favor: 9	Abstained: 0
Opposed: 0	

Staff Report

Community Solar Award

Michael Colgrove reminded the board that Energy Trust participated on a proposal to administer the Oregon's community solar program. A decision was made on that proposal, and one of the proposals with which we participated was selected. Following successful contract negotiations, Energy Trust will be a subcontractor for the community solar program. Contract negotiations are currently underway.

Steve Bloom added that the negotiations involve the Oregon Department of Administrative Services.

Budget and Organizational Review Implementation Planning

Staff completed recommendation reports for Energy Trust's budget process and organizational review. Staff selected two consultants to plan for implementation of the recommendations, including Slalom for the budget process and 1961 for the organizational review. Greg Stokes will manage those contracts and work with consultants to develop implementation plans based on the recommendations. Drafts are expected in early 2019.

Energy Programs

Clackamas County Water Environment Services Tri-City Water Pollution Control Facility Cogeneration Project

Jed Jorgensen, senior renewables program manager, and Dave Moldal, renewables program manager, presented on the Clackamas County Water Environment Services Tri-City Water Pollution Control Facility Cogeneration Project (WES Tri-City Cogeneration Project).

Jed provided context on Energy Trust's Other Renewables program. Other Renewables works under a different framework than Energy Trust's energy efficiency programs. Other Renewables helps reduce above-market costs for projects that generate energy from hydropower, biopower, wind and geothermal resources.

Staff evaluates Other Renewables projects based on costs to develop, construct and operate over 20 years, plus revenues. Staff compare those costs to costs of other energy sources and calculates reasonable rate of return for the developer. If costs exceed revenue on a 20-year basis, then the projects have above-market costs and Energy Trust can provide an incentive.

Dave Moldal introduced Lynne Chicoine of Clackamas County Water Environment Services. Dave provided a summary of biopower opportunities at wastewater recovery facilities in Oregon. Wastewater recovery facilities are ideal locations for energy efficiency and renewable energy because they are permanent, have a low cost of capital, are municipally owned, have heat and electric load, have full time staff, do long-term planning and are net metered.

There are 11 operating cogeneration projects at wastewater recovery facilities in Oregon, and Energy Trust has been involved in seven of those projects. Of the 11 cogeneration projects, four digest organic food waste and fats, oils and grease. By the end of 2019, there will be about 8.7 megawatts of biopower capacity at these facilities, generating 60,000 megawatt hours of renewable energy per year. They operate at 90 percent capacity factor, which is high. That's the equivalent of $2.4 million in energy savings. There is more biopower potential in Oregon, but many tax credits and incentives have expired. Funding sources include Energy Trust incentives and utility voluntary funds.

The board clarified that WES Tri-City Cogeneration Project will extend the useful life of the cogeneration equipment.

The board discussed Energy Trust's evaluation of the project, which included the retail rate for price of power. Energy Trust does not consider methane or carbon reduction in its calculations, and does not calculate levelized costs like the energy efficiency programs. The board emphasized that Energy Trust's goals should be linked to the Northwest Power and Conservation Plan goals, and stated that Energy Trust should understand how externalities impact calculations and decisions.

Dave Moldal added that Metro recently passed an ordinance requiring businesses to separate food waste, which can be used to generate more power at water resource recovery facilities. This is the first instance of a government requiring separation and collection of food waste.

Dave continued that WES responded to Energy Trust's spring 2018 request for proposals. The facility provides wastewater treatment to Gladstone, Oregon City and West Linn. The cogeneration project is part of a $33 million facilities upgrade project, including construction of new digester. WES plans to remove its existing cogeneration engine, which is too small and operating at low efficiency levels. WES will add new hot water boilers, a cogeneration engine, improved cogeneration heat recovery system and a new dual-membrane biogas system.

Energy Trust staff reviewed the project for site control, development and operations team expertise, permitting, interconnection and energy conversion technology, and WES is strong in all of these areas. This project will only use municipal wastewater solids, not food waste or fats, oils and grease.

WES also applied to PGE for a Renewable Development Grant, and the status of those funds is unknown.

WES is asking for a $2.1 million incentive. The project will cost $5.7 million total. These costs are in alignment with other biopower projects supported by Energy Trust. Construction is expected in 2019 and 2020 and commercial operation is expected in 2021, with enough biogas to operate at full output by 2029 or 2030.

Energy Trust's proposed incentive is $1.8 million paid in two installments, one at commercial operation and one a year later based on renewable energy generation results. Staff anticipate the project will generate 4,300 MWh per year. The above-market cost is $3.9 million, not taking into account potential funds from PGE.

The board clarified that Energy Trust's incentive is based on WES receiving a PGE Renewable Development Grant and requested that staff add this clarification to the resolution. If the project does not receive funds from PGE, Energy Trust will recalculate above-market costs and an Energy Trust incentive. Lynne Chicoine added that WES will proceed with the project whether it is funded by PGE or not.

The board noted that there are significant emissions reductions from this project, which will result in air quality benefits for the local community and the state. The board requested this information to be included in future presentations. The board asked if there is a diesel backup generation agreement with PGE, and whether it will remain intact. Lynne said yes.

Lynne clarified that WES would not flare biogas, because it intends to use this renewable resource.

The board requested that a resolution number be added and that a typo be corrected.

RESOLUTION 854
AUTHORIZING AN INCENTIVE FOR THE WES TRI-CITY COGENERATION PROJECT

WHEREAS:

1. **In April 2018, Energy Trust began a competitive process to allocate incentives for renewable energy facilities in Portland General Electric service territory and Pacific Power territory. One application was received: the WES Tri-City Cogeneration Project.**
2. **Water Environment Services of Clackamas County (WES) proposes to install a 600-kW cogeneration system at the existing Tri-City Water Pollution Control Facility, resulting in 4,324 MWh of generation annually, on average. Generation will offset electricity that would otherwise be purchased from Portland General Electric (PGE). Project construction is expected to begin 2019, with commissioning in 2020, and commercial operation in 2021.**
3. **Staff finds that the project has significant strengths and is low risk. The project will be municipally owned, and WES is an experienced operator of a biogas cogeneration project. Staff sees no significant permitting challenges.**
4. **Above-market costs are $3,914,549 (present value) over a 20-year period if the project does not receive a Renewable Development Grant from PGE, or $1,970,105 if the project receives a $2.1 million grant from PGE.**
5. **Staff proposes an incentive of up to $1,800,000 to be paid in two installments. The first payment would be $1,000,000 at commercial operation and $800,000 no sooner than 12 months later based on a generation threshold.**
6. **Staff proposes to request Renewable Energy Certificates (RECs) equivalent to 100% of the project's expected generation over 20 years.**

It is RESOLVED that the Executive Director is authorized to negotiate a funding agreement for up to $1,800,000 in incentives to offset the above-market cost of the 600 kW cogeneration project owned by Water Environment Services of Clackamas County, consistent with the terms outlined above.

Moved by: Debbie Kitchin	Seconded by: Ernesto Fonseca
In favor: 13	Abstained: 0
Opposed: 0	

Committee Reports

Roger asked new board members to join two committees.

Executive Director Review Committee (Melissa Cribbins)
The committee got input from a survey, have a draft of the review and will have final review in November.

Policy Committee (Alan Meyer)
The committee is discussing forming an executive committee to be a mechanism for acting quickly without gathering the full board. Draft anticipated for presentation at next board meeting.

Strategic Planning Committee (Mark Kendall)
The committee is meeting October 30 with staff. The committee has been working with staff on possible scenarios, and is on schedule for a draft of the 2020-2024 Strategic Plan for review by the May 2019 board retreat, with public distribution and comment between June and October 2019. The committee is looking forward to working with the new DAC next year to help shape the organization's next strategic plan.

Conservation Advisory Council (Lindsey Hardy)
The Conservation Advisory Council received a presentation on DEI data that was interesting and would be good for the board to see.

Adjourn

The meeting adjourned at 12:03 p.m.

The next regular meeting of the Energy Trust Board of Directors will be held Wednesday, November 14, 2018, at 10:30 a.m. at Energy Trust of Oregon, Inc., 421 SW Oak Street, Suite 300, Portland, Oregon.

_____ ____/____/____
Signed: Mark Kendall, Secretary Date

Tab 2

Resolution 857

Board Decision

Execute a Contract with Michaels Energy

November 14, 2018

Summary

Authorize up to $600,000 in budgeted funds for a contract with Michaels Energy for the 2016-2017 impact evaluation of the Energy Trust Production Efficiency program.

Background and Discussion

- In July 2018, following a competitive bidding process, Energy Trust selected Michaels Energy to complete an impact evaluation of the Production Efficiency program for the years 2016 and 2017. The 2015 program year will not be evaluated, due to high and relatively consistent realization rates over time, with the exception of a single 2015 project, which represents approximately 60 percent of the Production Efficiency program's gas savings in that year.

- Out of four proposals received, Michaels Energy was selected for their qualifications in industrial impact evaluation, the quality of the proposed sample design, and the value of the number of projects evaluated and the number of site visits performed for the proposed budget, which was competitive with the budgets proposed by other firms.

- An initial contract has been authorized for, and work has begun on, tasks related to project kick-off, work plan development and sampling design, project file review and the development of site-specific evaluation plans, and the development of interview guides, to be completed by October 15, 2018. As part of that work, a final statement of work will be developed. The initial contract is for $138,000, while the full scope of work is expected to be up to $600,000.

- The 2009-2011 Production Efficiency impact evaluation had a total cost of $548,000, the 2012 Production Efficiency impact evaluation had a total cost of $348,410 and the 2013-2014 Production Efficiency impact evaluation had a total cost of $573,000. Energy Trust Evaluation staff feel that $600,000 for this evaluation is reasonable.

- This evaluation represents 19 percent of the 2018 Planning and Evaluation budget for evaluation services, and is just under 1 percent of total industrial expenses in 2016 and 2017 combined. In 2016, savings from the industrial sector represented 20 percent of total gas savings and 20 percent of total electric savings, and in 2017, savings from the industrial sector represented 19 percent of total gas savings and 27 percent of total electric savings.

- This impact evaluation will provide robust and reliable estimates of evaluated program savings by a third-party evaluator with strong qualifications in industrial impact evaluation. Program-level realization rates, which are key outputs, will be used in program planning, budgeting and in true-up. In addition, evaluator review and feedback on the savings estimates will help program staff refine savings estimates in the future.

Recommendation

Authorize the executive director to execute a contract with Michaels Energy for up to $600,000 to complete the impact evaluation of Energy Trust's Production Efficiency program for the program years 2016 and 2017.

RESOLUTION 857
AUTHORIZING THE EXECUTIVE DIRECTOR
TO EXECUTE A CONTRACT WITH MICHAELS ENERGY

WHEREAS:

1. **Following a competitive solicitation process conducted in July 2018, Michaels Energy was awarded the contract to conduct an impact evaluation for Energy Trust's Production Efficiency program, covering program years 2016-2017.**
2. **The scope of the impact evaluation will cover work planning and sample design; reviewing project files and developing site- and project-specific evaluation plans; data collection; impact analysis; and reporting of savings results, observations and recommendations for program improvement.**
3. **The expected budget for the contract is $600,000, which exceeds the executive director's signature authority and requires board of directors' approval.**

It is therefore RESOLVED that the Board of Directors of Energy Trust of Oregon, Inc., hereby authorizes the executive director to sign an amended contract for evaluation services for the 2016-2017 Production Efficiency program impact evaluation with Michaels Energy with a budget of up to $600,000.

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

Tab 3

Resolution 858

Board Decision

Authorize Additional Incentives for a 300-kW Hydropower Project Funding Agreement

November 14, 2018

Summary

Authorize additional incentive of up to $225,000 to offset the additional above-market cost of the 300-kilowatt McKenzie hydroelectric facility, proposed by the Three Sisters Irrigation District (District) near Sisters, OR. Board Resolution 820 (November 8, 2017, attached as Attachment A) previously authorized incentives of up to $640,000. The total authorized incentives for the project, if approved by the board, would be $865,000.

Energy Trust Goals

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

Background

- Three Sisters Irrigation District (District) is an early adopter and leader in Irrigation Modernization, a program Energy Trust and Farmers Conservation Alliance manage to encourage irrigation districts to modernize their infrastructure to enable energy, water, economic and environmental benefits.
- The District is an experienced and successful project developer that Energy Trust has worked with several times in the past. In 2014 the District installed a 700-kW hydroelectric facility at its Watson reservoir. That system delivers power to Pacific Power and has operated well. The District is currently in the process of constructing and installing another project consisting of an additional set of four hydropower turbines (totaling 200 kW) near the Watson project. Those turbines will serve as a demonstration site for on-farm hydro facilities made possible through pressurized water deliveries.
- In November 2017 Energy Trust's board approved Resolution 820, authorizing $640,000 in incentives for the proposed 300-kW McKenzie hydroelectric facility, developed by the District. The original memo giving the background and above-market cost analysis of the project at that time is attached at the end of this memo for reference.
- The board resolution authorized the McKenzie project to sell power to either PGE or Pacific Power. After the board approved the resolution, the District pursued delivering the project's power to PGE to take advantage of its more favorable rate schedule. In attempting to develop the agreements for power delivery to PGE, the District encountered unsurmountable challenges, detailed below, which unfortunately led to a reduction in energy

revenues. The District has asked Energy Trust to re-evaluate the project to see if warrants additional incentives to help offset the perceived additional above-market cost.

- The District is located outside of the service territories of PGE and Pacific Power. Projects located outside the service territory of the utility they wish to deliver power to must transmit their energy via distribution or transmission lines in a process known as "wheeling." Projects that wheel must provide, on a daily basis, an hourly schedule of their planned generation to the utilities responsible for balancing the grid in the areas through which their transmitted energy will pass.
- Utilities require generation to be scheduled in whole megawatt (MW) increments. For projects with an installed capacity of less than 1 MW, some creativity is needed to get the math to work. Projects in this situation often need to schedule a combination of "1's" and "0's" over the course of a day, which add up to the actual fractional MWh generation. For example, a 500 kW (0.5 MW) facility which operates with baseload characteristics could schedule "1's" and "0's" for every other hour to add up to the 12 MWh of energy delivered during a 24-hour period.
- The District is well versed in this process, which it uses for the existing 700-kW hydro facility, delivering energy to Pacific Power via Bonneville Power Administration (BPA). With both BPA and Pacific Power, generation is *scheduled hourly* but *reconciled* against the actual delivered energy on a *monthly* basis. Per standardized contracts, utilities always pay the lesser of what is scheduled versus what was generated. So, hypothetically, if the District scheduled 20 MWh but delivered 22 MWh, they would be paid for 20 MWh. If they scheduled 20 MWh, but delivered 18 MWh, they would be paid for 18 MWh.
- At the time staff brought the McKenzie project to the board in 2017, PGE's Schedule 201 rate appeared to be more favorable than Pacific Power's Schedule 37 rate; thus, the District began due diligence to investigate delivering power to PGE. Through their due diligence process the district learned that PGE reconciles generation on an *hourly* basis, as opposed to the *monthly* basis that Pacific Power uses. This appears to be an impassable roadblock for projects under 1 MW in capacity.
- Hourly reconciliation means projects cannot schedule in "1's" and "0's" because they will not be compensated for any energy delivered during the scheduled "0" hour (the utility always pays the lesser of the scheduled vs delivered energy).
- The District investigated a work-around with BPA, exploring purchasing market energy from BPA to "round up" their fractional MW generation to 1 MW so that they could schedule "1's" each hour. This would work for power deliveries to PGE but it is does not work with BPA's system. BPA informed the District that scheduling "1's" and purchasing market energy would constitute an "intentional imbalance" on their system, for which they would be penalized. BPA could not quantify the cost of that penalty, stating that the charge could vary on a seasonal basis. This unquantifiable penalty presented too much of a risk for the District, leaving them with only the option of delivering power to Pacific Power.
- The process of moving through the due diligence with PGE and BPA took approximately six months. Unfortunately, during the time the District was pursuing a Power Purchase Agreement with PGE, Pacific Power's Schedule 37 avoided cost rates decreased, which translates into reduced revenue potential and a higher above-market cost for the project.
- With the exception of the reduced value of energy, and related changes in BPA costs from shifting delivery to Pacific Power instead of PGE, the project remains unaltered from what was presented to the board in 2017.

Staff Evaluation

- Staff re-evaluated the project using the current Pacific Power Schedule 37 avoided cost rates and saw significant impacts to the project's financial health. With energy rates as low as 2.4 cents per kWh, the project is unable to break even within 20 years without incentives. Shifting power deliveries to Pacific Power does reduce costs incurred for wheeling across the BPA system but these cost savings are eclipsed by the reduction in revenue.
- All other evaluation points from staff's previous memo remain accurate.

Revised Above-Market Cost Analysis and Proposed Incentive

- The above-market cost is calculated as the difference between the cost to produce the power over a specific term, and the market value of the power. Above-market costs are calculated on a present-value basis: all costs and revenues over the project term are discounted to their current value as if they existed today.
- Staff evaluated this project over a 20-year term. The length of the term was chosen to match what we have used for similar hydro projects.
- The project was evaluated at an 8 percent discount rate, consistent with the 8-10 percent range of discount rates Energy Trust has applied when evaluating other municipally or government-owned projects.
- The table below shows the financial summary for the project.

Project Financial Summary - Present Value Basis - Evaluated over 20 years		
Project Cost		
Total Design & Construction	$	1,430,000
Expense		
NPV Total Project Expense	$	341,584
NPV of Interest Payments	$	8,064
NPV of Principal Payments	$	29,247
	$	378,895
Total Cost: Cost + Expenses	**$**	**1,808,894**
Revenue		
NPV Total Revenues (including Avoided O&M)	$	908,403
Above Market Cost: Total Cost - Revenues	**$**	**(900,491)**

- The project's above-market costs total $900,491.
- Staff propose an additional incentive of $225,000 be added to the initial incentive of $640,000 for a total incentive of $865,000, split into payments over time. The first payment would be the largest, $465,000, payable upon reaching commercial operation. Upon

meeting annual generation milestones, staff would propose to make additional payments of $100,000 annually, over four years. With the Energy Trust incentive, the project would pay back in 11 years.

- On a present-value basis, Energy Trust's incentive is worth $737,234, or 82 percent of the project's above-market cost.
- Energy Trust would ask for 18,448 Renewable Energy Certificates (RECs) from the project, equivalent to 100 percent of the expected generation produced by the project over 20 years.
- The REC allocation goes beyond board policy requiring Energy Trust to take ownership of RECs in proportion to its contribution to above-market costs. Because the project requires an incentive in the upper range of costs, we think it is reasonable to request more RECs than we usually would, in this case 100 percent of the RECs.
- Staff proposes to negotiate a contract with the District with milestones to allow Energy Trust to withdraw funding if the project is unable to move forward.
- Funds for the project are within the 2018 Other Renewables program budget.

Recommendation

Authorize additional incentives of up to $225,000 to offset the further above-market cost of the 300-kW Three Sisters Irrigation District McKenzie hydroelectric facility.

RESOLUTION 858
AUTHORIZING ADDITIONAL INCENTIVES FOR THE MCKENZIE HYDRO FACILITY

WHEREAS:

1. **In November 2017 Energy Trust's board approved Resolution 820, authorizing $640,000 in incentives for the proposed 300-kW McKenzie hydroelectric facility, developed by Three Sisters Irrigation District (District). After the board approved Resolution 820, the District encountered challenges in attempting to deliver power to PGE and the above-market costs of the project increased. The District asked Energy Trust to re-evaluate the project's above-market costs and consider additional incentives to enable power delivery to Pacific Power.**
2. **Staff re-evaluated the project and found above-market costs are now $900,491 (net-present value).**
3. **Staff proposes an additional incentive of $225,000 to be added to the original incentive of $640,000, for a total of $865,000. The first payment would be $465,000, payable on commercial operation, followed by four additional payments of $100,000 if the project meets annual generation milestones. With the proposed incentives, the project would pay back in 11 years.**
4. **Staff proposes to include milestones in the funding agreement with the District to allow Energy Trust to withdraw funding if the project is unable to move forward.**

It is RESOLVED that the Executive Director is authorized to negotiate a funding agreement for up to $865,000 ($640,000 from Resolution 820 plus $225,000 from Resolution 858) in incentives to offset the above-market cost of the 300-kW McKenzie hydroelectric facility of the Three Sisters Irrigation District, consistent with the terms outlined above and in Resolution 820.

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

ATTACHMENT A:
Original Board Decision
Authorize a 300-kW Hydropower Project Funding Agreement

November 8, 2017

Summary

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

Energy Trust Goals

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

Background

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

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

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

Staff Evaluation

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

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

The evaluation found the following:

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

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

Interconnection

- The District has submitted an interconnection application with CEC and met with BPA and CEC staff to discuss interconnection. A CEC systems impact study is underway to evaluate any changes in the distribution or transmission system related to the project. The District will be responsible for paying for any upgrades that are necessary.

- Because the interconnection study is incomplete, interconnection costs are engineering estimates, not utility quotes. The interconnection cost estimate of $115,000 seems reasonable in comparison to the interconnection costs of the District's 700 kW unit's in 2014 (approximately $250,000), but there is risk associated with an estimate.

- CEC will charge the District a flat rate of $6.24 per kW per month to wheel power, an annual cost of $22,464. The 12-month charge is an industry standard even though the project will only be online during the irrigation season.

- The District also has to move power through BPA. If the District delivers to PGE this requires firm, point-to-point transmission services, which they have secured. These services entail an

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

Project Costs, Expenses, and Financing

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

Capital Costs

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

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

Grants and Revenues (including Power Purchase Agreement)

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

Staff's overall evaluation:

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

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

Above-Market Cost Analysis and Proposed Incentive

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

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

- Above-market costs are $778,859 (NPV) if the project delivers to PGE, or $729,917 if it delivers to Pacific Power.
- Staff proposes an incentive of $640,000 in several payments. The first payment would be $440,000, payable on commercial operation. If the project delivers to PGE, additional payments of $40,000 would be triggered over five years as the project meets annual generation milestones. If the project delivers to Pacific Power, these additional payments would be $25,000 a year for eight years. These payments would help the District maintain a positive cash flow during the lean early years of their PPA, when power prices are less than $30/MWh. With the proposed incentives, the project would pay back in 15 years.
- On a present-value basis, Energy Trust's incentive is worth $540,431 to $558,286 (depending on how many additional payments are made), or about 70% of the project's above-market cost. At $6.1 million/aMW, the incentive is in the upper end of the range for hydropower projects we have supported in the past. This is due to low power prices, which require larger incentives to enable projects to be financially viable.
- Energy Trust would negotiate 18,448 Renewable Energy Certificates (RECs) from the project, equivalent to 100% of the expected generation produced by the project over 20 years. This REC allocation is more than is strictly required by board policy, which requires Energy Trust to take RECs in proportion to its contribution to above-market costs. We think it is reasonable to take 100% of the RECs Because the project requires an incentive in the upper range of costs.
- Staff proposes to include milestones in the funding agreement with the District, to allow Energy Trust to withdraw funding if the project is unable to move forward.

- Funds for the project are within the 2017 Other Renewables program budget.

Recommendation

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

RESOLUTION 820

AUTHORIZING INCENTIVES FOR THE MCKENZIE HYDRO FACILITY

WHEREAS:

5. **In May, 2017 Energy Trust began a competitive process to allocate up to $3.0 million in incentives for renewable energy facilities in Portland General Electric service territory and $1 million in Pacific Power territory. Three applications were received, all hydropower, including the McKenzie project, proposed by the Three Sisters Irrigation District.**
6. **By replacing irrigation canals with pressurized pipe, the District can conserve water, eliminate seepage, evaporation and on-farm pumping, and generate hydropower with the excess pressure.**
7. **The proposed project will use a new 5.25-mile long pressurized penstock pipeline that discharges into the McKenzie Reservoir. Water savings will permanently restore 7 cfs of flow to Whychus Creek, benefiting threatened and endangered fish species.**
8. **The District proposes to construct a 30'x30' concrete powerhouse and install a 300kW horizontal Francis turbine with an estimated generation of 922,400 kWh, annually. Power would be wheeled through Central Electric Coop and Bonneville Power Administration for delivery to Portland General Electric (PGE) or Pacific Power. Project construction is expected to begin in spring 2019, commissioning and testing to start in in winter 2019, and commercial operation in spring 2020.**
9. **Staff finds that the project has significant strengths in that it will be built by an entity with a proven track record as a hydropower operator, it will be municipally owned, and it has secured grants. Staff sees no significant permitting challenges and few other risks.**
10. **Above-market costs are $778,859 (net-present value) if the project delivers to PGE, or $729,917 if it delivers to Pacific Power. The choice of utility depends on the resolution of certain power delivery feasibility issues.**
11. **Staff proposes an incentive of $640,000. The first payment would be $440,000, payable on commercial operation. If the project delivers to PGE, additional payments of $40,000 would be triggered over five years if the project meets annual generation milestones. If the project delivers to Pacific Power, these additional payments would be $25,000 a year for eight years. With the proposed incentives, the project would pay back in 15 years.**
12. **On a present-value basis, Energy Trust's incentive is worth $540,431 to $558,286 (depending on how many additional payments are made), about 70% of the project's above-market cost. At $6.1 million/aMW, the incentive is in the upper end**

of the range for hydropower projects Energy Trust has supported, due primarily to the fact that low power prices require larger incentives.

13. **Staff proposes to seek Renewable Energy Certificates (RECs) equivalent to 100% of the project's expected generation over 20 years. This is more than required by board policy, but is reasonable because the project is in the upper range of costs.**
14. **Staff proposes to include milestones in the funding agreement with the District to allow Energy Trust to withdraw funding if the project is unable to move forward.**

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

Moved by: Ken Canon		Seconded by: John Reynolds
Vote:	In favor: 10	Abstained: 0
	Opposed: 1	

Tab 4

Compensation Committee Meeting

October 25, 2018

Attending at Energy Trust offices
Debbie Menashe (Energy Trust), Jeff Gates (Cable Hill Partners), Shelby Gatewood (Cable Hill Partners), Ann Konrad (Principal Financial)

Attending by teleconference
Melissa Cribbins, Chair; Roger Hamilton

Review and Approval of August 23, 2018, Meeting Notes

The minutes of August 23 were reviewed and approved by the committee as submitted.

Retirement Plan Quarterly Fiduciary Investment Review

Ann Konrad, of Principal Financial, introduced herself to the committee members and described her role. Jeff Gates and Shelby Gatewood, of Cable Hill Partners, also were in attendance to provide a quarterly plan performance update of the market and the Energy Trust retirement plan investments.

Jeff opened the update with a general discussion about the markets. Jeff described the markets as volatile. While the markets have had a long bull run, with all sectors in positive territory in 2017, 2018 will likely wind up differently. Much of the 2018 volatility is driven by Federal Reserve announcements about interest rate increases. Also, ongoing discussions about trade wars create uncertainty, and markets react poorly to uncertainty. Jeff and Shelby then discussed the implications for plan participants. In their view, given that most of Energy Trust's plan participants are in the Retirement View product, with age and risk management for individual investment portfolios, only the youngest plan participants will see much impact because for those participants investments include a higher percentage of U.S. equities.

Shelby and Jeff then reviewed the scorecard methodology. For the second consecutive quarter, the TIAA-CREF Social Choice Eq Instl fund scored 6, putting it on the watch list. Funds scoring at six or below are placed on a watchlist for four consecutive quarters or for four of five consecutive quarters would be suggested for removal from the available fund investment lineup. Jeff explained that the fund is performing well; it's low score is related primarily to manager fees, which are higher than the benchmark applied by the scorecard. The committee agreed to continue to watch this fund noting that it is a social equity fund of interest to Energy Trust's plan participants. Jeff noted that the Principal platform is dynamic, and Cable Hill Partners will continue to monitor the platform for alternative socially conscious investment funds and will keep the committee informed.

Ann then gave the committee a high-level summary of the distribution of plan investments and a snapshot of "retirement wellness," a measure of participation, and at what level, disaggregated by age of participation. Generally, Energy Trust's participant "retirement wellness" is good as compared to the comparison benchmark used by Principal Financial. This report is used to tailor education planning for employees. In the coming year, Ann and Shelby will work closely with Energy Trust's human resources group to design retirement education seminars aimed at improving retirement wellness for participants. Ann and Shelby will continue to report to the committee on education and outcomes.

Staff Updates

2019 Benefits Renewal Update

Debbie reported to the committee on the 2019 benefit renewal. As expected, Energy Trust will see significant increases in its health plan premiums. Staff reviewed options to minimize costs, and for

2019, deductibles and out-of-pocket maximums will be increased. In anticipation of premium increases for the foreseeable future, Amanda Sales and Debbie will engage with staff in early 2019 to begin to consider other cost mitigation strategies.

Compensation Philosophy

Debbie reported that the Management Team has reviewed a Compensation Philosophy document that will be considered in annual performance management and merit compensation discussions in early 2019. Staff will report on the performance management and merit process at the committee's next meeting.

Investment Policy Statement

The committee agreed to review an investment policy statement in 2019.

Meeting adjourned at 4:30 p.m.

Next Compensation Committee Meeting: October 25, 2018, 3:00 – 4:30 pm.

Tab 5

Finance Committee Meeting

October 9, 2018, 3:30 pm

Attending at Energy Trust offices
Susan Brodahl – *Finance Committee Chair*, Ernesto Fonseca Board
Pati Presnail, Mike Colgrove, Steve Lacey, Amber Cole, Cheryle Easton from Energy Trust

Attending by teleconference
Roger Hamilton (ex officio) and Anne Root

The meeting began at 3:35 pm.

Draft Budget preview

Mike previewed the workshop plan. It will start with a short presentation, followed by an open forum with posters and presenters at ten stations. Following the open session will be a group discussion and questions and answers. We hope this will result in high engagement with board members and other stakeholders able to spend more time in subjects of interest to them. This is the first time we've used this format.

Amber clarified that the Utilities have been meeting with Peter West & Steve Lacey since July discussing revenue requirements, early ideas, snap shots of forecasts and action plan drafts, and the utility representatives will attend the workshop as well.

Amber also informed the committee that a Budget webinar will be available for those attending or unable to attend this workshop. She will provide the link after the workshop.

Key dates for the board:

- Round 1 (Draft) at Board Workshop 10-17-18
- Round 2 (Proposed Final) at December Board meeting 12-14-18

Mike presented the highlights from the At a Glance document and the highlights from the presentation that is going out in tomorrow's mail.

Key take-aways in the budget:

1. We are pursuing underserved markets
2. Increasing cost per unit of savings
3. Residential lighting transition is expected to complete in 2020, and this was a huge contributor to our low levelized costs up to this point
4. Resource demands on the organization continue to grow. An example is targeted load management, and a new project with PGE.
5. We are investing in some internal projects like the organization review and budget review recommendations, migrating to online office365and SharePoint.

Budget discussions

Ernesto and Susan asked about the relationship between avoided cost and levelized cost. Electric was 3.4 cents per kwh, and utility cost last year was 7 cents. These comparators are not exact but give a general idea of the cost versus the value. This information is refined and reported in our annual report.

Ernesto asked about reserves – Steve explained the levels of reserves we have - program reserves, contingency, and emergency. Program reserves are available for use immediately, contingency reserves are available if needed subject to board approval, emergency reserves are to be used only in

catastrophic events. Ernesto asked if reserves continue to rise each year, Steve explained they can go up and down based on relative revenues and expenses each year. Pati explained how reserves are invested – very conservatively, in short term CD's bond funds, and commercial paper with short maturity and high ratings.

Susan asked should we reduce the reserves balance on the statements for the project commitments. Pati explained these are contingent liabilities and can be shown in a foot note. We will move forward with that suggestion.

Roger asked and Anne joined, asking can we show savings as a percent of the utility loads? The committee discussed whether this is available information and whether this would be helpful to the public to see.

Roger commented on the OPUC performance measure for annual increases on staffing and administrative cost. The measure has been expanded to also limit growth from year to year to no more than 10%.

Ernesto asked for more information about lighting. Mike explained the federal code change, and Steve explained our incentives on lighting, and that the market adopted LED lighting faster than had previously been expected.

Susan is interested in how our cost levels compare to other program administrators. The Secretary of State was also interested in this. CEE is doing a benchmarking study on this. We are also interested in understanding what portion of the delivery cost we pay out has a high customer service component, such as performing walk throughs. Mike stated we intend to have more information a year from now as these inquiries bear fruit.

Susan offered to lend her expertise to looking creatively at healthcare costs. Mike and Pati described the work the broker has done to manage the premium cost, the limited cost levers and provider options available to us. Ernesto asked about association plans and self-insurance. Susan explained how these work and why they may not benefit Energy Trust. Susan also explained the increase in healthcare cost related to ACA taxes that are embedded in the premium.

Anne and other committee members expressed concern for rising administrative and staffing costs while savings are going down. Mike explained all the reasons, the higher number of small projects that require more attention by staff, the no cost and low-cost savings going away due to the lighting market maturation for example.

Susan asked why the forecast for staffing costs in 2018 is lower than budget, which Mike and Pati explained is due to turnover – individuals leave, their position is unfilled for a time while recruitment takes place.

Mike presented the administrative and program support costs and performance metric in the budget. We are at 7%, which is below the 8% cap. Pati explained the change in reporting of administrative cost to respond to recommendations by the Secretary of State audit. The methodology and impact are explained in the budget administrative cost memo.

The committee discussed the staffing metric and the interplay of regular employees and interns. The budget contains 108.5 full time employees, and 8.5 FTE in interns. We discussed changing the intern count either in the draft budget, or in the proposed final budget. This change will help take a small amount of pressure from the performance metric, but does not solve the problem.

Meeting adjourned at 5:20 pm
Next meeting date is TBD

Notes on September 2018 Financial Statements

October 19, 2018

Revenue

PGE revenue exceeded budget by $1 million in the month of September. Overall revenues remain reasonable compared to budgeted amounts.

	YTD Actual	YTD Budget	YTD Var	YTD %	PY
PGE Efficiency	73,629,779	70,321,867	3,307,912	5%	71,161,895
PGE Renewables	6,562,354	6,351,154	211,200	3%	6,591,945
PAC Efficiency	42,299,629	41,108,385	1,191,244	3%	44,505,222
PAC Renewables	4,855,007	4,842,117	12,890	0%	4,944,424
NWN	17,118,002	16,784,064	333,938	2%	21,241,731
CNG	1,796,992	1,422,482	374,511	26%	2,054,130
Avista	982,023	867,652	114,370	13%	675,398
Grant Revenue	68,771		68,771	0%	
Investment Income	706,943	170,000	536,943	316%	299,801
Total	148,019,499	141,867,721	6,151,780	4%	151,474,547

Reserves

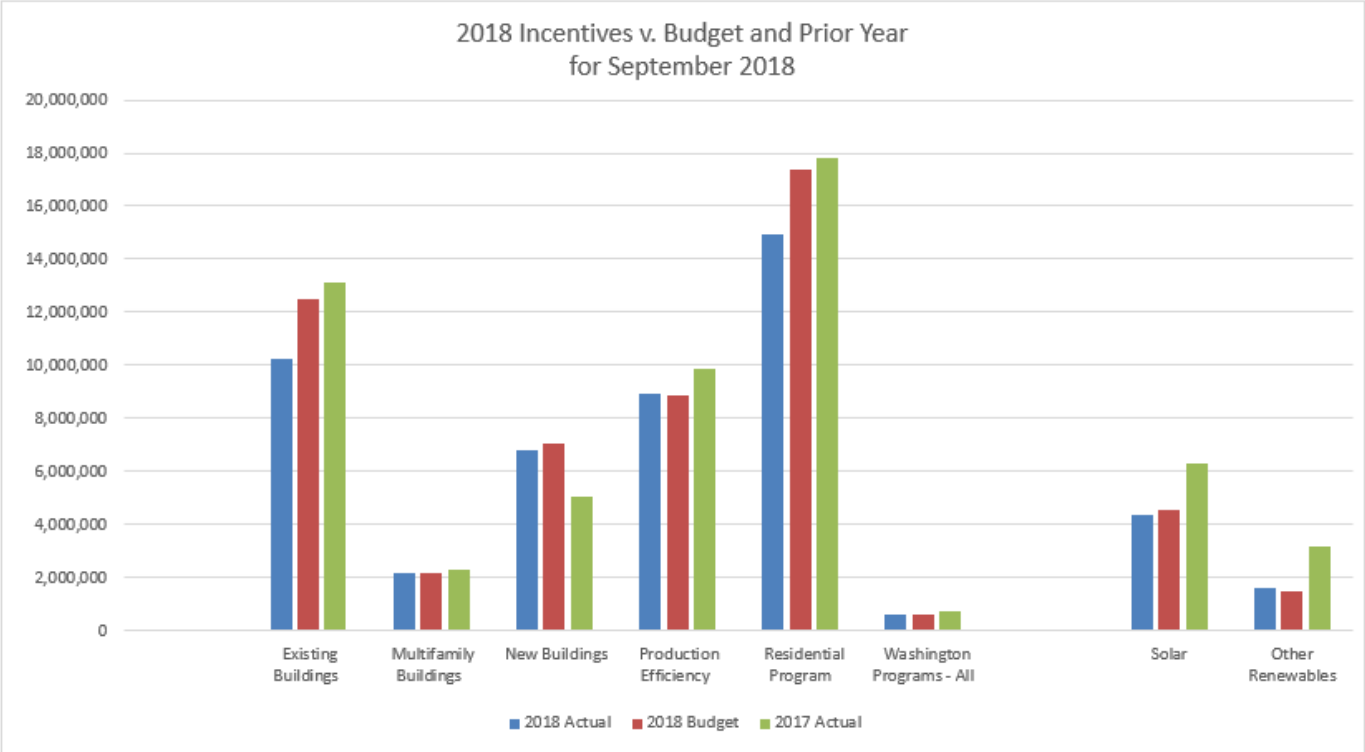
Our current look at year-end shows that reserves will be significantly reduced by 12/31/18. We are finalizing our October forecast, and it appears that all utilities will be positive and no drawdowns will be necessary. This forecast will be present next month.

Reserves

	12/31/18 forecast	9/30/18 current	12/31/18 beg of year	9/30/17 one year ago
PGE	17,376,531	32,255,673	12,210,374	21,400,680
PacifiCorp	4,551,710	17,398,064	6,211,995	12,923,711
NW Natural	3,194,439	6,532,436	3,527,721	6,426,679
Cascade	153,647	982,522	262,065	515,430
Avista	16,398	95,302	75,716	67,901
NWN Industrial	670,252	1,234,784	2,647,086	2,682,742
NWN Washington	437,629	442,186	176,503	813,213
PGE Renewables	8,608,447	8,768,229	7,073,074	7,354,422
PAC Renewables	5,813,330	7,069,792	6,268,078	6,649,684
Program Reserves	40,822,383	74,778,967	38,452,612	58,834,462
Other Reserves	0	26,860	38,710	
Contingency Reserve	5,000,000	5,000,000	5,000,000	5,000,000
Board approved for program loans	1,800,000	1,800,000	800,000	
Contingency Available	3,441,309	3,548,252	4,641,309	4,523,715
Total	51,063,690	85,154,082	48,132,611	65,564,937

Expenses

Total September expenses were 2% ($365,000) over budget. September incentive spending exceeded budget by $1.2 million. This brings our incentive shortfall for the year to just under $5 million. New Buildings and Production Efficiency in particular had strong incentive spending this month. Staff expenses are below budget for the month due to the number of workdays in the month and are below budget year to date due to vacancies (including a CFO position) that we did not fill. Professional services are below budget due to certain projects not beginning as quickly as planned.

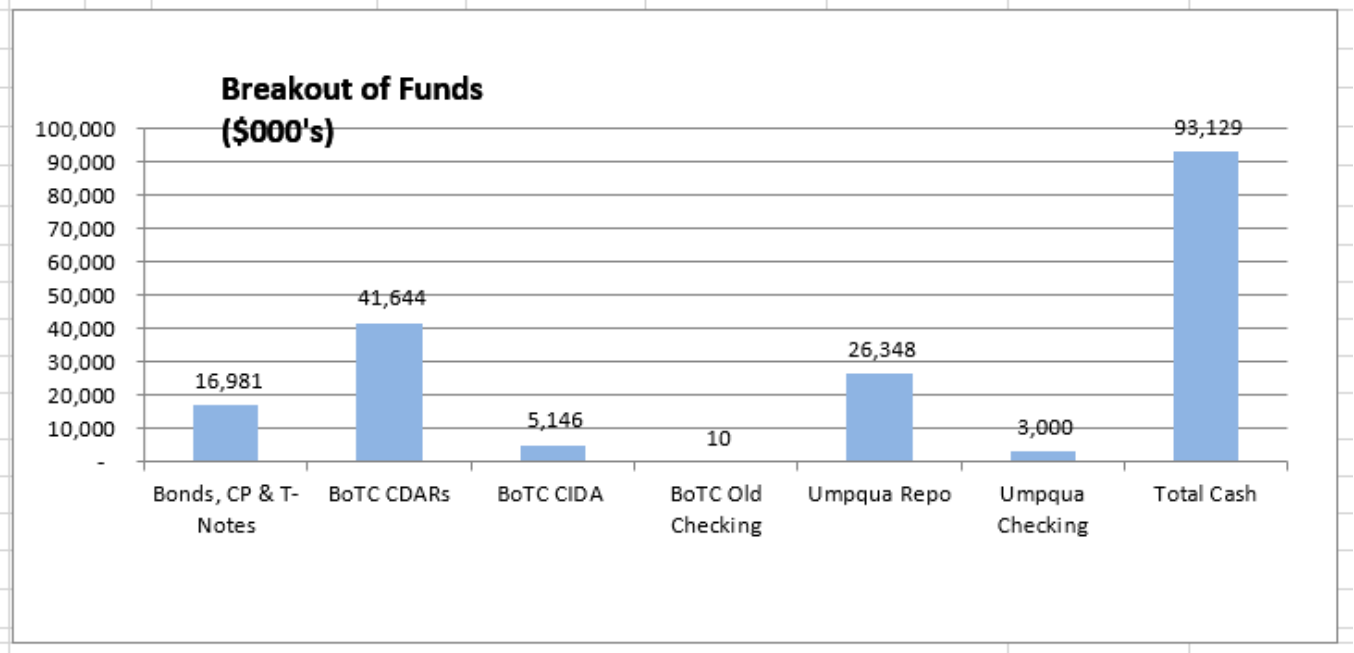


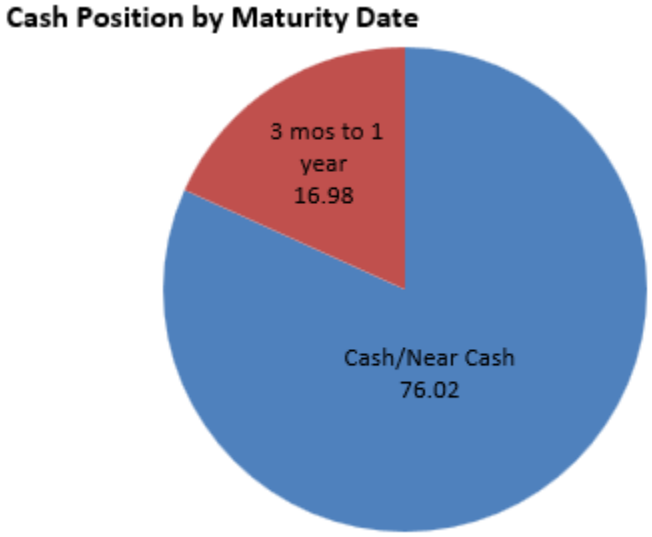
Total Incentives
Year-to-Date 2018

	2018 Actual	2018 Budget	2017 Actual
Existing Buildings	10,247,014	12,513,278	13,104,719
Multifamily Buildings	2,164,067	2,203,700	2,320,517
New Buildings	6,822,277	7,032,989	5,073,459
Production Efficiency	8,931,938	8,842,145	9,865,771
Residential Program	14,938,814	17,398,610	17,783,407
Washington Programs - All	596,190	612,515	721,243
Solar	4,373,462	4,545,750	6,308,479
Other Renewables	1,606,884	1,464,245	3,166,119
Total Incentives	49,680,647	54,613,234	58,343,714
Energy Efficiency Only	**43,700,301**	**48,603,239**	**48,869,115**

Investment Status

The graphs below show the type of investments we hold and the locations where our funds are held. We are investing in short term areas (mainly 13 week CDARs). We want to ensure cash is available to meet year end demands by late December/early January. As the 2019 budget is completed and our confidence grows, we will probably be able to invest for the slightly longer term.


Breakout of Funds
($000's)
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
-
16,981
41,644
5,146
10
26,348
3,000
93,129
Bonds, CP & T-Notes
BoTC CDARs
BoTC CIDA
BoTC Old Checking
Umpqua Repo
Umpqua Checking
Total Cash


Cash Position by Maturity Date
3 mos to 1 year
16.98
Cash/Near Cash
76.02

PINK PAPER

Energy Trust of Oregon
BALANCE SHEET
September 30, 2018
(Unaudited)

	September 2018	August 2018	December 2017	September 2017	Change from one month ago	Change from Beg. of Year	Change from one year ago
Current Assets							
Cash & Cash Equivalents	34,516,054	36,614,329	52,223,904	46,864,420	(2,098,275)	(17,707,850)	(12,348,366)
Investments	58,456,567	54,391,604	22,721,392	29,221,261	4,064,963	35,735,174	29,235,306
Receivables	81,707	24,081	119,077	75,571	57,626	(37,370)	6,136
Prepaid Expenses	456,590	459,231	244,442	330,236	(2,641)	212,148	126,354
Advances to Vendors	2,202,781	773,190	2,489,421	2,233,949	1,429,592	(286,640)	(31,168)
Total Current Assets	**95,713,699**	**92,262,434**	**77,798,237**	**78,725,436**	**3,451,264**	**17,915,462**	**16,988,263**
Fixed Assets							
Computer Hardware and Software	3,934,165	3,934,165	3,733,082	3,733,082	-	201,083	201,083
Software Development in Progress	-	-	183,687		-	(183,687)	-
Leasehold Improvements	595,027	595,027	595,027	595,027	-	-	-
Office Equipment and Furniture	819,795	819,795	815,056	815,056	-	4,739	4,739
Total Fixed Assets	**5,348,986**	**5,348,986**	**5,326,852**	**5,143,164**	**-**	**22,134**	**205,822**
Less Depreciation	(4,773,971)	(4,750,980)	(4,442,925)	(4,237,608)	(22,992)	(331,046)	(536,363)
Net Fixed Assets	**575,015**	**598,006**	**883,926**	**905,556**	**(22,992)**	**(308,912)**	**(330,541)**
Other Assets							
Deposits	258,653	237,314	237,314	237,314	21,339.00	21,339.00	21,339.00
Deferred Compensation Asset	990,846	992,679	972,828	879,459	(1,833)	18,018	111,388
Note Receivable, net of allowance	430,669	430,669	263,669	263,669	-	167,000	167,000
Total Other Assets	**1,680,169**	**1,660,663**	**1,473,812**	**1,380,442**	**19,506**	**206,357**	**299,727**
Total Assets	**97,968,883**	**94,521,103**	**80,155,975**	**81,011,434**	**3,447,779**	**17,812,908**	**16,957,448**
Current Liabilities							
Accounts Payable and Accruals	9,957,336	7,507,296	29,180,745	9,888,749	2,450,041	(19,223,409)	68,587
Salaries, Taxes, & Benefits Payable	770,562	853,828	874,594	881,046	(83,266)	(104,032)	(110,484)
Total Current Liabilities	**10,727,898**	**8,361,124**	**30,055,339**	**10,769,795**	**2,366,774**	**(19,327,441)**	**(41,897)**
Long Term Liabilities							
Deferred Rent	1,099,176	1,087,084	990,344	950,252	12,093	108,833	148,925
Deferred Compensation Payable	984,465	986,298	976,378	883,009	(1,833)	8,087	101,457
Other Long-Term Liabilities	3,249	3,249	1,290	2,315	-	1,959	934
Total Long-Term Liabilities	**2,086,890**	**2,076,630**	**1,968,012**	**1,835,575**	**10,260**	**118,879**	**251,315**
Total Liabilities	**12,814,789**	**10,437,754**	**32,023,351**	**12,605,370**	**2,377,034**	**(19,208,562)**	**209,418**
Net Assets							
Unrestricted Net Assets	85,154,094	84,083,349	48,132,624	68,406,064	1,070,745	37,021,470	16,748,030
Total Net Assets	**85,154,094**	**84,083,349**	**48,132,624**	**68,406,064**	**1,070,745**	**37,021,470**	**16,748,030**
Total Liabilities and Net Assets	**97,968,883**	**94,521,103**	**80,155,975**	**81,011,434**	**3,447,779**	**17,812,908**	**16,957,448**

Energy Trust of Oregon
Cash Flow Statement-Indirect Method
Monthly 2018

	January	February	March	April	May	June	July	August	September	Year to Date
Operating Activities:										
Revenue less Expenses	$ 11,111,618	$ 11,785,867	$ 5,880,943	$ 6,097,341	$ 1,847,257	$ (3,889,820)	$ 2,539,130	$ 578,392	$ 1,070,747	$ 37,021,468
Non-cash items:										
Depreciation	60,349	60,436	37,154	35,624	33,910	31,464	26,631	22,992	22,992	331,552
Change in Reserve on Long Term Note										-
Loss on disposal of assets										-
Receivables	25,330	13,597	(10,052)	(101,297)	89,402	(6,066)	(5,248)	34,210	(15,585)	24,292
Interest Receivable	11,816	701	586	(36,521)	59,170	(27,651)	55,102	(8,083)	(42,041)	13,079
Advances to Vendors	1,053,629	717,885	(1,549,230)	755,704	755,705	(1,563,795)	773,167	773,166	(1,429,591)	286,640
Prepaid expenses and other costs	(423,367)	(160,906)	52,859	53,228	(29,400)	67,421	(36,386)	74,911	(16,865)	(418,505)
Accounts payable	(18,224,160)	(151,198)	(3,016,589)	1,026,311	(486,892)	43,241	1,788,509	(2,652,679)	2,450,039	(19,223,418)
Payroll and related accruals	94,882	102,231	(227,298)	(11,396)	148,977	58,746	(44,306)	(132,682)	(85,099)	(95,945)
Deferred rent and other	12,093	12,092	12,092	12,093	14,051	12,093	12,092	12,093	12,092	110,791
Cash rec'd from / (used in) Operating Activities	(6,277,810)	12,380,706	1,180,465	7,831,087	2,432,180	(5,274,367)	5,108,691	(1,297,680)	1,966,689	18,049,961
Investing Activities:										
Investment Activity (1)	3,011,583	(2,002,711)	(8,416,303)	(3,992,551)	5,387,728	(16,077,806)	(8,988,537)	(591,615)	(4,064,963)	(35,735,175)
(Acquisition)/Disposal of Capital Assets	(2,843)	(8,444)	(3,397)		(7,955)					(22,639)
Cash rec'd from / (used in) Investing Activities	3,008,740	(2,011,155)	(8,419,700)	(3,992,551)	5,379,773	(16,077,806)	(8,988,537)	(591,615)	(4,064,963)	(35,757,814)
Cash at beginning of Period	52,223,904	48,954,835	59,324,388	52,085,153	55,923,690	63,735,643	42,383,470	38,503,624	36,614,329	52,223,904
Increase/(Decrease) in Cash	(3,269,070)	10,369,552	(7,239,235)	3,838,536	7,811,953	(21,352,173)	(3,879,846)	(1,889,295)	(2,098,274)	(17,707,853)
Cash at end of period	$ 48,954,835	$ 59,324,388	$ 52,085,153	$ 55,923,690	$ 63,735,643	$ 42,383,470	$ 38,503,624	$ 36,614,329	$ 34,516,054	$ 34,516,054

(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 2018 - December 2019

	Actual									Adjusted Budget		
	January	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**
Cash In:												
Public purpose and Incr funding	18,964,634	21,537,912	17,624,324	17,785,777	15,360,373	12,544,226	13,567,185	13,864,679	15,994,676	13,333,652	11,883,542	14,311,937
Investment Income	48,230	35,414	48,768	21,666	136,385	71,477	171,619	115,601	70,862	(131,228)	(131,228)	(131,228)
From Other Sources	31,744	20,495	383	(96,406)	95,652	0	(55)	41,257	(8)			
Total cash in	19,044,608	21,593,822	17,673,475	17,711,037	15,592,410	12,615,703	13,738,749	14,021,537	16,065,530	13,202,424	11,752,314	14,180,709
Cash Out:	(25,325,256)	(9,221,560)	(16,496,406)	(9,879,952)	(13,168,186)	(17,890,069)	(8,630,058)	(15,319,218)	(14,098,846)	(17,192,009)	(18,660,498)	(26,736,315)
Net cash flow for the month	(6,280,648)	12,372,261	1,177,069	7,831,085	2,424,224	(5,274,366)	5,108,691	(1,297,681)	1,966,684	(3,989,586)	(6,908,184)	(12,555,606)
Cash Flow from/to Investments	3,011,583	(2,002,711)	(8,416,303)	(3,992,551)	5,387,728	(16,077,806)	(8,988,537)	(591,615)	(4,064,963)		2,500,000	21,325,000
Beginning Balance: Cash & MM	52,223,904	48,954,835	59,324,381	52,085,150	55,923,690	63,735,643	42,383,469	38,503,623	36,614,326	34,516,047	30,526,461	26,118,277
Ending cash & MM	**48,954,835**	**59,324,381**	**52,085,153**	**55,923,690**	**63,735,643**	**42,383,470**	**38,503,624**	**36,614,329**	**34,516,047**	**30,526,461**	**26,118,277**	**34,887,670**
Future Commitments												
Renewable Incentives	8,300,000	8,500,000	6,400,000	4,900,000	5,200,000	7,000,000	7,200,000	7,600,000	10,700,000	10,200,000	10,100,000	9,400,000
Efficiency Incentives	84,300,000	85,700,000	88,200,000	90,600,000	89,500,000	98,400,000	100,700,000	113,600,000	89,400,000	90,100,000	84,900,000	84,200,000
Emergency Contingency Pool	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000
Total Commitments	97,600,000	99,200,000	99,600,000	100,500,000	99,700,000	110,400,000	112,900,000	126,200,000	105,100,000	105,300,000	100,000,000	98,600,000

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 2018 - December 2019

	2019 Final R2 Projection											
	January	**February**	**March**	**April**	**May**	**June**	**August**	**September**	**September**	**October**	**November**	**December**
Cash In:												
Public purpose and Incr funding	15,970,862	20,394,304	20,722,660	17,098,459	14,743,958	13,596,738	14,573,633	13,617,897	14,099,097	15,412,038	13,580,079	16,540,633
Investment Income	25,000	15,000	15,000	15,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
From Other Sources												
Total cash in	15,995,862	20,409,304	20,737,660	17,113,459	14,763,958	13,616,738	14,593,633	13,637,897	14,119,097	15,432,038	13,600,079	16,560,633
Cash Out:	(32,946,810)	(11,040,289)	(12,017,485)	(12,649,468)	(12,460,968)	(13,228,580)	(14,957,185)	(12,174,555)	(13,517,924)	(16,641,042)	(17,904,238)	(21,900,335)
Net cash flow for the month	(16,950,948)	9,369,016	8,720,175	4,463,992	2,302,990	388,158	(363,552)	1,463,343	601,173	(1,209,003)	(4,304,159)	(5,339,702)
Cash Flow from/to Investments	-	-	-	-	-	-	-	-	-	-	-	-
Beginning Balance: Cash & MM	34,887,670	17,936,722	27,305,737	36,025,913	40,489,904	42,792,894	43,181,052	42,817,500	44,280,843	44,882,016	43,673,013	39,368,853
Ending cash & MM	**17,936,722**	**27,305,737**	**36,025,913**	**40,489,904**	**42,792,894**	**43,181,052**	**42,817,500**	**44,280,843**	**44,882,016**	**43,673,013**	**39,368,853**	**34,029,151**
Future Commitments												
Renewable Incentives	9,700,000	10,700,000	10,900,000	10,800,000	11,000,000	11,300,000	11,600,000	12,000,000	12,500,000	13,100,000	13,100,000	13,100,000
Efficiency Incentives	85,400,000	86,500,000	87,400,000	88,300,000	90,500,000	99,500,000	99,500,000	99,600,000	99,700,000	99,900,000	100,100,000	100,400,000
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	100,100,000	102,200,000	103,300,000	104,100,000	106,500,000	115,800,000	116,100,000	116,600,000	117,200,000	118,000,000	118,200,000	118,500,000

Dedicated funds adjustment: reduction in available cash for commitments to Renewable program projects with board approval, or when board approval not required, with signed agreements
Committed funds adjustment: reduction in available cash for commitments to Efficiency program projects with signed agreements
Cash reserve: reduction in available cash to cover cashflow variability and winter revenue risk
Escrow: dedicated funds set aside in separate bank accounts

Energy Trust of Oregon
Income Statement - Actual and YTD Budget Comparison
For the Month Ending September 30, 2018
(Unaudited)

	September				YTD			
	Actual	**Budget**	**Budget Variance**	**Variance %**	**Actual**	**Budget**	**Budget Variance**	**Variance %**
OREGON PPC REVENUE								
Public Purpose Funds-PGE	3,581,445	3,204,663	376,782	12%	29,305,342	28,869,000	436,342	2%
Incremental Funds - PGE	6,209,864	5,561,746	648,118	12%	50,886,791	47,804,020	3,082,770	6%
Public Purpose Funds-PacifiCorp	2,534,892	2,355,162	179,730	8%	21,792,752	21,750,057	42,695	0%
Incremental Funds - PacifiCorp	2,915,990	2,578,690	337,301	13%	25,361,884	24,200,445	1,161,439	5%
Public Purpose Funds-NW Natural	592,680	533,655	59,024	11%	15,511,880	15,139,966	371,914	2%
NW Natural - DSM	-	-	-	-	-	-	-	-
Public Purpose Funds-Cascade	45,444	45,809	(365)	-1%	1,796,992	1,422,482	374,511	26%
Public Purpose Funds-Avista	114,370	96,406	17,964	19%	982,023	867,652	114,370	13%
Total Oregon PPC Revenue	**15,994,685**	**14,376,132**	**1,618,553**	**11%**	**145,637,664**	**140,053,622**	**5,584,042**	**4%**
NW Natural - Washington	-	-	-	-	1,606,122	1,644,099	(37,977)	-2%
Grant Revenue	15,578		15,578	-	68,771		68,771	-
Revenue from Investments	112,903	20,000	92,903	465%	706,943	170,000	536,943	316%
Total Other Sources of Revenue	**128,481**	**20,000**	**(108,481)**	**542%**	**2,381,836**	**1,814,099**	**(567,738)**	**31%**
TOTAL REVENUE	**16,123,166**	**14,396,132**	**1,727,034**	**12%**	**148,019,500**	**141,867,721**	**6,151,779**	**4%**
EXPENSES								
Incentives	8,537,305	7,359,245	(1,178,060)	-16%	49,680,647	54,613,234	4,932,587	9%
Program Delivery Subcontracts	4,629,770	4,899,150	269,379	5%	43,220,613	43,305,153	84,540	0%
Employee Salaries & Fringe Benefits	905,977	1,138,648	232,671	20%	10,007,188	10,178,485	171,297	2%
Agency Contractor Services	105,465	133,972	28,507	21%	965,772	1,134,082	168,311	15%
Planning and Evaluation Services	260,839	335,673	74,834	22%	1,756,191	3,021,055	1,264,864	42%
Advertising and Marketing Services	253,254	236,292	(16,962)	-7%	1,946,078	2,166,933	220,855	10%
Other Professional Services	180,899	345,916	165,017	48%	1,550,674	3,248,295	1,697,621	52%
Travel, Meetings, Trainings & Conferences	29,228	42,212	12,985	31%	281,989	360,412	78,423	22%
Dues, Licenses and Fees	6,217	13,548	7,331	54%	110,172	173,859	63,687	37%
Software and Hardware	25,068	45,512	20,444	45%	282,575	378,843	96,267	25%
Depreciation & Amortization	22,992	37,404	14,412	39%	331,551	418,873	87,322	21%
Office Rent and Equipment	86,658	87,869	1,211	1%	777,910	790,825	12,914	2%
Materials Postage and Telephone	8,749	11,346	2,597	23%	82,059	104,613	22,554	22%
Miscellaneous Expenses	-	250	250	100%	4,609	3,750	(859)	-23%
TOTAL EXPENSES	**15,052,421**	**14,687,037**	**(365,384)**	**-2%**	**110,998,030**	**119,898,413**	**8,900,384**	**7%**
TOTAL REVENUE LESS EXPENSES	**1,070,745**	**(290,906)**	**1,361,650**	**468%**	**37,021,470**	**21,969,308**	**15,052,163**	**69%**

Energy Trust of Oregon
Income Statement - Actual and Prior Yr Comparison
For the Month Ending September 30, 2018
(Unaudited)

	September				YTD			
	Actual	Actual Prior Year	Prior Year Variance	Variance %	Actual	Actual Prior Year	Prior Year Variance	Variance %
OREGON PPC REVENUE								
Public Purpose Funds-PGE	3,581,445	3,269,069	312,376	10%	29,305,342	29,449,301	(143,959)	0%
Incremental Funds - PGE	6,209,864	5,619,979	589,885	10%	50,886,791	48,304,540	2,582,251	5%
Public Purpose Funds-PacifiCorp	2,534,892	2,511,017	23,876	1%	21,792,752	22,433,243	(640,491)	-3%
Incremental Funds - PacifiCorp	2,915,990	3,172,065	(256,074)	-8%	25,361,884	27,016,403	(1,654,519)	-6%
Public Purpose Funds-NW Natural	592,680	546,356	46,323	8%	15,511,880	15,500,301	11,578	0%
NW Natural - DSM			-	-		3,720,596	(3,720,596)	-100%
Public Purpose Funds-Cascade	45,444	66,151	(20,707)	-31%	1,796,992	2,054,130	(257,138)	-13%
Public Purpose Funds-Avista	114,370	60,980	53,390	88%	982,023	675,398	306,625	45%
Total Oregon PPC Revenue	**15,994,685**	**15,245,616**	**749,069**	**5%**	**145,637,664**	**149,153,912**	**(3,516,249)**	**-2%**
NW Natural - Washington		938,367	(938,367)	-100%	1,606,122	2,020,834	(414,712)	-21%
Grant Revenue	15,578		15,578	-	68,771		68,771	-
Revenue from Investments	112,903	47,895	65,008	136%	706,943	299,801	407,142	136%
Total Other Sources of Revenue	**128,481**	**986,262**	**857,782**	**-87%**	**2,381,836**	**2,320,635**	**(61,201)**	**3%**
TOTAL REVENUE	**16,123,166**	**16,231,878**	**(108,713)**	**-1%**	**148,019,500**	**151,474,547**	**(3,455,047)**	**-2%**
EXPENSES								
Incentives	8,537,305	6,273,089	(2,264,217)	-36%	49,680,647	58,343,714	8,663,066	15%
Program Delivery Subcontracts	4,629,770	5,120,255	490,485	10%	43,220,613	42,021,570	(1,199,044)	-3%
Employee Salaries & Fringe Benefits	905,977	1,022,411	116,434	11%	10,007,188	9,439,246	(567,942)	-6%
Agency Contractor Services	105,465	75,161	(30,304)	-40%	965,772	556,273	(409,499)	-74%
Planning and Evaluation Services	260,839	254,561	(6,278)	-2%	1,756,191	1,169,875	(586,317)	-50%
Advertising and Marketing Services	253,254	208,291	(44,963)	-22%	1,946,078	1,666,245	(279,834)	-17%
Other Professional Services	180,899	204,003	23,104	11%	1,550,674	1,518,005	(32,669)	-2%
Travel, Meetings, Trainings & Conferences	29,228	35,545	6,317	18%	281,989	299,731	17,741	6%
Dues, Licenses and Fees	6,217	9,300	3,083	33%	110,172	156,569	46,397	30%
Software and Hardware	25,068	22,936	(2,132)	-9%	282,575	239,656	(42,919)	-18%
Depreciation & Amortization	22,992	68,620	45,628	66%	331,551	639,353	307,802	48%
Office Rent and Equipment	86,658	87,627	969	1%	777,910	774,787	(3,124)	0%
Materials Postage and Telephone	8,749	8,954	206	2%	82,059	80,719	(1,340)	-2%
Miscellaneous Expenses		(1)	(1)	100%	4,609	36,663	32,055	87%
TOTAL EXPENSES	**15,052,421**	**13,390,753**	**(1,661,668)**	**-12%**	**110,998,030**	**116,942,405**	**5,944,375**	**5%**
TOTAL REVENUE LESS EXPENSES	**1,070,745**	**2,841,126**	**(1,770,381)**	**62%**	**37,021,470**	**34,532,142**	**2,489,328**	**-7%**

Energy Trust of Oregon
Statement of Functional Expenses
For the 9 Months Ending September 30, 2018
(Unaudited)

	Total	Program	Administrative and Program Support
Incentives	$49,680,647	$49,680,647	-
Program Delivery Subcontracts	$43,220,613	43,220,613	-
Employee Salaries & Fringe Benefits	$10,007,188	5,151,079	4,856,109
Agency Contractor Services	$965,772	551,990	413,782
Planning and Evaluation Services	$1,756,192	1,734,185	22,007
Advertising and Marketing Services	$1,946,079	1,113,553	832,526
Other Professional Services	$1,550,674	1,070,164	480,510
Travel, Meetings, Trainings & Conferences	$281,990	143,761	138,229
Dues, Licenses and Fees	$110,173	81,188	28,985
Software and Hardware	$282,575	154,603	127,972
Depreciation & Amortization	$331,551		331,551
Office Rent and Equipment	$777,910		777,910
Materials Postage and Telephone	$82,059	2,761	79,298
Miscellaneous Expenses	$4,609	1,510	3,099
Shared Office Space	$0	497,355	(497,355)
Shared Information Technology	$0	1,800,616	(1,800,616)
TOTAL Expenses	**110,998,030**	**105,204,025**	**5,794,006**
Program Support			2,681,794
Management & General & Development			2,795,766
Communications and Outreach			2,998,240
TOTAL Expenses			**8,475,800**
divided by			
Total Revenue without Interest			147,243,786
OPUC Measure vs. 8%			**5.76%**

ENERGY TRUST OF OREGON
Summary of All Units
For the 9 Months Ending September 30, 2018

	ENERGY EFFICIENCY									
	PGE	PacifiCorp	Total	NWN Industrial	NW Natural	Cascade	Avista	Oregon Total	NWN WA	ETO Total
REVENUES										
Public Purpose Funding	22,742,989	16,937,745	39,680,734		15,511,880	1,796,992	982,023	57,971,628		57,971,628
Incremental Funding	50,886,791	25,361,884	76,248,675					76,248,675	1,606,122	77,854,797
Grant Revenue										
Contributions										
Revenue from Investments										
TOTAL PROGRAM REVENUE	**73,629,780**	**42,299,629**	**115,929,409**	**-**	**15,511,880**	**1,796,992**	**982,023**	**134,220,303**	**1,606,122**	**135,826,425**
EXPENSES										
Incentives	23,197,255	12,835,777	36,033,032	633,140	5,510,106	501,712	426,123	43,104,110	596,190	43,700,300
Program Delivery Subcontracts	22,447,540	13,625,410	36,072,949	574,712	5,045,868	412,944	383,093	42,489,565	418,355	42,907,920
Employee Salaries and Fringe Benefits	1,373,835	826,110	2,199,946	45,971	316,721	27,611	25,737	2,615,987	69,343	2,685,330
Agency Contractor Services	210,856	114,227	325,085	8,013	29,552	3,286	2,227	368,163	-	368,163
Planning and Evaluation Services	831,835	424,251	1,256,086	17,446	97,237	9,747	7,980	1,388,496	-	1,388,496
Advertising and Marketing Services	467,178	301,603	768,782	12,413	158,665	12,070	11,945	963,876	-	963,876
Other Professional Services	250,588	170,073	420,660	7,022	79,669	6,270	6,224	519,843	7,403	527,246
Travel, Meetings, Trainings and Conferences	31,544	18,934	50,478	784	9,301	734	726	62,024	658	62,682
Dues, Licenses and fees	10,691	5,911	16,603	368	1,657	172	156	18,955	26,217	45,172
Software and Hardware	-	-	-	-	-	-	-	-	-	-
Depreciation and Amortization	-	-	-	-	-	-	-	-	-	-
Materials Postage and Telephone	601	393	993	41	22	7	2	1,067	-	1,067
Miscellaneous Expenses	803	395	1,198	3	269	16	23	1,510	-	1,510
Shared Office Space	132,371	80,114	212,489	4,540	30,296	2,660	2,460	252,444	6,778	259,222
Shared Information Technology	663,700	381,060	1,044,760	13,798	195,785	14,964	15,539	1,284,847	27,623	1,312,470
Customer Service Management	78,267	56,916	135,183	573	43,431	2,978	3,314	185,477	-	185,477
Trade Ally Management	103,246	73,146	176,391	421	58,265	3,905	4,408	243,393	-	243,393
Planning & Evaluation Management	992,326	577,975	1,570,301	19,459	278,863	21,375	22,353	1,912,349	118,014	2,030,363
TOTAL PROGRAM EXPENSES	**50,792,640**	**29,492,294**	**80,284,935**	**1,338,701**	**11,855,704**	**1,020,456**	**912,308**	**95,412,101**	**1,270,581**	**96,682,682**
ADMINISTRATIVE COSTS										
Management & General (Notes 1 & 2)	1,344,270	780,493	2,124,763	35,438	313,654	27,001	24,136	2,524,994	33,636	2,558,630
Communications & Customer Svc (Notes 1 & 2)	1,447,763	840,579	2,288,343	38,166	337,802	29,080	25,994	2,719,383	36,225	2,755,608
Total Administrative Costs	**2,792,033**	**1,621,072**	**4,413,106**	**73,604**	**651,456**	**56,081**	**50,130**	**5,244,377**	**69,861**	**5,314,238**
TOTAL PROG & ADMIN EXPENSES	**53,584,673**	**31,113,366**	**84,698,041**	**1,412,305**	**12,507,160**	**1,076,537**	**962,438**	**100,656,478**	**1,340,442**	**101,996,920**
TOTAL REVENUE LESS EXPENSES	**20,045,107**	**11,186,263**	**31,231,368**	**(1,412,305)**	**3,004,720**	**720,455**	**19,585**	**33,563,825**	**265,680**	**33,829,505**
NET ASSETS - RESERVES										
Cumulative Carryover at 12/31/17	12,210,566	6,211,801	18,422,366	2,647,089	3,527,716	262,067	75,717	24,934,948	176,506	25,111,445
Net Assets Reattributed from prior year										
Change in net assets this year	20,045,107	11,186,263	31,231,368	(1,412,305)	3,004,720	720,455	19,585	33,563,825	265,680	33,829,505
Ending Net Assets - Reserves	**32,255,673**	**17,398,064**	**49,653,734**	**1,234,784**	**6,532,436**	**982,522**	**95,302**	**58,498,773**	**442,186**	**58,940,950**
Ending Reserve by Category										
Program Reserves (Efficiency and Renewables)	32,255,673	17,398,064	49,653,734	1,234,784	6,532,436	982,522	95,302	58,498,773	442,186	58,940,950
Operational Contingency Pool										
Emergency Contingency Pool										
TOTAL NET ASSETS CUMULATIVE	**32,255,673**	**17,398,064**	**49,653,734**	**1,234,784**	**6,532,436**	**982,522**	**95,302**	**58,498,773**	**442,186**	**58,940,950**

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

ENERGY TRUST OF OREGON
Summary of All Units
For the 7 Months Ending September 30, 2018

	RENEWABLE ENERGY						TOTAL			
	PGE	PacifiCorp	Total	Solar LMI	Community Solar	Other	All Programs	Approved budget	Change	% Change
REVENUES										
Public Purpose Funding	6,562,354	4,855,007	11,417,361				69,388,989	68,049,158	1,339,831	2%
Incremental Funding							77,854,797	73,648,564	4,206,233	6%
Grant Revenue				68,771			68,771		68,771	
Contributions									-	
Revenue from Investments						706,943	706,943	170,000	536,943	316%
TOTAL PROGRAM REVENUE	**6,562,354**	**4,855,007**	**11,417,361**	**68,771**	**-**	**706,943**	**148,019,500**	**141,867,722**	**6,151,778**	**4%**
EXPENSES										
Incentives	3,219,605	2,760,742	5,980,346				49,680,646	54,613,232	4,932,586	9%
Program Delivery Subcontracts	192,540	120,154	312,694				43,220,614	43,305,154	84,540	0%
Employee Salaries and Fringe Benefits	478,634	393,126	871,760	6,379	11,850		3,575,319	3,632,113	56,794	2%
Agency Contractor Services	57,285	49,364	106,649	36,602			511,414	589,582	78,168	13%
Planning and Evaluation Services	-	-	-				1,388,496	2,499,805	1,111,309	44%
Advertising and Marketing Services	81,414	68,264	149,678				1,113,554	1,362,183	248,629	18%
Other Professional Services	203,199	130,433	333,631	17,400			878,277	1,776,859	898,582	51%
Travel, Meetings, Trainings and Conferences	13,893	12,893	26,786	2,138			91,606	125,737	34,131	27%
Dues, Licenses and fees	4,661	3,809	8,470				53,642	65,671	12,029	18%
Software and Hardware	83,419	71,185	154,603				154,603	119,325	(35,278)	-30%
Depreciation and Amortization	-	-	-				-	58,333	58,333	100%
Materials Postage and Telephone	39	36	75				1,142	5,775	4,633	80%
Miscellaneous Expenses	-	-	-				1,510	-	(1,510)	-
Shared Office Space	49,857	41,062	90,918	804			350,944	373,562	22,618	6%
Shared Information Technology	103,402	84,976	188,377	1,534			1,502,381	1,788,215	285,834	16%
Customer Service Management	52,264	44,599	96,864				282,341	300,777	18,436	6%
Trade Ally Management	15,296	13,051	28,347				271,740	290,836	19,096	7%
Planning & Evaluation Management	58,513	48,771	107,284				2,137,647	2,249,846	112,199	5%
TOTAL PROGRAM EXPENSES	**4,614,022**	**3,842,464**	**8,456,482**	**64,857**	**11,850**	**-**	**105,215,871**	**113,157,008**	**7,941,137**	**7%**
ADMINISTRATIVE COSTS										
Management & General (Notes 1 & 2)	121,763	101,394	223,157	2,131	-	-	2,783,918	3,614,339	830,420	23%
Communications & Customer Svc (Notes 1 & 2)	131,413	109,436	240,849	1,783	-	-	2,998,240	3,127,066	128,826	4%
Total Administrative Costs	**253,176**	**210,830**	**464,006**	**3,914**	**-**	**-**	**5,782,158**	**6,741,405**	**959,247**	**14%**
TOTAL PROG & ADMIN EXPENSES	**4,867,198**	**4,053,294**	**8,920,488**	**68,771**	**11,850**	**-**	**110,998,030**	**119,898,413**	**8,900,384**	**7%**
TOTAL REVENUE LESS EXPENSES	**1,695,156**	**801,713**	**2,496,873**	**-**	**(11,850)**	**706,943**	**37,021,470**	**21,969,308**	**15,052,161**	**69%**
NET ASSETS - RESERVES										
Cumulative Carryover at 12/31/17	7,073,073	6,268,079	13,341,154	-	38,710	9,641,309	48,132,624	43,871,177	4,261,447	10%
Net Assets Reattributed from prior year							-			
Change in net assets this year	1,695,156	801,713	2,496,873	-	(11,850)	706,943	37,021,470	21,969,308	15,052,162	69%
Ending Net Assets - Reserves	**8,768,229**	**7,069,792**	**15,838,027**	**-**	**26,860**	**10,348,252**	**85,154,094**	**65,840,485**	**19,313,609**	**29%**
Ending Reserve by Category										
Program Reserves (Efficiency and Renewables)	8,768,229	7,069,792	15,838,027	-	26,860		74,805,837			
Operational Contingency Pool						5,348,252	5,348,252			
Emergency Contingency Pool						5,000,000	5,000,000			
TOTAL NET ASSETS CUMULATIVE	**8,768,229**	**7,069,792**	**15,838,027**	**-**	**26,860**	**10,348,252**	**85,154,094**	**65,840,485**	**19,313,609**	**29%**

Energy Trust of Oregon
Program Expense by Service Territory
For the 9 Months Ending September 30, 2018
(Unaudited)

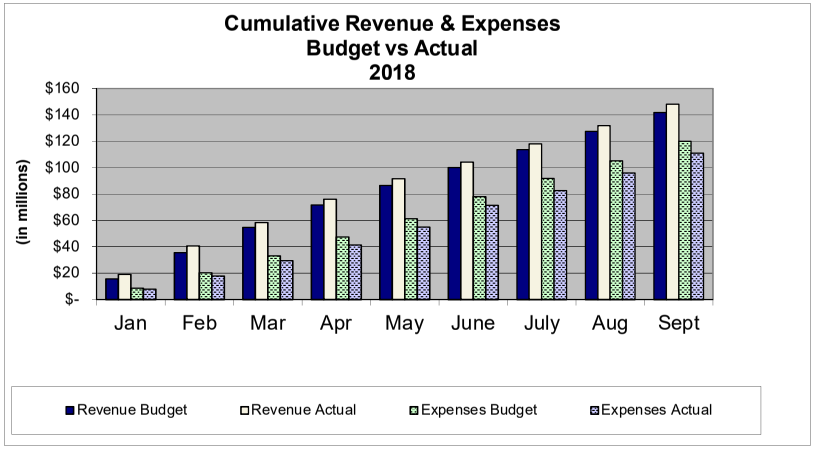
	PGE	Pacific Power	Subtotal Elec.	NWN Industrial	NW Natural Gas	Cascade	Avista	Subtotal Gas	Oregon Total	NWN WA	Solar LMI	Community Solar	ETO Total	YTD Budget	Variance	% Var
Energy Efficiency																
Commercial																
Existing Buildings	$14,009,493	$8,568,936	$22,578,428	$596,607	$1,770,641	$209,513	$232,318	$2,809,079	$25,387,507	$503,472			$25,890,979	$28,692,779	$2,801,800	10%
Multifamily Buildings	4,458,291	1,359,912	5,818,202	26,340	515,134	17,291	67,771	626,536	6,444,738				6,444,738	6,825,104	380,366	6%
New Buildings	9,368,373	2,651,840	12,020,213	16,425	1,436,644	120,847	67,100	1,641,016	13,661,229				13,661,229	13,935,151	273,922	2%
NEEA	1,258,854	949,663	2,208,517		119,233	12,808		132,041	2,340,558				2,340,558	1,914,141	(426,417)	-22%
Total Commercial	**29,095,011**	**13,530,350**	**42,625,361**	**639,372**	**3,841,652**	**360,458**	**367,189**	**5,208,671**	**47,834,032**	**503,472**			**48,337,504**	**51,944,728**	**3,029,671**	**6%**
Industrial																
Production Efficiency	11,234,303	7,340,480	18,574,783	772,931	419,493	138,091	35,919	1,366,434	19,941,217				19,941,217	21,012,016	1,070,799	5%
NEEA	38,068	28,720	66,788						66,788				66,788	340,970	274,182	80%
Total Industrial	**11,272,370**	**7,369,200**	**18,641,571**	**772,931**	**419,493**	**138,091**	**35,919**	**1,366,434**	**20,008,005**				**20,008,005**	**21,352,986**	**1,344,981**	**6%**
Residential																
Residential Combined	11,422,475	8,859,836	20,282,310		7,578,771	506,310	559,332	8,644,413	28,926,723	836,969			29,763,692	33,430,225	3,666,533	11%
NEEA	1,794,818	1,353,983	3,148,801		667,246	71,676		738,922	3,887,723				3,887,723	4,003,010	115,287	3%
Total Residential	**13,217,292**	**10,213,819**	**23,431,111**		**8,246,017**	**577,986**	**559,332**	**9,383,335**	**32,814,446**	**836,969**			**33,651,415**	**37,433,235**	**3,781,820**	**10%**
Energy Efficiency Program Costs	**53,584,673**	**31,113,366**	**84,698,041**	**1,412,305**	**12,507,160**	**1,076,537**	**962,438**	**15,958,440**	**100,656,478**	**1,340,442**			**101,996,924**	**110,730,949**	**8,734,025**	**8%**
Renewables																
Solar Electric (Photovoltaic)	3,439,544	2,935,109	6,374,653						6,374,653		68,771		6,443,424	6,666,391	222,967	3%
Other Renewable	1,427,651	1,118,183	2,545,834						2,545,834				2,545,834	2,501,074	(44,760)	-2%
Renewables Program Costs	**4,867,198**	**4,053,294**	**8,920,488**						**8,920,487**		**68,771**		**8,989,258**	**9,167,465**	**178,207**	**2%**
Community Solar Development												11,850	11,850		(11,850)	
Cost Grand Total	**58,451,871**	**35,166,660**	**93,618,529**	**1,412,305**	**12,507,160**	**1,076,537**	**962,438**	**15,958,440**	**109,576,965**	**1,340,442**	**68,771**	**11,850**	**110,998,030**	**119,898,414**	**8,900,384**	**7%**

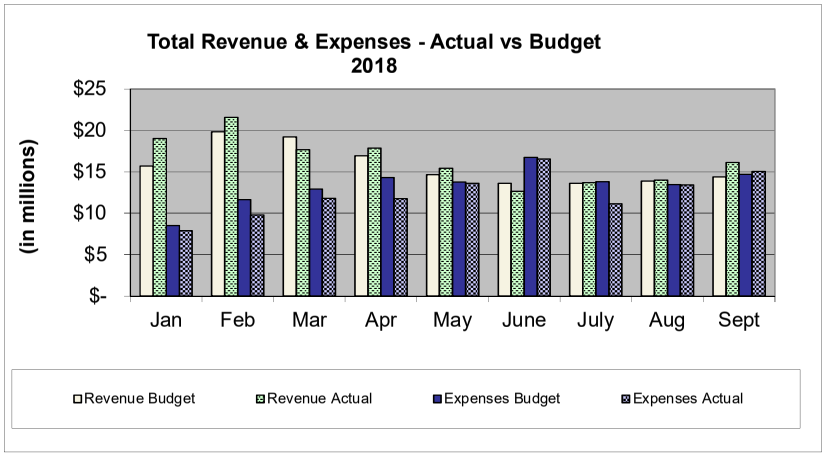
Energy Trust of Oregon
Administrative Expenses
For the 9 Months Ending September 30, 2018
(Unaudited)

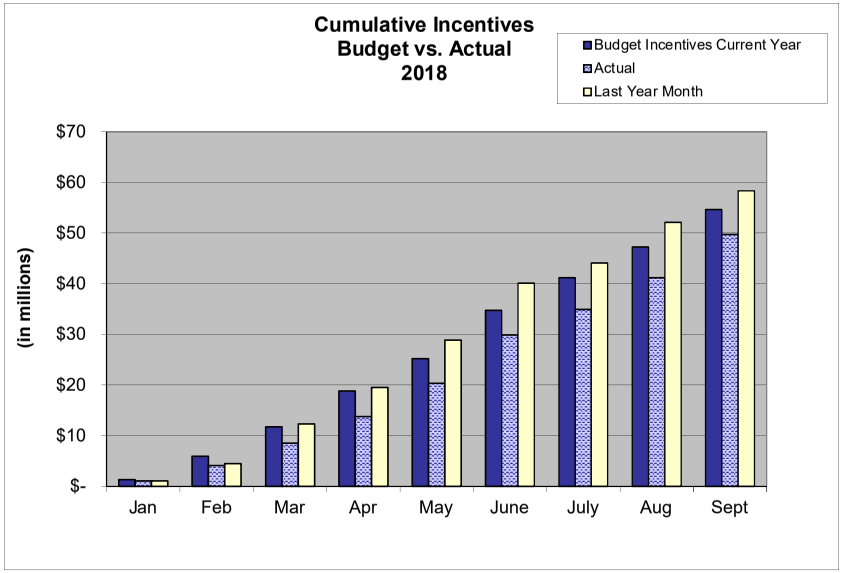
	MANAGEMENT & GENERAL						COMMUNICATIONS & CUSTOMER SERVICE					
	QUARTERLY			YTD			QUARTERLY			YTD		
	ACTUAL	BUDGET	REMAINING	ACTUAL	BUDGET	VARIANCE	ACTUAL	BUDGET	REMAINING	ACTUAL	BUDGET	VARIANCE
EXPENSES												
Outsourced Services	$86,729	$251,079	$164,351	$328,823	$873,321	$544,498	$272,081	$341,500	$69,419	$924,568	$1,024,500	$99,932
Legal Services	438	6,250	5,812	12,680	18,750	6,070						
Salaries and Related Expenses	564,259	703,753	139,494	1,871,693	2,041,911	170,218	486,317	480,828	(5,489)	1,493,495	1,442,483	(51,012)
Supplies	166	725	559	2,878	2,175	(703)		250	250	80	750	670
Postage and Shipping Expenses	383	750	367	497	2,250	1,753				7		(7)
Printing and Publications	1,310	1,125	(185)	8,971	3,375	(5,596)				4	2,500	2,496
Travel	9,666	13,850	4,184	30,151	41,550	11,399	8,243	12,500	4,257	29,959	37,500	7,541
Conference, Training & Mtngs	12,525	13,250	725	38,189	39,750	1,561	2,139	5,500	3,361	7,057	16,500	9,443
Interest Expense and Bank Fees				1,712	1,500	(212)						
Dues, Licenses and Fees	1,860	9,022	7,162	11,223	35,947	24,724	1,759	4,500	2,741	15,685	13,500	(2,185)
Shared Allocation (Note 1)	51,615	54,461	2,847	147,238	162,298	15,061	41,715	44,759	3,044	128,795	133,384	4,589
IT Service Allocation (Note 2)	104,056	116,822	12,766	321,816	383,043	61,227	85,518	96,010	10,492	264,484	314,803	50,319
Planning & Eval	2,501	2,825	323	8,046	8,469	422	41,691	47,076	5,385	134,106	141,145	7,039
TOTAL EXPENSES	**835,506**	**1,173,912**	**338,405**	**2,783,918**	**3,614,339**	**830,423**	**939,461**	**1,032,922**	**93,460**	**2,998,240**	**3,127,065**	**128,825**

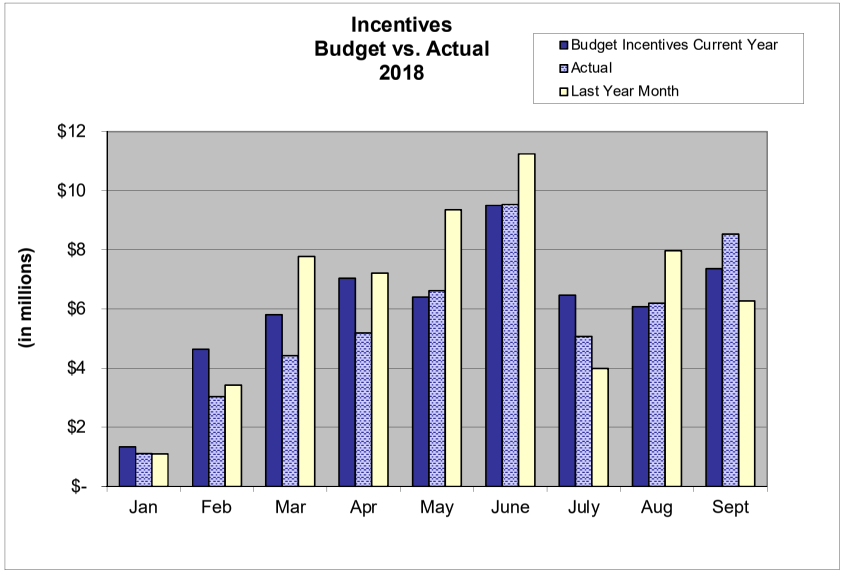
Note 1) Represents allocation of Shared (General Office Management) Costs
Note 2) Represents allocation of Shared IT Costs

Administrative Expenses 3rd Month of Quarter


Cumulative Revenue & Expenses
Budget vs Actual
2018
(in millions)
$160
$140
$120
$100
$80
$60
$40
$20
$-
Jan
Feb
Mar
Apr
May
June
July
Aug
Sept
Revenue Budget
Revenue Actual
Expenses Budget
Expenses Actual


Total Revenue & Expenses - Actual vs Budget
2018
(in millions)
$25
$20
$15
$10
$5
$-
Jan
Feb
Mar
Apr
May
June
July
Aug
Sept
Revenue Budget
Revenue Actual
Expenses Budget
Expenses Actual


Cumulative Incentives
Budget vs. Actual
2018
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


Incentives
Budget vs. Actual
2018
Budget Incentives Current Year
Actual
Last Year Month
(in millions)
$12
$10
$8
$6
$4
$2
$-
Jan
Feb
Mar
Apr
May
June
July
Aug
Sept

PINK PAPER

CONTRACTOR	Description	City	EST COST	Actual TTD	Remaining	Start	End
Administration							
		Administration Total:	**13,422,466**	**5,541,854**	**7,880,611**		
Communications							
		Communications Total:	**5,736,430**	**3,971,083**	**1,765,347**		
Energy Efficiency							
Northwest Energy Efficiency Alliance	Regional EE Initiative Agmt	Portland	36,142,871	26,623,113	9,519,758	1/1/2015	7/1/2020
ICF Resources, LLC	2018 BE PMC	Fairfax	15,616,683	11,213,379	4,403,304	1/1/2018	12/31/2018
CLEAResult Consulting Inc	2018 Residential PMC	Austin	8,483,204	5,734,447	2,748,757	1/1/2018	12/31/2018
CLEAResult Consulting Inc	2018 NBE PMC	Austin	6,206,575	4,685,668	1,520,907	1/1/2018	12/31/2018
Northwest Energy Efficiency Alliance	Regional Gas EE Initiative	Portland	5,864,530	3,132,272	2,732,258	1/1/2015	7/1/2020
Lockheed Martin Corporation	2018 MF PMC	Grand Prairie	4,655,000	3,145,366	1,509,634	1/1/2018	12/31/2018
Energy 350 Inc	PDC - PE 2018	Portland	3,373,954	2,281,739	1,092,215	1/1/2018	12/31/2018
Intel Corporation	EE Project Incentive Agmt	Hillsboro	2,400,000	0	2,400,000	11/13/2015	12/31/2019
TRC Engineers Inc.	2018 EPS New Const PDC	Irvine	1,946,406	1,300,897	645,509	1/1/2018	12/31/2018
Evergreen Consulting Group, LLC	PE Lighting PDC 2018	Tigard	1,893,000	1,375,622	517,378	1/1/2018	12/31/2018
RHT Energy Inc.	PDC - PE 2018	Medford	1,836,230	1,197,585	638,645	1/1/2018	12/31/2018
Northwest Power & Conservation Council	RTF Funding Agreement		1,825,000	1,349,096	475,904	2/25/2015	12/31/2019
Cascade Energy, Inc.	PE Lighting PDC 2018	Walla Walla	1,823,250	1,318,522	504,728	1/1/2018	12/31/2018
CLEAResult Consulting Inc	2018 Retail PDC	Austin	1,645,112	1,125,289	519,823	1/1/2018	12/31/2018
Craft3	Manufactured Home Pilot Loan	Portland	1,000,000	0	1,000,000	9/20/2018	9/20/2033
SBW Consulting, Inc.	PE Program Impact Evaluation	Bellevue	573,000	561,140	11,860	5/1/2016	8/31/2018
Craft3	Loan Agreement	Portland	500,000	167,000	333,000	1/1/2018	12/31/2019
Pivotal Energy Solutions LLC	License Agreement	Gilbert	490,500	262,487	228,013	3/1/2014	12/31/2019
EnergySavvy Inc.	Optix Engage Online Audit Tool	Seattle	467,000	282,250	184,750	6/1/2016	5/31/2020
Michaels Energy, Inc.	NBE '15 & '16 Impact Eval	La Crosse	425,000	250,136	174,864	3/5/2018	3/1/2019
KEMA Incorporated	EB & SEM 2017 Evaluation	Oakland	350,000	226,732	123,268	4/10/2018	5/30/2019
Balanced Energy Solutions LLC	New Homes QA Inspections	Portland	321,700	171,202	150,498	4/27/2015	12/31/2018
Cascade Energy, Inc.	PDC Transition Agreement	Walla Walla	311,107	27,573	283,534	9/1/2018	12/31/2018
Craft3	Loan Agreement	Portland	300,000	300,000	0	6/1/2014	6/20/2025
ICF Resources, LLC	2018 BE PMC - WA	Fairfax	258,286	182,371	75,915	1/1/2018	12/31/2018
CLEAResult Consulting Inc	2018 Residential PMC - WA	Austin	238,129	159,318	78,811	1/1/2018	12/31/2018
CLEAResult Consulting Inc	2018 Residential PMC - CustSvc	Austin	174,000	116,678	57,322	1/1/2018	12/31/2018
ICF Resources, LLC	2018 BE PMC - DSM	Fairfax	161,119	94,347	66,772	1/1/2018	12/31/2018
The Cadmus Group LLC	Residential DHP Study	Portland	155,000	81,352	73,649	4/18/2018	12/31/2018

Evergreen Economics	2018 EB Process Evaluation	Portland	150,000	40,735	109,265	5/14/2018	3/31/2019
Open Energy Efficiency, Inc.	Automated Meter Data Analysis	Mill Valley	150,000	99,440	50,560	1/1/2018	12/31/2018
Michaels Energy, Inc.	PE 16 &17 Impact Eval	La Crosse	138,000	24,504	113,496	7/1/2018	10/15/2018
Research Into Action, Inc.	PE Process Evaluation	Portland	138,000	39,007	98,993	4/2/2018	6/14/2019
DNV GL Energy Services USA Inc	Ind O&M Persistence Study	Oakland	130,000	0	130,000	9/4/2018	6/30/2019
Research Into Action, Inc.	Fast Feedback 2018	Portland	115,500	81,251	34,249	2/15/2018	5/31/2019
Alternative Energy Systems Consulting, Inc.	PE Review of Technical Studies	Carlsbad	100,000	69,890	30,110	5/22/2017	12/31/2018
Research Into Action, Inc.	NB Market Research 2018	Portland	90,000	89,670	330	1/1/2018	9/28/2018
WegoWise Inc	benchmarking license	Boston	90,000	42,572	47,428	6/15/2014	12/31/2019
1000 Broadway Building L.P.	Pay-for-Performance Pilot	Portland	88,125	80,959	7,166	10/17/2014	11/1/2018
EES Consulting, Inc	Professional Services Agmt	Kirkland	80,430	32,760	47,670	10/1/2016	9/30/2020
TRC Engineers Inc.	2018 EPS New Const PDC - WA	Irvine	63,456	47,641	15,816	1/1/2018	12/31/2018
Craft3	SWR Loan Origination/Loss Fund	Portland	55,000	0	55,000	1/1/2018	12/31/2019
Research Into Action, Inc.	Evaluation MHR Pilot	Portland	52,000	25,727	26,273	5/1/2017	2/28/2019
Navigant Consulting Inc	Evaluation Cosultant-DSM Proj.	Boulder	50,500	40,731	9,770	6/15/2017	6/1/2019
Ecotope, Inc.	NB - NEEA Impact Evaluation	Seattle	50,000	49,983	18	10/23/2017	12/31/2018
Research Into Action, Inc.	Marketing Customer Insights	Portland	48,418	13,007	35,411	6/14/2018	1/31/2019
Apex Analytics	Residential Windows Research	Boulder	45,000	8,891	36,109	5/15/2018	12/31/2018
Evergreen Economics	New Home Pilot- DHP	Portland	44,000	11,789	32,211	11/1/2017	3/31/2019
Brightworks Sustainability LLC	Net Zero Fellowship Grant Agmt	Portland	43,500	24,000	19,500	4/5/2017	8/31/2018
BASE zero LLC	Quality Assurance Services	Bend	43,075	40,050	3,025	3/1/2016	12/31/2018
Alternative Energy Systems Consulting, Inc.	CSEM - PTT	Carlsbad	40,000	26,290	13,711	6/30/2018	12/15/2018
The Cadmus Group Inc.	Existing Homes DHP Study	Watertown	40,000	40,000	0	9/25/2017	3/31/2019
The Cadmus Group Inc.	Impact Evaluation NB projects	Watertown	39,000	3,994	35,006	6/18/2018	2/28/2019
MetaResource Group	Intel Mod 1&2 Megaproject	Portland	35,000	4,497	30,503	3/1/2018	10/12/2018
Research Into Action, Inc.	Evaluation - APS Pilot	Portland	31,219	23,274	7,945	7/1/2017	12/31/2018
Northwest Energy Efficiency Council	Toll Lending Lbry Sponsorship	Seattle	30,500	30,500	0	1/1/2018	12/31/2018
American Council for and Energy Efficient Economy	Research Sponsorship - 2018		30,000	30,000	0	1/1/2018	12/31/2018
INCA Energy Efficiency, LLC	Red Rock Evaluation	Grinnell	30,000	0	30,000	6/10/2018	6/9/2020
RWDI USA LLC	Net Zero Fellowship Grant		26,000	0	26,000	9/1/2018	9/1/2019
University of Oregon	NB 2018 Net Zero Fellows Grant	Eugene	26,000	0	26,000	10/1/2018	3/30/2020
MetaResource Group	Pay-for-Performance Evaluation	Portland	25,000	24,694	307	2/1/2018	12/31/2018
Sustainable Northwest	Klamath Ag Program	Portland	24,990	21,868	3,122	2/1/2018	12/10/2018
FMYI, INC	Subscription Agreement	Portland	24,650	24,650	0	4/25/2016	1/15/2019

Cadeo Group LLC	Evaluation Consulting Services	Washington	24,620	14,586	10,034	5/1/2018	12/31/2018
Consortium for Energy Efficiency	Membership Dues - 2018		23,074	23,074	0	1/1/2018	12/31/2018
Michaels Energy, Inc.	Large NB Impact Evaluation	La Crosse	18,000	4,653	13,348	8/1/2018	3/31/2020
Earth Advantage, Inc.	Sponsorship	Portland	17,750	10,250	7,500	3/1/2017	2/28/2019
AIQUEOUS LLC	Water Market Study	Austin	15,000	15,000	0	6/18/2018	11/15/2018
KEMA Incorporated	New Bldg Evaluation	Oakland	13,000	1,847	11,153	10/1/2017	3/31/2019
American Council for and Energy Efficient Economy	ACEEE Sponsorship - 2018		12,500	12,500	0	1/1/2018	12/31/2018
Cascade Energy, Inc.	PE Custom Track SEM Curriculm	Walla Walla	10,000	10,000	0	7/23/2018	10/31/2018
Consortium for Energy Efficiency	IEM DSM Sponsorship		10,000	10,000	0	3/13/2018	12/31/2018
Research Into Action, Inc.	Review Mesure Dev. Process	Portland	10,000	9,092	909	6/12/2018	11/30/2018
Alliance For Sustainable Energy, LLC	Technical Services Agreement	Lakewood	9,609	9,609	0	3/19/2018	11/30/2018
LightTracker, Inc.	Lighting Market Analysis	Boulder	9,000	9,000	0	4/1/2018	12/31/2018
City of Portland Bureau of Planning & Sustainability	Sponsorship - 2018	Portland	8,000	8,000	0	1/1/2018	12/31/2018
Earth Advantage, Inc.	2018 - Sponsorship	Portland	7,750	5,000	2,750	6/1/2018	12/31/2018
Resource Innovation Institute	2018 Event Sponsorship	Portland	7,500	7,500	0	2/7/2018	12/31/2018
Northwest Energy Efficiency Council	BOC 2018 Sponsorship	Seattle	7,300	7,300	0	1/1/2018	12/31/2018
The Cadmus Group Inc.	NB Evaluation Plan	Watertown	6,500	0	6,500	10/1/2017	3/31/2019
Shades of Green	Shades of Green Sponsorship	Portland	5,000	5,000	0	11/6/2017	10/30/2018
Social Enterprises Inc.	GoGreen Sponsorhip - 2018	Portland	5,000	5,000	0	6/12/2018	10/31/2018
Travel Portland	My People's Market Sponsorship	Portland	5,000	5,000	0	5/31/2018	12/31/2018
	Energy Efficiency Total:		**101,828,622**	**68,630,362**	**33,198,260**		

Joint Programs

E Source Companies LLC	Membership Agreement	Boulder	75,607	75,607	0	1/1/2018	12/31/2018
Structured Communications Systems, Inc.	ShoreTel Phone System Install		70,345	65,287	5,059	1/1/2017	12/31/2018
Infogroup Inc	Data License & Service Agmt	Papillion	26,114	13,057	13,057	2/12/2018	2/12/2020
Research Into Action, Inc.	Trade Ally Survey	Portland	21,100	21,100	0	4/24/2018	11/30/2018
	Joint Programs Total:		**193,166**	**175,051**	**18,116**		

Renewable Energy

Sunway 3, LLC	Prologis PV installation		3,405,000	3,261,044	143,956	9/30/2008	9/30/2028
City of Salem	Biogas Project - Willow Lake	Salem	3,000,000	0	3,000,000	9/4/2018	9/4/2038
Clean Water Services	Project Funding Agreement		3,000,000	2,013,106	986,894	11/25/2014	11/25/2039
Oregon Institute of Technology	Geothermal Resource Funding	Klamath Falls	1,550,000	1,550,000	0	9/11/2012	9/11/2032
Farm Power Misty Meadows LLC	Misty Meadows Biogas Facility	Mount Vernon	1,000,000	1,000,000	0	10/25/2012	10/25/2027
Three Sisters Irrigation District	TSID Hydro	Sisters	1,000,000	1,000,000	0	4/25/2012	9/30/2032
Farmers Irrigation District	FID - Plant 2 Hydro	Hood River	900,000	900,000	0	4/1/2014	4/1/2034

Klamath Falls Solar 2 LLC	PV Project Funding Agreement	San Mateo	850,000	382,500	467,500	7/11/2016	7/10/2041
Old Mill Solar, LLC	Project Funding Agmt Bly, OR	Lake Oswego	490,000	490,000	0	5/29/2015	5/28/2030
City of Medford	750kW Combined Heat & Power	Medford	450,000	450,000	0	10/20/2011	10/20/2031
City of Pendleton	Pendleton Microturbines	Pendleton	450,000	150,000	300,000	4/20/2012	4/20/2032
Deschutes Valley Water District	Opal Springs Hydro Project	Madras	450,000	0	450,000	1/1/2018	4/1/2040
RES - Ag FGO LLC	Biogas Manure Digester Project	Washington	441,660	441,660	0	10/27/2010	10/27/2025
RES - Ag FGO LLC	Biogas Manure Digester - FGO	Washington	441,660	438,660	3,000	10/27/2010	10/27/2025
Three Sisters Irrigation District	TSID Funding Agreement	Sisters	400,000	0	400,000	1/1/2018	12/31/2038
Farmers Conservation Alliance	Program Support	Hood River	367,000	183,333	183,667	1/1/2018	12/31/2019
SunE Solar XVI Lessor, LLC	BVT Sexton Mtn PV	Bethesda	355,412	355,412	0	5/15/2014	12/31/2034
CIty of Gresham	City of Gresham Cogen 2		350,000	334,523	15,477	4/9/2014	7/9/2034
Luxurious Plumbing and Heating, Inc.	Solar Verifier Services	West Linn	250,000	269,655	(19,655)	8/1/2016	10/15/2018
Clean Power Research, LLC	PowerClerk License	Napa	215,478	215,478	0	7/1/2017	6/30/2019
Gary Higbee DBA WindStream Solar	Solar Verifier Services	Eugene	200,000	161,607	38,393	8/1/2016	10/15/2018
City of Astoria	Bear Creek Funding Agreement	Astoria	143,000	143,000	0	3/24/2014	3/24/2034
Energy Assurance Company	Solar Verifier	Milwaukie	100,000	0	100,000	11/15/2018	10/14/2020
Gary Higbee DBA WindStream Solar	Solar Verifier	Eugene	100,000	0	100,000	10/15/2018	10/14/2020
Wallowa County	Project Funding Agreement	Enterprise	80,000	0	80,000	4/1/2018	3/31/2038
SPS of Oregon Inc	Project Funding Agreement	Wallowa	75,000	74,513	488	10/15/2015	10/31/2036
Kendrick Business Services LLC	Small Business Financial Dev	Albany	60,000	4,450	55,550	8/1/2018	6/30/2020
Kleinschmidt Associates	Evaluation Services	Pittsfield	47,400	47,609	(209)	1/1/2017	11/30/2018
TRC Engineers Inc.	2018 EPS New Const PDC - Solar	Irvine	41,500	27,863	13,637	1/1/2018	12/31/2018
Clean Energy States Alliance	2018 CESA Sponsorship		39,500	39,500	0	6/1/2018	6/30/2019
Clean Power Research, LLC	WattPlan Software	Napa	38,000	38,000	0	11/17/2017	6/30/2019
Craft3	NON-EEAST OBR Svc Agrmt	Portland	30,000	10,250	19,750	1/1/2018	12/31/2018
The Solar Foundation	Workforce Diversity Survey	Washington	27,500	13,750	13,750	7/17/2018	12/31/2018
ENERGYneering Solutions Inc	Biopower & Hydro Evaluations	Sisters	25,000	24,954	46	12/6/2016	11/30/2018
University of Oregon	UO SRML Contribution - 2018	Eugene	24,999	24,999	0	3/9/2018	3/8/2019
Wallowa Resources Community Solutions, Inc.	Renewables Field Outreach		24,999	13,541	11,458	2/1/2018	1/30/2020
Robert Migliori	42kW wind energy system	Newberg	24,125	24,125	0	4/11/2007	1/31/2024
Site Capture LLC	SiteCapture Subscription	Austin	24,000	13,500	10,500	2/1/2018	1/31/2019
Warren Griffin	Griffin Wind Project	Salem	13,150	9,255	3,895	10/1/2005	10/1/2020
Rocky Mountain Institute	Membership Dues	Boulder	8,000	8,000	0	8/15/2018	12/31/2018
OSEIA-Oregon Solar Energy Industries Assoc	OSEIA 2018 Conf. Sponsorship		7,500	7,500	0	9/1/2017	12/31/2018

Bonneville Environmental Foundation	REC/WRC Purchase 2016	Portland	7,290	4,860	2,430	1/1/2016	12/31/2018
Seattle University	2018 Mid-Career Inst. Environm	Seattle	5,000	0	5,000	6/22/2018	12/31/2018
National Association for the Advancement of Colored People	LMI Solar Energy Development	Eugene	3,920	1,136	2,783	9/1/2018	6/30/2019
Lower Columbia Hispanic Council	LMI Solar Energy Development	Astoria	3,736	1,133	2,604	9/1/2018	6/30/2019
Mid-Columbia Housing Authority	LMI Solar Energy Development	The Dalles	3,691	0	3,691	9/5/2018	6/30/2019
NeighborImpact	LMI Solar Energy Development	Redmond	3,627	1,174	2,452	9/4/2018	6/30/2019
African American Alliance for Homeownership	LMI Solar Energy Development	Portland	3,102	1,024	2,078	9/1/2018	6/30/2019
Habitat for Humanity of Oregon Inc	LMI Solar Energy Development	Portland	3,102	1,000	2,102	9/1/2018	6/30/2019
Housing Development Center Inc	LMI Solar Energy Development	Portland	3,102	0	3,102	9/1/2018	6/30/2019
Native American Youth & Family Center	LMI Solar	Portland	3,102	0	3,102	9/1/2018	6/30/2019
Portland Community Reinvestment Initiatives Inc	LMI Solar Energy Development	Portland	3,102	1,000	2,102	9/1/2018	6/30/2019
		Renewable Energy Total:	**20,542,656**	**14,133,112**	**6,409,544**		
		Grand Total:	**141,723,340**	**92,451,462**	**49,271,878**		

Tab 6

Policy Committee Meeting

October 4, 2018

Attending at Energy Trust offices
Alan Meyer (Committee Chair), Amber Cole, Michael Colgrove, Fred Gordon, Steve Lacey, Debbie Menashe, Peter West, Jed Jorgensen, Dave Moldal, Erika Kociolek, Phil Degens

Attending by yeleconference
Roger Hamilton, Anne Root, Elaine Prause (Oregon Public Utility Commission)

Policies Reviewed

Biopower Eligible Policy 4.23.000-P

Debbie Menashe presented the biopower Eligible Policy to the committee for its regular three-year review. Staff reviewed the policy and does not recommend any substantive changes. A few revisions for clarity were recommended. The committee reviewed the proposed revisions and recommends that they be presented to the full board for approval on the October meeting consent agenda.

Renewable Energy Certificate Policy 4.15.000-P

The Renewable Energy Certificate (REC) Policy is up for its regular three-year review. Staff has reviewed the policy considering changes in market conditions, including Oregon's new community solar program, and is examining implications of the policy in light of these changes. Staff identified four options for the REC policy, ranging from maintaining the policy in its current form to eliminating the requirement that Energy Trust take RECs for projects. Jed Jorgensen and David McClelland initiated a discussion at this Policy Committee meeting, and expect discussions to continue at the next committee meeting. Jed reported on input from the Renewable Energy Advisory Council (RAC), which discussed the policy at its September meeting. At the RAC meeting, a majority of RAC members said that the policy provides little benefit to ratepayers and utilities. Members mentioned the policy may be a barrier to participation in Energy Trust's renewable energy programs for a number of reasons, including setting up a structure for possible double-counting of green claims, impeding municipal climate goals, and being inconsistent with the Oregon community solar program statute and regulations that require that RECs stay with the community solar project developers. A minority view expressed that the current REC policy is essential to demonstrate that Energy Trust is supporting renewable energy projects.

Elaine Prause presented a summary of the OPUC staff position of the policy. OPUC staff are in favor of the current REC policy and are open to discussion of one of the options identified by staff. The option is one that would change the policy such that Energy Trust does not take title to RECs from net-metered and on-site use projects, and mandates any projects that receive Energy Trust incentives are prohibited from selling their RECs. Elaine continued that the OPUC views RECs as a way in which the OPUC can demonstrate its oversight of Energy Trust's renewable programs because RECs demonstrate that Energy Trust is supporting renewable energy projects.

Elaine expressed an interest in continuing discussions regarding the OPUC and Energy Trust's roles in Oregon's community solar program. If Energy Trust is part of the program administrator team for community solar, it will have to ensure that is has firewalls between the side of the organization that processes Energy Trust solar program incentives for eligible community solar projects and the community solar program administration side. Also, the OPUC will have to consider its dual role as

the oversight body of Energy Trust and as the agency overseeing the community solar program. OPUC staff will provide more comments on this and their view of its impact on the REC policy before the Policy Committee's next meeting.

Alan Meyer expressed his position that RECs demonstrate the additionality of a renewable project and, as such, must continue to be taken by Energy Trust to ensure compliance with the statutory requirements for funding. Roger Hamilton asked if Alan's position was shared by others on the RAC, and Alan reported that he was the only one to express this position at the RAC, and he sees value in the policy.

Discussion continued around the barrier to community solar. Energy Trust staff see community solar projects as a way to provide the benefits of solar energy to customers who are renters or otherwise not able to access solar installation programs. Staff believes that reaching these customers with community solar opportunities would expand participation. Elaine said that it will be interesting to see what projects are proposed by developers. Elaine mentioned when OPUC staff provides more input to the policy and its implications for community solar, they will provide guidance on their view of this conflict. Alan expressed continued support for the current REC policy even if it means that Energy Trust incentives would not be available to community solar projects.

Board Meeting Presentation Previews

WES Tri-City Cogeneration Project

Dave Moldal previewed a presentation about a proposed funding agreement for the WES Tri-City Cogeneration Project. The project would replace a 30-year-old, 250-kilowatt cogeneration system, currently at the end of its lifecycle. WES proposes to install and operate a new lean-burn cogeneration system with increased capacity of 600 kW and estimated to generate an average of 4,324 megawatt hours per year (0.49 average megawatts). The generation is expected to offset about 50 percent of the electricity needed to operate the plant, which is in PGE territory.

Anne Root asked whether this project is a new renewable resource given that it is replacing an existing system. Dave explained that Energy Trust funding is available for replacements for systems that are, like this one, at the end of their lifecycles.

Roger asked whether this project will reduce carbon emissions at the plant. Dave explained that it will have a net effect of reduced carbon emissions because the plant will use less electricity, but it is not a zero-carbon project.

Elaine asked how this project compares in cost to prior similar projects, and Jed and Dave reported that it compares favorably.

Alan identified a small typographical error in the resolution language, and staff will make the correction when the resolution is presented to the full board.

Michaels Energy Production Efficiency Impact Evaluation Contract

Erika Kociolek presented information about a proposed contract with Michaels Energy for an impact evaluation of the Production Efficiency program, covering program years 2016-2017. Committee members support the proposal for the Michaels Energy contract and asked Erika and Phil Degens if they believed sufficient budget was proposed for authorization. Erika and Phil said they did, noting that the initial estimates for the evaluation work is less than the amount authorized, but that the

amount should cover additional services if they are needed in the course of proceeding with the evaluation. The resolution will be presented to the full board at its November meeting.

Role of a Possible Executive Committee

The committee discussed a draft resolution authorizing and designating an executive committee. Alan informed the committee members that this resolution would not be reviewed with the full board until the November board meeting. Committee members discussed the proposed resolution and concluded that the language should be revised to make specific reference to the bylaw limits on executive committee authority. In addition, committee members believed that the proposed full-board ratification requirement would create some confusion about the authority of the executive committee. Committee members suggested that the resolution call for an executive committee to report to the full board on any decisions made rather than providing for board ratification. Debbie Menashe will revise the language and provide it to Alan. Alan will provide the full board with information about the proposal in his Policy Committee report at the October 2018 board meeting to provide the full board with information about the proposal in advance, with time to ask questions before the resolution is presented to the full board for decision in November.

Proposal to Amend the Bylaws to Remove References to Chief Financial Officer, Remove References to Financial Statement Certification Procedures and Revise Reference to General Counsel

Staff presented suggestions about changes to the chief financial officer position in the organization and implications for the organizational bylaws. The current bylaws permit the appointment of a Chief Financial Officer (CFO) and require certain actions in finance reporting by a CFO, if one is appointed, including financial statements certification by a CFO. In August, the CFO position and Management Team structure were revised. The organization no longer has a CFO position, and staff suggest changes to the bylaws so that they are consistent with this change. In addition to the changes referencing a CFO, staff also recommend a slight change to the bylaw provision on conflict of interest. In that section, the current bylaws identify the General Counsel as the reviewer of annual conflict of interest disclosure statements. Debbie Menashe's title has changed recently so that the organization does not have a General Counsel. The bylaws are proposed to be revised to replace "General Counsel" with the more generic chief legal counsel. Committee members expressed support for the proposed bylaw amendments, and they will be presented to the full board for review and decision at the November meeting.

Consent and Appointment of a Member to the Conservation Advisory Council

Staff presented information on Tim Hendricks, Director of Facilities and Sustainability for the Bill Naito Company and Building Owners and Managers Association representative. Tim has worked in the facilities management field for more than 27 years. He is currently responsible for more than one million square feet of office and warehouse space, including the Montgomery Park building. Tim recently directed the implementation of an energy-efficiency retrofit and the installation of an innovative solar energy system at Montgomery Park. Staff recommended, and the committee approved, Tim as a member of CAC based on his industry experience and his experience as an Energy Trust program participant.

Staff Updates

Elaine Prause recused herself from the meeting. Michael Colgrove updated the committee on the status of the competitive bid process for the community solar program. Mike advised the committee that staff will bring more information about a subcontract with Energy Solutions to the committee and the board when contracting proceeds.

Meeting adjourned at 5:15 p.m.

Next meeting date is Thursday, November 15, 2018, at 3:30 p.m.

Tab 7

Strategic Planning Committee Meeting

October 30, 2018

Attending at Energy Trust offices
Mark Kendall (Committee Chair), Michael Colgrove, Hannah Cruz, Cheryle Easton, Fred Gordon, Debbie Menashe, Spencer Moersfelder, Lizzie Rubado, John Volkman

Attending by teleconference
Susan Brodahl, Lindsey Hardy

Location of Strategic Planning Workshop in May 2019

Staff has recommended that the board's strategic planning workshop for 2019 occur onsite at Energy Trust's offices instead of offsite for this year. Mike and Roger Hamilton, Energy Trust board president, are currently working on the 2019 board meeting calendar, and they anticipate a July board meeting offsite and outside of Portland again in 2019, providing an opportunity for the board to have time for offsite team building in July. Committee Chair Mark Kendall supports the staff recommendation, and the committee members agreed to try the onsite location for 2019. The committee will revisit this issue next year.

Review Status of Strategic Plan Development Work and Engagement to Date

John Volkman reviewed the steps taken to develop the building blocks for the 2020-2024 Strategic Plan: a Strengths and Capabilities Map, a current "unique role of value" statement and a set of scenarios for scenario planning. Staff has engaged with the board, beginning at the board's 2018 workshop, the committee, staff, and the Conservation Advisory and Renewable Energy Advisory Councils (CAC and RAC) to develop these building blocks along the way.

Lizzie Rubado described the recent engagement with CAC and RAC to develop three draft scenarios.

Review of Draft Scenarios

Committee members and staff had a robust discussion about three draft scenarios prepared by staff. Scenarios are useful to strategic planning in times of dynamic change. Scenarios provide context for future planning. Once there is agreement on an initial set of 1-3 scenarios, the next step is to consider what Energy Trust's future role (its future unique role of value) would be in that future scenario or scenarios.

To develop the scenarios for strategic plan development, two key drivers were identified: clean energy policy environment and the resource potential for energy efficiency and renewable energy. By considering the impact of these drivers, and through discussions with Energy Trust staff and the CAC and RAC, three draft scenarios were drafted for review by the committee: "Incremental Evolution," "Hungry for Action," and "Resilience Now."

The "Incremental Action" scenario envisions a favorable clean energy policy environment, but a relatively slow and stable pace of adoption. Utilities continue to examine new business models and rate structures, with focus on peak and, to a lesser degree, flexibility and dispatchability. Electrification of the transportation sector continues to be discussed, but it feels still like early days. Oregon continues to grow in population and become more diverse. Equity is more prioritized in energy policy. Housing affordability continues to be a challenge. The "Hungry for

Action" scenario is like the Incremental Action scenario, but activity is more underway and the pace of making change seems more immediate. Finally, the "Resilience Now" scenario would be focused more on extreme climate events, where clean energy activities would be more on the forefront of policy making and impactful to the region's economy and planning. In this scenario, the utility industry is focused on peak, but also on flexibility to support resilience. There is a fair amount of fear driving action in this scenario and disparities between various groups, particularly rural and urban, are emphasized.

The committee and staff discussed some slight revisions to the draft scenarios and will return to the discussion at its next meeting on November 12.

Next Steps

The committee will meet again on November 12 to continue scenario discussions and begin to consider and discuss a future role for Energy Trust in these scenarios. The group discussed next steps, which will include a number of engagements with staff, CAC and RAC and the committee on future planning. Staff will also work with the committee to create an external engagement plan for the next several months. This plan will permit external engagement into the development of the plan's future role of value development and the development of the plan itself, including mission, purpose, goals, and strategies, so that the when a draft is presented to the board in May 2019, it reflects input from a wide variety of stakeholders.

The committee concluded with some discussions about public engagement planning.

Next Strategic Planning Committee Meeting: November 12, 2018, 2:30 p.m. – 4:30 pm

Tab 8

Conservation Advisory Council Meeting Notes

October 12, 2018

Attending from the council:

Holly Braun, NW Natural
Tom Elliot, Oregon Department of Energy
Will Gehrke, Citizens' Utility Board of Oregon
Kari Greer, Pacific Power
Charlie Grist, Northwest Power and Conservation Council
Anna Kim, Oregon Public Utility Commission
Lisa McGarity, Avista
Jeff Mitchell, Northwest Energy Efficiency Alliance
Dave Moody, Bonneville Power Administration

Attending from Energy Trust:

Mike Bailey
Adam Bartini
Tom Beverly
Mike Colgrove
Hannah Cruz
Andy Eiden
Fred Gordon
Jackie Goss
Mana Haeri
Kate Hanson
Andy Hudson
Marshall Johnson
Jessica Kramer
Steve Lacey
Spencer Moersfelder
Amanda Potter
Thad Roth
Zach Sippel
Peter West
Mark Wyman

Others attending:

Lisa Wood, ICF
Mike Christianson, Energy350
Rick Hodges, NW Natural
Mark Kendall, Energy Trust board
Angela Long, Pacific Power
Alan Meyer, Energy Trust board
John Molnar, Rogers Machinery
Elaine Prause, Oregon Public Utility Commission
Colin Podelnyk, ICF
Dan Reese, CLEAResult
Chris Smith, Energy350
Josh Weissert, Energy350

Executive Summary

1. Draft 2019 action plans for Planning and Evaluation and Northwest Energy Efficiency Alliance
    - Staff provided an overview of activities planned for 2019.
2. Targeted Load Management Pilot Findings
    - Staff described results of the Energy Trust and Pacific Power targeted load management pilot in the North Santiam Canyon area.
3. Development of Energy Trust 2020-2024 Strategic Plan
    - Staff led a discussion of likely market scenarios in the next five years. Scenarios will inform strategies for 2020-2024.

1. Welcome, Old Business and Short Takes

Hannah Cruz convened the meeting at 1:35 p.m. The agenda, notes and presentation materials are available on Energy Trust's website at www.energytrust.org/about/public-meetings/conservation-advisory-council-meetings/.

There were no changes to the September Conservation Advisory Council notes.

2. Draft Planning and Evaluation 2019 Action Plan

Hannah Cruz reminded members that the 2019 action plans will be presented in a board workshop next Wednesday, October 17 from 1:00 pm to 4:00 pm. Conservation Advisory Council members are encouraged to attend. One piece of feedback from last year's budget process was the need for more interactivity. This is an opportunity to interact with staff regarding the budget.

Spencer Moersfelder summarized the Planning and Evaluation action plan and context. In 2019, Energy Trust will likely change reporting methods from net savings to gross savings. We don't foresee roadblocks preventing this change.

> The region is in a more capacity-constrained environment than ever before. This will factor into planning and will require a framework for how energy efficiency and demand response factor into energy savings and utility demand management.
>
> Planning works extensively with program staff to update and develop new measures using measure approval documents. There will be significant measure change work related to new codes in 2019. Existing Buildings measures are expected to be impacted.

Holly Braun: What's the typical duration for measures?
Spencer Moersfelder: They normally expire in three years, unless the measures change more rapidly.

Will Gehrke: What measures are included in the expiring measure approval documents?
Jackie Goss: Expiring measure approval documents include measures that programs no longer use or are no longer cost-effective.
Fred Gordon: Mike Bailey presented information on expiring measure approval documents a few meetings ago, so information is available in Conservation Advisory Council meeting notes.

Peter West: Keep in mind that there's a whole family of measures within one measure approval document. Didn't we review about half of our measures in these measure approval documents?
Jackie Goss: Yes, I believe we reviewed about half of our measures, or roughly 1,000 to 1,500 measures.

Spencer Moersfelder continued that that the market is buying more efficient equipment, meaning Energy Trust can claim fewer savings. This is most dramatic in electric savings for the Residential program due to reductions in lighting and water saving devices.

Angela Long, Pacific Power: In looking at energy efficiency and demand response in cost-benefit analysis, are you talking about adding benefits or also costs? Will you talk to the utilities?
Spencer Moersfelder: This will be a collective discussion with the utilities.

Spencer Moersfelder continued that there are a few major process evaluations in 2019, along with impact evaluations. There will also be market research efforts and pilots.

Dave Moody: You're looking at a process evaluation for the entire Residential program. Will you do customer surveys? What other methods will be included?
Phil Degens: We haven't determined the full slate of methods we'll use.
Dave Moody: It does seem like a substantial effort.

Tom Elliot: Are you considering energy imbalance balance markets to address peak load?
Angela Long: That would probably come from electric utilities. There are tons of ancillary services provided and we would normally include that information in avoided costs that we give to Energy Trust for analysis.
Tom Elliott: Are you asking if there are ways to encourage it in other contexts?
Angela Long: Energy storage value is something we're actively looking at. I don't know if it's utility specific.
Andy Eiden: It would be at the utilities' behest to do that, but a storage water heater, for example, could be valued very differently depending on market rates.
Fred Gordon: We're working with PGE to better understand how storage with solar integrates with the grid. How do we understand values across multiple power markets? Defining this across markets is our strength.

3. Targeted Load Management Pilot Findings
Andy Eiden, planning project manager, described results of the Energy Trust and Pacific Power targeted load management pilot in the North Santiam Canyon area.

> We began working with Pacific Power in fall 2016 by looking at its load planning and Energy Trust's projects in the pipeline. The North Santiam Canyon area is about 20 miles southeast of Salem with about 2,500 people. It's a small area, but it is similar to other rural territories on Pacific Power's grid. It has a flat load profile over summer and winter, and a lengthy peak time. It has a mix of residential and commercial customers with a couple of very large industrial plants. The pilot goal was to reduce demand during specific time periods.
>
> This was a new effort for Energy Trust and Pacific Power that crossed functional areas and required coordination between Pacific Power and Energy Trust staff. As part of this pilot, we did not change or create new measures. We focused on targeted marketing and program delivery tactics to this geographic area.
>
> We offered solar incentives, but they didn't exactly match the load shape of the area, so we did not include them in targeted efforts.
>
> We offered a new measure for heat pumps in manufactured homes, which had not yet been screened for cost-effectiveness. Since there were manufactured home parks in the area, we decided to deploy it.

Hannah Cruz: How did you identify projects that were influenced by the targeted load management pilot efforts?
Andy Eiden: Results were based on projects that came in after the effort. We didn't survey customers directly, but we can in the future. We saw an increase in participation. Direct installation of lighting got people to participate right away. There was an increase in winter kilowatts above baseline. We offer a lot of heating measures. There was a project with a large process load that helped reduce energy use in summer and winter.

Charlie Grist: On the 22 percent participation increase, that's over how many quarters?
Andy Eiden: About a year.
Charlie Grist: Compared to the average over a three-year period?
Andy Eiden: The point of comparison is a 12-month average over a three-year period. It's scaled over a year, not seasonally distorted. This was a learning pilot to see what we can further hone in on in the future.

Tom Elliott: Did you pull out the few large customers that made up the bulk of the energy saving? Everyone that's left might help you tease out the effects.
Andy Eiden: Commercial projects increased from one to 14. Residential is harder to sort out because we have limited data. Once you isolate large industrial customers, savings are not enough to be meaningful for load planners. We did observe a large project in 2016 at the end of the baseline period.

Alan Meyer: Industrial businesses normally can't make upgrades within one year.

Andy Eiden: We'll close the pilot at the end of this year and reflect on how that integrates into planning next time around.

Charlie Grist: How many commercial customers are there? Projects per customer will help determine that.
Andy Eiden: There were 100 to 300 commercial customers.

Lisa McGarrity: Can you give an example of what caused the decline in summer energy use?
Andy Eiden: That was dependent on large industrial projects and the load shape of savings.
Chris Smith, Energy350: There was a large heater project that had zero summer load, as an example.
Andy Eiden: Energy350 has kept up with different plants in the area, which helped.
Chris Smith: We have a lot of projects from now through early next year. There's a time lag and we'll see results later.

Dave Moody: What's the cost compared to traditional transmission and distribution efforts?
Andy Eiden: We need to take a close look at the numbers before we can speak to it.

Charlie Grist: You took your program savings by measure. The green is lighting. It's a nice depiction. Everything contributes. It doesn't have to be a peaky resource to contribute.
Andy Eiden: Pacific Power's engineers were able to conceptualize what contributed. They could see what lighting changes would contribute, for example.

Andy Eiden continued in the future, we need to plan and coordinate communications more completely and further in advance. We also need to distill what we want to answer with the next pilot. We are working with Pacific Power to design the next pilot. We may use bonus incentives that would allow us to keep current measures. We also want to select a location that allows us to integrate rooftop solar.

Charlie Grist: There's a lot of lumber and wood processing in North Santiam. The shape for that depends on whether they run one, two or three shifts. It depends on wood being available and demand for wood products. You need to look more specifically at the plants. If they are one-shift plants, the savings would just happen anyway.
Andy Eiden: These analyses are dialed in to plant specifics, using a mix of stock load shapes.
Charlie Grist: What's driving the problem, and what's addressing it? You'd want to pick up differences in shifts between summer and winter.
Fred Gordon: What's important is different from one distribution point to the next, and you have to collect information quickly to understand it. How do you get information and proceed quickly?

Lisa McGarrity: Is this an electric-only area? How do you account for that in your analysis? You'll have effects from lighting on gas.
Andy Eiden: We haven't accounted for it, but we can in the future. We're working with NW Natural now.

Lisa McGarrity: What uptake did you have on the gas side?
Andy Eiden: We haven't evaluated gas results yet.
Steve Lacey: We need to see if there was an increase in gas savings due to marketing for electric upgrades.

Andy Eiden: If we can start answering research questions to help understand load in an area, we should include them. Summer load changes lead to questions about heat pump impact on summer load.
Charlie Grist: It's diversified: Not every house heats their water at the same time.
Andy Eiden: We are looking into how to use prescriptive measures to treat diverse households.

Holly Braun: There's an idea of having constraints that drive targeted efforts. There are also communities that have action plans and they look to the utilities to help. This is similar to targeted efforts. So many communities may want targeted efforts, and this may be replicable.

Angela Long: There's a transmission and distribution planning process before any of our projects. Cost isn't how we look at this. We have upgrades we're required to do. Through a capital projects process, we narrow it down to projects that would be competitive in cost. We vet the communities and give that list to Energy Trust for further refinement. Andy has done a great job at the front end of the process. Now we are working on the back end. This pilot was focused on rapid deployment.

Andy Eiden: There are obvious overlaps with our diversity, equity and inclusion efforts.

Holly Braun: You had to create support, but if you have a community doing that on your behalf, awesome!
Andy Eiden: We saw that with the Bend Energy Challenge, for example.

Alan Meyer: Have we proven that this works?
Andy Eiden: No, not yet. Right now we're using power council load shapes. Power council load shapes may not always align with the actual load shape of the area due to factors like plant closures. There are things we need to understand better. We didn't do a full impact evaluation, like billing analysis or customer interviews.

Hannah Cruz: Having a local champion who really knows the customers was helpful, like Alan Meyer Jr., and the OPUC.
Angela Long: Alan has been promoted, but there are other people who can help. It will depend on the situation in the community and who is there with connections.

Charlie Grist: This is really great. It seems like there are secondary findings on scaling up and increasing pace. In the hard-to-reach market report we did last time, the annual touch in most segments is 0.5 percent. Commercial could be 14 percent, but there's a big cost. The findings will be helpful.

Fred Gordon: While the PGE demand response testbed is focused on system peak versus local peak and has not yet been approved by the OPUC, it has ambitious goals and commensurate costs. If you want to achieve16 percent market share in two years, that's difficult. Maybe you will be successful if you pay most of the cost of equipment. Targeted efforts are built around intensive marketing of off-the-shelf technologies.

Kari Greer: Is this waiting for OPUC approval?

Fred Gordon: I don't think they've seen the final proposal yet.

Charlie Grist: I'm happy to see your extreme weather comment. All of our shapes look at normal weather.
Andy Eiden: We need to partner with other groups to make sure the research is thought out.

Hannah Cruz: I included more resources about this in our packet, including activities in other states and other organizations.

4. Draft Northwest Energy Efficiency Alliance 2019 Action Plan
Jeff Mitchell summarized NEEA's 2019 action plan. On the residential side, we will still focus on heat pump water heaters. It's an important measure to the region, and sales have continued to grow from less than 1,000 to over 13,000 units. We will transition out of the ductless heat pump market, which we've been in since 2008 and market infrastructure is strong. Next Step Homes will be NEEA's first dual-fuel program in 2019. We've historically focused on electric.

> On the commercial side, we will move out of the low watt T8 program, which impacts commercial maintenance. We've done exciting work, but the impact was less than we expected. We're working on a very high-efficiency, dedicated outside air program. Case studies on these pilots will be available soon.
>
> Our commercial building stock assessment is in development, and we hope to wrap up the field work by Q4.
>
> There are a number of efforts going on in natural gas, including a gas heat pump water heater. We are working on how to bring a market rate product in next year.

Alan Meyer: What is a gas heat pump water heater?
Jeff Mitchell: It's driven by a gas engine instead of an electric motor. There's a coefficient of performance above one on a heat pump. A gas heat pump can give between 1.2 and 1.4 COP.

Holly Braun: Now that there will be new homes through NEEA and Energy Trust, we want to understand who is doing what and what savings come from NEEA versus Energy Trust.
Peter West: This is part of our conversations with NEEA and the utilities.

Jeff Mitchell: In 2018, we did a lot of work to define gas savings and understand opportunities.

Holly Braun: Deployment wouldn't happen in 2019?
Jeff Mitchell: It would be the following year, most likely.

5. Development of Energy Trust 2020-2024 Strategic Plan
Lizzie Rubado led an exercise to develop future scenarios that can be used to test potential strategic plan strategies. What will be the key drivers in scenarios? What is a plausible future?

Anna Kim: How will these be used in the planning process?
Lizzie Rubado: The scenarios give us context as we think about the future, along with boundaries for our five-year strategic plan. The scenarios provide context and help us think through whether our strategies will be effective in that context.

Conservation Advisory Council members believed that carbon policy or carbon pricing, a greater focus on utility peak, and an increasing focus on equity in energy policy will have a large impact in the future.

Lizzie Rubado led the group in a discussion about the policy outlook and market potential for the next five years, and asked attendees to share opinions about whether the outlook five years from now is better, worse or similar to today. Participants were given time to consider their responses independently on worksheets, then shared their thinking with the group.

In this discussion, Conservation Advisory Council members speculated that the outlook for distributed renewables will improve in the next five years, driven by carbon policy, customer concerns and interest in resilience, consumer and local government interest in climate planning and goals, and evolution of utility rate structures and business models that will benefit distributed resources.

Conservation Advisory Council members had mixed opinions about the outlook for energy efficiency, with many members speculating that the market potential will not change much from today. Some members thought the outlook will improve slightly, impacted by carbon policy, increased avoided costs and technology will bring more opportunity than expected. Other members thought that the outlook will worsen, speculating that carbon policy will not have any impact on the economics of energy efficiency within five years, avoided costs will continue to decline and the market is already saturated with lower-cost technologies.

6. Public Comment
There was no additional public comment.

7. Meeting Adjournment
The meeting adjourned at 4:30 p.m. The next Conservation Advisory Council meeting will be held on Friday, November 30, 2018.

Tab 9

Renewable Energy Advisory Council Meeting Notes

Friday, October 12, 2018

Attending from the council

Erik Andersen, Pacific Power
Bruce Barney, Portland General Electric
Meghan Craig, Oregon Solar Energy Industries Association
Andria Jacob, City of Portland
Anna Kim, Oregon Public Utility Commission
Oriana Magnera, NW Energy Coalition
Adam Schultz, Oregon Department of Energy (by phone)
April Snell, Oregon Water Resources Congress
Tom Starrs, SunPower
Frank Vignola, University of Oregon
Dick Wanderscheid, Bonneville Environmental Foundation

Attending from Energy Trust

Michael Colgrove
Chris Crockett
Hannah Cruz
Emily Findley
Matt Getchell
Jeni Hall
Kate Hansen
Betsy Kauffman
Dave McClelland
Dave Moldal
Joshua Reed
Joshua Reid
Thad Roth
Lizzie Rubado
Zach Sippel
Julianne Thacher
Jay Ward
Peter West
Mariah Willis
Robert Wylie

Others attending

Samuel Birru, University of Oregon
Alan Meyer, Energy Trust Board of Directors

Executive Summary:

1. Low- and Moderate-Income Solar Update
    - Staff provided an update on Energy Trust's work on an initiative to expand solar benefits for low and moderate-income groups.
2. Strategic Planning
    - Staff sought feedback from members on key drivers and scenarios explored in Energy Trust's five-year strategic planning process.

1. Welcome, introductions, announcements

Dave McClelland called the meeting to order at 9:30 a.m. The agenda, notes and presentation materials are available on Energy Trust's website at: https://www.energytrust.org/about/public-meetings/renewable-energy-advisory-council-meetings/.

Dave McClelland announced the board budget workshop next Wednesday, October 17 from 1:00 pm to 4:00 pm. Renewable Energy Advisory Council members are encouraged to attend.

Lizzie Rubado and Anna Kim provided a brief update on community solar. This program was created due to recently passed legislation and is intended to help make solar accessible for

people who are not able to install the technology on their homes. Anna Kim stated that contract negotiations are taking place. Once negotiations are complete, the contract will be brought to the Oregon Public Utility Commission for final approval.

Lizzie clarified that the program administrator is the implementer of the program. She directed people to the request for proposals for the program administrator for a complete description of the role and scope of work.

Andria Jacobs: Will Energy Trust be part of the program administration team?
Lizzie Rubado: Energy Trust participated in two proposals as a subcontractor, one of which was selected through the RFP process. Nothing is final, including Energy Trust's role, until contracting is complete. There is another role within the program administration team, called the low-income facilitator. This party will support the successful delivery of the low-income portion of this program. Community Energy Project is the potential implementer for that work.

2. Low- and Moderate-Income Solar Update

Betsy Kauffman presented updates on the low- and moderate-income solar initiative. The goal is to increase solar deployment for families with low and moderate incomes. Energy Trust is one of many entities working on this contract through a grant from the U.S. Department of Energy.

Alan Meyer: What are the other participating states?
Betsy Kauffman: Rhode Island, New Mexico, Minnesota, Connecticut and District of Columbia.

Betsy Kauffman reviewed program efforts in 2017, the first year of the grant. She described findings regarding housing stock for low- and moderate-income people, explaining that many low- and moderate-income families are renters.

Andria Jacobs: What was the source of the demographic data?
Zach Sippel: 2015 American Community Survey census data for Oregon.
Lizzie Rubado: These efforts are in partnership with Oregon Department of Energy and Spark Northwest, who provide additional information and context for the entire state. That is why we did not limit this analysis to Energy Trust's service territory.

Betsy Kauffman highlighted findings about average electric bills for renters and homeowners, emphasizing that low- and moderate-income customers typically bear a greater energy burden relative to their incomes.

> A stakeholder group was formed and met throughout 2017 and 2018. In early 2018, staff travelled throughout the state to meet with 35 organizations and agencies. This outreach led to refined strategies and the creation of an implementation plan. The next steps will be to build capacity, develop program models and promote the offerings.
>
> Energy Trust will offer a new Low- and Moderate-Income Innovation Grant that provides funding to help organizations develop replicable program models for promoting solar opportunities for low- and moderate-income residents.

Alan Meyer: Is funding from the Low- and Moderate-Income Innovation Grant from the U.S. Department of Energy grant?
Betsy Kauffman: It's from Energy Trust.
Alan Meyer: So, public purpose dollars?

Betsey: Yes. Applicants must be in Pacific Power or PGE territory to be eligible for the grant.

Betsy Kauffman discussed plans for 2019, which is the third and final year of the plan. Energy Trust will help organizations develop program models. Staff will also figure out how to apply these learnings to the traditional solar program and incorporate the organization's diversity, equity and inclusion efforts into low- and moderate-income solar activities.

Bruce Barney: You must ask if adding solar is the best step for a particular location, and if there could be more value added through efforts to weatherize or insulate the home. How have you dealt with that?
Betsy Kauffman: It depends on the circumstances of a home or building. We want to make sites as energy efficient as possible. Solar provides the opportunity for long-term bill reduction. All customers of PGE and Pacific Power pay the public purpose charge, part of which goes to renewables. We want to be sure that our funds are supporting low- and moderate-income communities.
Lizzie Rubado: We see solar as a tool that can help buildings that have been weatherized go further or, in some cases, uniquely address energy challenges that are problematic for weatherization or energy assistance programs. Solar is not an end in and of itself; it is a way to tackle other issues. We have asked community group members to identify circumstances where solar can uniquely address a need or provide value to their customers. Community solar, for example, may be a solution that can provide long-term bill reductions that are independent of the condition of a customer's home. Resilience and disaster preparedness are another long-term benefit solar can provide. We have participated in conversations about the best use of time and dollars. For example, Spark Northwest has expressed interest in ownership of renewable assets as a tool to build wealth in low-income communities.

1. Development of Energy Trust 2020-2024 Strategic Plan
Lizzie Rubado led an exercise to develop future scenarios that can be used to test potential strategic plan strategies. What will be the key drivers in scenarios? What is a plausible future? Prior to the meeting, members completed a survey about what kinds of events will have impact or influence in the next five years.

Most participants predicted a relatively positive future. Members described a positive future outlook as having robust state and federal tax incentives, new technology, better waste capturing stream, policies that overcome split incentives, aggressive building codes, higher costs for fossil fuels, lower costs for distributed renewables, better financing for affordable housing, cheap storage, fully integrated delivery for targeted load management, a smart grid, proliferation of electric vehicles, seamless aggregated net metering, high valuation of solar as a resource, success of community solar, monetization of non-energy benefits, a carbon tax and high carbon costs, market potential created by extreme weather, successful utility regulation, policies that increase funding to community-based organizations, authority to prioritize equity and carbon, a mandate requiring solar on all new homes, and changes to land law allowing solar to be used in agriculture.

Members described a negative future outlook as having lower energy prices, negative market impacts from California, a recession leading to a shrinking workforce, diminished access to raw materials, loss of national efficiency standards such as ENERGY STAR®, loss of consumer confidence, loss of investment appetite, extreme success of large-scale renewables, trade wars, a saturated market for energy efficiency, failing storage technology, loss of the public purpose charge, high costs for integration, unsuccessful commercial solar, and low carbon costs.

Renewable Energy Advisory Council members discussed the policy outlook for distributed-scale renewables. Most predictions were optimistic.

Andria Jacobs: I expect that consumer demand is strong and will pull policy along. Big market players continue to advocate and show up at the OPUC. However, I don't see Oregon leading in innovative policy. We've lost that over the last seven or eight years.
April Snell: That matches what I thought. My prediction was barely more optimistic than current conditions. Existing programs will be enough to produce progress.

Oriana Magnera: Oregon is poised to be a leader in energy and equity, and that will affect distributed resources and who can access them.

Chris Crockett: What are considered distributed-scale renewables?
Lizzie Rubado: They are not utility-scale, and typically deployed within the built environment, or our communities.
Dick Wanderscheid: It's on the customer side of the meter.

Anna Kim: There is work being done now so things can happen in next five years.

Meghan Craig: If we can move away from financially based policy, we will have more positive potential. Currently as we look at state budget, we are told there's not money. If we can move away from that, we can have things like community solar or the California mandate.
Tom Starrs: I agree, but I'm less optimistic that will happen. I've seen declining commitment to net metering and affordable rate design. I would like to think that community solar could offset that or other policies could reduce the soft cost of solar, but I'm concerned over loss of economic incentives.
Lizzie Rubado: What do you think is the driver?
Tom Starrs: A conservative campaign by Edison Electric to deter utilities from net metering.

Dick Wanderscheid: There is an ongoing decline in the cost of renewables. Uptake will increase if policy encourages it and costs are low.

Frank Vignola: Small, non-investor-owned utilities are worried about the costs of solar. Smaller utilities have not supported solar legislation because they are worried about being required to run solar programs that they feel would be too costly to administer.

Erik Andersen: As compensation gets tied more to the grid, the actual energy value could be less than the net metering rates, which would negatively impact people's compensation. If we're tying the value of solar to what it provides to grid, there will be less value for what's provided.

April Snell: While I'm still optimistic, one thing that argues for things staying the same is lack of leadership at state and Federal level to push policy forward.

Jeni Hall: Does anyone have thoughts on the California independent system operator or energy imbalance market?
Erik Andersen: That makes it worse. We get negatively priced solar energy and use that to serve our customer. Millions of dollars of savings are coming to the state, and we must deal with the duck curve of our own. Since we can take less from California, energy imbalance marke benefits go down as we get more solar in Oregon. The benefit energy imbalance market produces will be smaller for customers as we build more solar here. I don't want to overestimate

the benefits ancillary services and carbon signals will provide. That's why I'm on the slightly negative side.
Anna Kim: At least in the next five years.

Renewable Energy Advisory Council members discussed the outlook for energy efficiency policy. The forecast is close to present conditions, and less optimistic.

Erik Andersen: There is more energy efficiency being built into standards, so the efficiency of new structures will go up as building standards reflect new equipment. This makes it harder to justify energy efficiency programs, but more efficiency goes in.

Tom Starrs: I'm optimistic. There is potential for innovative rate designs and PV charging to shift load profiles in a favorable direction for cost reduction.

Oriana Magenera: There is a push and pull on the policy front. Legislators don't understand the value of energy efficiency. They need to see non-energy benefits.

April Snell: When the consumer has to pay more for energy, that can stimulate positive energy efficiency policy.
Anna Kim: What would cause a cost increase?
April Snell: I don't think it would be all carbon—consumers' perception isn't always reality. If there are other similar increases, they may demand more energy efficiency policy.
Anna Kim: In the five-year horizon, the energy efficiency industry and policy is still maturing and iterating. We are analyzing and getting more granular with information, and I don't know if something positive will occur within five years. The outlook will become more optimistic in a 10-year timeframe.

Renewable Energy Advisory Council members discussed market potential for distributed-scale renewables. The outlook was generally optimistic.

Frank Vignola: Solar has proven itself. If the price continues to go down, I predict a positive outlook.
Bruce Barney: I was feeling the price would continue to rise.

Dave McClelland: The federal investment tax credit will be stepping down. How do people see that as a driver?
Frank Vignola: It is a factor.
Bruce Barney: The overall incentive picture is dismal in next five years
Erik Andersen: The cost of solar equipment has dropped very quickly, but it might not have a strong enough effect in next five years to make up for the loss of the tax credit.
Tom Starrs: Declining policy support is offset by price decline, but that won't continue indefinitely.

Frank Vignola: I think storage will come into its own in the next five years, and there will be an incentive to install it.
Bruce Barney: Innovative rate designs might feed into that as well.
Meghan Craig: I agree with Frank on resiliency, and the adoption of electric vehicles will cause solar potential to grow.

Frank Vignola: I see community solar as a driver

Oriana Magnera: I see an increased focus on equity in policy opening new opportunities for reaching underserved markets.

Samuel Birru: I predict there will be increased efficiency in land use for renewables. The increase in the efficiency of technology itself will create potential to use less space to get the same amount of energy.

Renewable Energy Advisory Council members discussed market potential for energy efficiency. The outlook was slightly optimistic.

Bruce Barney: I expect continued growth in new technology, such as the next version of the LEDs.

Andria Jacob: The easy stuff has been done, and the next things are harder and more expensive. Having tried to sell energy efficiency for most of my career, people don't want it. It's hard to sell compared with renewables.

April Snell: I was trying hard to be positive, but there are volatilities and unknowns that make it extremely hard to predict. National and global politics drive the economy and could change a lot.

Anna Kim: I don't think carbon policy will be important in the five-year period. We might decide on a policy, but it won't' start tomorrow even if it is passed.

Tom Starr: There is potentially cheaper technology. Modestly increasing retail rates and decreasing energy costs could make efficiency more accessible and attractive.

Erik Andersen: I see an increase in the level of energy knowledge. It's easier to track down funding for educational opportunities like viewing a presentation.

April Snell: Going back to distributed-level renewables, the potential increase of small-scale hydropower could add to a positive outlook. Some irrigation districts I work with are looking at in-conduit hydropower. Over half of my members are interested in pursuing these types of opportunities because its tied to improving their water delivery system.
Zach Sippel: I'm wondering if we experience more heating and cooling days, if that will drive energy efficiency valuation. This is based on what I'm hearing from renters.

3. Public comment
There was no public comment.

4. Adjourn
The meeting adjourned at 11:45 a.m. The next scheduled meeting of the Renewable Energy Advisory Council will be Friday, November 30, 2018.