

Board Meeting Minutes—135th Meeting

April 1, 2015

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

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

Staff attending: Margie Harris, Ana Morel, Debbie Menashe, Amber Cole, Steve Lacey, Fred Gordon, Peter West, Courtney Wilton, Hannah Hacker, Betsy Kauffman, Jed Jorgensen, Juliet Eck, Dan Rubado, Erika Kociolek, Jay Ward, John Volkman, Cheryl Gibson, Wendy Bredemeyer, Cheryle Easton, Pati Presnail, Rachanney Ros, Elizabeth Fox, Alison Ebbott, Justin Buttles, Larisa Antonov, Lizzie Rubado, Dave McClelland, Sue Fletcher, Marshall Johnson

Others attending: Elaine Prause (OPUC), John Charles (Cascade Policy Institute), Jennifer Price (Moss Adams), Ashley Osten (Moss Adams), Patrick Nye (Bonneville Environmental Foundation), John Morris (CLEARresult), Clay Norris (NEEA), Anne Snyder Grassman (Portland General Electric), Samantha Taylor (Conservation Services Group), Bob Stull (CLEARresult), Janice Boman (Ecova), Cliff Davis (International Brotherhood of Electrical Workers)

Business Meeting

President Debbie Kitchin called the meeting to order at 12:20 p.m.

General Public Comments

There were no public comments.

Consent Agenda

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

MOTION: Approve consent agenda

Consent agenda includes:

- 1) February 25 Board meeting minutes
- 2) Amend Oregon preference policy—R740
- 3) Amend Other Renewables policy—R741

Moved by: John Reynolds

Seconded by: Melissa Cribbins

Vote: In favor: 11

Abstained: 0

Opposed: 0

RESOLUTION 740 AMEND POLICY ON OREGON PREFERENCE

WHEREAS:

1. In 2003, the board adopted a policy on preference for Oregon contractors competing for major Energy Trust contracts.
2. In later compiling policies for administrative purposes, staff included introductory language summarizing the discussions that preceded the 2003 policy.

3. The details of the introductory language are no longer current, and the introductory language was not itself part of the policy adopted by the board in 2003.
4. Simplifying the introductory language to the policy implies no substantive change in the policy itself.

It is therefore RESOLVED that the Board of Directors hereby adopts amendments to the introductory language of the Oregon Preference policy, as shown in the attached.

**RESOLUTION 741
AMEND POLICY ON OTHER RENEWABLE ENERGY PROJECTS**

WHEREAS:

5. The “Other Renewables” policy has two tracks: (1) a “mature technologies” track for established technologies including wind, biopower and traditional hydropower projects, which the executive director may approve up to \$500,000; and (2) other technologies, which require more intensive review, varying on the basis of dollar thresholds.
6. Based on the Energy Trust staff’s recommendation, the board finds that geothermal energy technology is sufficiently well established that it does not require the intensive review afforded to non-mature technologies.
7. The 2015-2019 strategic plan emphasizes early-stage assistance for renewable energy projects, such as grant-writing, feasibility studies and other development assistance. Under current practice, the executive director may approve such assistance up to \$200,000 per project.
8. The board has previously recognized this practice, approves it, and wishes the process for reviewing projects using non-mature technologies to use the same dollar threshold.

It is therefore RESOLVED that the Board of Directors hereby adopts amendments to the Other Renewable Energy Projects policy as shown in the attached:

1. Designating geothermal energy technology as a mature technology for purposes of this policy;
2. Authorizing the executive director to approve early-stage renewable project assistance up to \$200,000 per project; and
3. Requiring board review and approval of projects using non-mature technology only if they exceed \$200,000 in incentives.

POLICY ~~ESTABLISHING THE MERGER OF THE BIOPOWER PROGRAM INTO~~ FOR THE OTHER RENEWABLES PROGRAM PROJECT APPROVAL

The Energy Trust of Oregon, Inc., Board of Directors:

- 1) Authorizes two tracks for approval of projects incentives within the Other Renewables Program and not covered by other Energy Trust solar energy programs:
 - a. Mature technologies, i.e., biopower ~~projects~~, traditional hydropower ~~projects~~, wind ~~projects~~, geothermal and such other technologies as the board may designate in the future: The executive director may approve projects involving incentives less than \$500,000; board approval is required for projects involving \$500,000 or more.
 - b. Other projects:

- i. Projects involving incentives of ~~\$5~~200,000 or less may be approved by the executive director. A summary of any such project will be provided subsequently to the board and Renewable Advisory Council.

~~ii. ii. — Projects entailing incentives of \$50,000 to \$125,000 require review by the Renewable Advisory Council and will be placed on a consent agenda for board action unless a member of the board asks to have the project placed on the regular agenda.~~

~~iii. — Projects involving incentives of more than \$200~~125,000 will be reviewed by the ~~Renewable Advisory Council and~~ require placed on the regular agenda for board approval.

2) Authorizes the executive director to approve up to \$200,000 per project for early-stage project assistance activities such as grant-writing, feasibility studies and other expert development assistance. Procedures for reviewing such awards shall be reported to the Renewable Energy Advisory Council and discussed with the Board.

CLEAN VERSION:

POLICY FOR OTHER RENEWABLES PROGRAM PROJECT APPROVAL

The Energy Trust of Oregon, Inc., Board of Directors:

1) Authorizes two tracks for approval of project incentives within the Other Renewables Program and not covered by other Energy Trust solar energy programs:

a. Mature technologies, i.e., biopower, traditional hydropower, wind, geothermal and such other technologies as the board may designate in the future: The executive director may approve projects involving incentives less than \$500,000; board approval is required for projects involving \$500,000 or more.

b. Other projects:

- i. Projects involving incentives of \$200,000 or less may be approved by the executive director. A summary of any such project will be provided subsequently to the board and Renewable Advisory Council.
- ii. Projects involving incentives of more than \$200,000 will be reviewed by the Renewable Advisory Council and require board approval.

2) Authorizes the executive director to approve up to \$200,000 per project for early-stage project assistance such as grant-writing, feasibility studies and other expert development assistance. Procedures for reviewing such awards shall be reported to the Renewable Energy Advisory Council and discussed with the Board.

President's Report

Debbie Kitchin presented on the use of cross-laminated timber (CLT), an innovative structural material that can replace concrete and steel in construction of tall commercial buildings. The Wood Innovation and Design Center in Prince George, British Columbia used CLT as a substitute for concrete and steel in its seven-story building, and the Oregon Zoo is the first building in Oregon to use CLT. The pressed, prefabricated wood panels have been championed for their environmental and cost-saving benefits. When compared to steel and concrete, CLT is lightweight, strong, fast and easy to install, less expensive with less on-site waste and a lower carbon footprint. For example, constructing a 20-story wood building compared to the same building using concrete and steel is equal to the eliminating emissions from 900 cars for a year. While there are two manufacturers of CLT in Canada, there are none in the U.S. Debbie

noted this may be a new opportunity for Oregon's wood products industry. She mentioned DR Johnson in Riddle, Oregon recently received an Oregon Built Environment and Sustainable Technologies (BEST) grant to explore production of CLT. The board discussed potential opportunities for the Production Efficiency program to support such an operation with energy-efficient features.

Audit Committee

Ken Canon noted the annual financial audit is complete and before the board today for acceptance. He thanked the Audit Committee members for their efforts and involvement. The board recognized the full Finance team and its contributions to obtaining an unmodified audit opinion for Energy Trust.

Ken introduced Jennifer Price and Ashley Osten of Moss Adams LLP. This is the third year Moss Adams has conducted an independent financial audit for Energy Trust. The Audit Committee heard full details on the audit at the last committee meeting in March. Moss Adams summarized the audit process and results for the board. The audit process included meetings with the Audit Committee, approval of the audit scope and performance of all audit procedures. The audit followed this standard process and Energy Trust staff was well prepared. Moss Adams reported Energy Trust received an unmodified opinion on the 2014 financial statements, resulting in Energy Trust meeting its 2014 Oregon Public Utility Commission minimum performance measure to demonstrate financial integrity. An unmodified opinion means Energy Trust's financial statements are presented fairly in accordance with generally accepted accounting principles (GAAP) in the U.S. Moss Adams reviewed the highlights of the audit and reported there were no items noted to be communicated specifically to the board.

Moss Adams explained to the board the concept of materiality and how it relates to the Energy Trust financial audit. Materiality is a commonly used approach by the financial industry to review a sampling of an organization's financial transactions. Moss Adams also set other testing thresholds within the audit, such as random sampling, and followed industry standards to determine Energy Trust financial statements are materially correct in accordance with GAAP.

The board inquired about note 7 in the audit and whether the liability for \$13,211 rests with Energy Trust or Craft3. Moss Adams clarified the note is staff's best estimate of what may not be collected for energy efficiency loans to moderate income program participants and what would need to be reserved in case the balance is not collected. It was explained the agreement is a commitment to loan up to \$300,000 in \$100,000 increments to support the Savings Within Reach loan offering, and only \$100,000 has been loaned to date. Staff noted Craft3 has so far executed loans for about \$85,000. Energy Trust is obligated to cover about \$50,000 of loan losses.

The board inquired if there are any opportunities for Energy Trust be more efficient. Moss Adams suggested Energy Trust may want to review the financial audits of any third-party financial service providers. An example of such a third-party provider is the payroll provider. Moss Adams affirmed this is a best practice and only a recommendation.

The board asked how often Moss Adams has seen companies receive unmodified audit opinions for multiple years in a row. Moss Adams noted many companies received unmodified opinions but with adjustments provided beforehand. Energy Trust did not receive any such adjustments to incorporate before the audit concluded.

RESOLUTION 742 ACCEPTANCE OF AUDITED FINANCIAL REPORT

BE IT RESOLVED: That Energy Trust of Oregon, Inc., Board of Directors accepts the auditor's report on the financial statements, including an unmodified opinion, submitted by Moss Adams LLP for the calendar year ended December 31, 2014.

Moved by: Roger Hamilton
Vote: In favor: 11
Opposed: 0

Seconded by: Dan Enloe
Abstained: 0

Margie reviewed the 2014 Management Review Status Update memo in the board packet, highlighting progress made on implementing the review recommendations. The Audit Committee will receive periodic updates from staff three to four times during 2014 to ensure Energy Trust is on track to implement the recommendations.

Feature Presentation

Primer on Renewable Energy Certificates: Patrick Nye, Betsy Kauffman, Jed Jorgensen

The presentation on Renewable Energy Certificates (RECs) is part of an in-depth review of the Energy Trust REC policy to determine if updates are warranted in light of changes in the marketplace. To better position the board to provide direction on any changes, this presentation is to develop a shared understanding of RECs and the REC market. A briefing paper entitled the Renewable Energy Certificates Report was included in the board packet; the full report was reviewed by the Policy Committee. Challenges interpreting the policy, and potential changes to the policy, will be addressed at a later date, starting with the Policy Committee at its April meeting. Staff plans to bring the policy back to the board in the summer.

Betsy introduced Patrick Nye, carbon and renewable energy senior consultant at Bonneville Environmental Foundation.

Patrick delivered his presentation on RECs, which covered the concept behind a REC versus the generation output of a renewable energy system. He also described standards and registries for RECs, the makeup of the REC market, recent trends in price and quantity of RECs sold, and challenges facing the REC market.

Patrick first framed renewable energy as having two aspects: power generation and the environmental, economic and social benefits from the power being renewably produced with little to no greenhouse gas emissions. Eligible resources include wind, solar, geothermal and qualifying hydropower, biomass, biodiesel and fuel cells. He noted RECs have also been called green tags or green credits. A REC is a document that verifies ownership of the environmental benefits to the power, and is a transferable commodity that can be traded in a marketplace. The renewable energy producer can sell the power and REC to different markets. The purchaser of a REC can then “green” its own power and retains proof of those environmental, social and economic benefits. A REC can be bundled or unbundled. A bundled REC is the combined sale of both the power generation and the non-power attributes from the unit.

Patrick noted there are no standards or certifications required of RECs. It is open to interpretation, and over time, systems have emerged that provide checks and balances for the creation, sale and tracking of RECs. For example, Green-e certification is a standard that provides assurances and requires an annual audit that follows the movement of the REC from generation to the marketer or utility and then to the end-use customer to guarantee no one else has laid claim to the same REC or double sold the unit. In the past ten years, there has also been an emergence of registries, which act as bank accounts and provide a higher level of transparency. A registry, like the Western Renewable Energy Generation Information System (WREGIS) will account for the REC and track generation. The Federal Trade Commission is also developing guidelines for how purchasers can represent ownership of a REC to the public in an accurate, transparent manner. The REC market has changed over the last decade, largely by self-imposing standards and requirements.

There are two markets for RECs. The voluntary market is largely driven by businesses or households that want to buy green power for their individual and varied reasons. The compliance market is driven by mandates, like Oregon's Renewable Portfolio Standard (RPS), which allows RECs to be purchased to help utilities meet their RPS compliance targets. Another example is when a utility is mandated to make RECs available for customers through green power programs; both PGE and Pacific Power have programs available to customers.

Ken Canon departed the meeting at 1:21 p.m.

In the REC market, typical sellers are renewable energy project owners, brokers, marketers like Bonneville Environmental Foundation and utilities. Typical buyers include individuals, companies, universities, governments and utilities. The military is one of the biggest buyers of RECs in the country. Utilities purchase RECs for compliance or for their own voluntary green power programs.

The board inquired how long the REC operates. Patrick explained the seller wants the REC to be purchased the year in which the energy was used. Some compliance programs allow the banking of RECs for future energy use.

Patrick reviewed the pricing history from 2001 using data provided by the National Renewable Energy Lab. He noted a period of time in 2008 where the price per REC dropped due to an oversupply in the market. Patrick noted the REC market is dynamic in terms of prices. The volume of RECs has been increasing since 2006, especially for unbundled RECs.

In Oregon, the RPS allows utilities to use unbundled RECs for 50 percent of their compliance until 2020, at which time the allowance will change to 20 percent. Through Oregon law, utilities provide voluntary green power programs. Collectively, PGE and Pacific Power serve 200,000 customers through their green power programs. Voluntary corporate purchasers include higher education, owners of LEED-certified buildings and other businesses. The Port of Portland is one of the top 100 volume purchasers in the nation.

Challenges with RECs in the marketplace include the oversupply of RECs; administrative costs and cumbersome registry requirements that make it difficult for smaller producers like small net-metered solar systems; competing products like carbon offsets; and critics questioning the transparency in transferring and recording REC generation, sale and end-use claims.

Energy Trust controls about 125,000 RECs annually, and that number is expected to grow to 280,000 annually by 2025. Energy Trust has never sold RECs and has instead provided them to PGE and Pacific Power for their RPS compliance targets.

The board asked whether the downward trend in REC prices may change in the near future. Patrick said yes, especially as policy changes impact the market, such as California's RPS policy that gives greater value to in-state produced RECs.

The board inquired how wave technology could be accepted for RECs. Patrick noted some programs recognize less mature renewable energy technologies; however, the marketplace is in general waiting on those technologies.

The board asked what the inventory is of Energy Trust expired RECs. The Solar program has 7,000 projects, and each contract notes the percentage of RECs Energy Trust takes title to for a certain amount of time. The smaller system RECs like those from residential solar are not registered with WREGIS or any other registry. For custom renewable energy projects, some RECs have been delivered to the utility because the owner is already on WREGIS. Only a small subset of RECS are delivered to each utility.

The board discussed whether smart meters could be modified for the smaller solar systems to support counting and registering RECs.

Staff clarified that PGE and Pacific Power continue receiving RECs and can bank them for RPS compliance, which they've met through 2019 or 2020.

The board took a break from 1:52 p.m. to 2:07 p.m.

Committee Reports

Policy Committee, Roger Hamilton

At the March meeting, the committee reviewed changes to the two policies approved on the consent agenda by the board today: the Other Renewable Energy Projects Policy and the Oregon Preference Policy.

The Balanced Competition Policy is up for a regular three-year review in May. This policy is of particular importance given the fall 2014 acquisition of PECL by CLEAResult, resulting in three major programs managed by one contractor. At that time of acquisition, the board allowed an exception to the policy given its regular review in spring 2015.

The committee also received updates on state legislation, the large customer funding docket and the hiring of Elaine Prause by the OPUC to fill the role of Energy Trust liaison.

Evaluation Committee, Alan Meyer

At the February meeting, the committee discussed how Energy Trust tracks and counts energy savings from data centers built and occupied incrementally. The committee also discussed transitions related to Home Energy Reviews and received clarification that in-home reviews are available to customers upon request. The meeting included a review of four studies and evaluations. The third-party heat pump study will be presented to the OPUC and utilities. In response to OPUC Docket 1565, the study explores whether an incentive for a heat pump encourages fuel switching to electricity from natural gas. The study concluded factors like lower fuel costs and a single integrated heating and cooling system have a greater impact on a customer's decision to change from natural gas heating to a heat pump than an Energy Trust incentive.

The Rooftop Unit Tune-Up Initiative 2012 Impact Evaluation was also reviewed. It was discussed that staff is looking for additional strategies to encourage rooftop HVAC unit tune-ups, as noted in the committee notes. The board discussed ways the program could acquire more savings from rooftop tune-ups. Staff noted this is a harder market to reach given the hundreds of contractors that work on the units. Staff will follow up with the board on whether rooftop tune-ups are an element of commercial Strategic Energy Management.

The EPS and Solar Valuation Study explored whether and by how much an EPS™, energy performance score, or solar electric system improves property values. The study indicated solar improves home re-sale value. The study found that at this early stage in the availability of EPS, there is no additional premium in re-sale value. Staff noted such an effect will take time as brand awareness and builder promotion of EPS continues to increase.

The Residential Solar Market Research report evaluated what motivates customers to purchase residential solar systems. The primary motivator is lower electricity bills and the main barrier is cost. The board discussed the merits of marketing and advertising to promote solar electric system installations. It was noted the committee had encouraged staff to incorporate solar into existing energy-efficiency advertising.

Staff will provide an overview of Energy Trust's evaluation process at the July 29 board meeting.

The board inquired about the market demand for heat pump water heaters for domestic water heating. Staff noted General Electric has a tier 3 product available and a tier 2 product may be leaving the market soon. Heat

pump water heaters are still a minor portion of overall water heater sales. The Northwest Energy Efficiency Alliance (NEEA) and Bonneville Power Administration are conducting advanced testing on heat pump water heaters, for both space and water heating, as well as a gas version. Energy Trust will receive those results when available.

Finance Committee, Dan Enloe

Along with reviewing the recently accepted 2014 financial audit, the committee reviewed the January 2015 financials. At this early stage in the year, there are no major shifts regarding revenues and expenditures. As typical, revenues were very close to budget and incentive payments were low. It was noted that incentive payments in January 2015 were higher than in January 2014.

Strategic Planning Committee, Mark Kendall

Mark reviewed a memo to the board provided by Margie Harris. In the memo, Margie announced her decision to leave her position as executive director of Energy Trust as of the end of calendar year 2016. Margie described her decision, the creation of an Executive Director Transition Committee to lead the hiring process. Margie expressed her interest in discussing with the board how to contribute to Energy Trust in new ways, provided what is considered enables and supports the full success of the new executive director.. Ken Canon will chair the new transition committee. Debbie Kitchin will contact board members to sit on the committee. The agenda for the annual board strategic planning workshop in June will include activities and discussion in preparation for this transition. The board commented on Margie's leadership in guiding the organization, and indicated its desire to approach the transition in a very thoughtful, planned manner.

At the March meeting, the committee also reviewed staff's proposal for reporting and tracking on 2015-2019 Strategic Plan implementation.

Staff Report

Highlights, Margie Harris

Margie began her report with a follow-up on the preliminary annual results previewed at the February board meeting. The official 2014 results will be published in the OPUC Annual Report on April 15, and an update will be provided to the board at the May meeting.

Margie highlighted the High Desert Museum, a recent customer that installed LEDs to reduce operating costs while preserving its exhibits and artifacts. Based on this successful LED upgrade, the museum is now adding energy-efficiency controls to its HVAC system. This demonstrates how lighting projects can open the door to energy-efficiency benefits and inspire additional energy-efficiency investments and commitments.

Margie reviewed a series of recent customer and community events celebrating completion of energy efficiency and renewable energy projects, including the City of Astoria's first renewable energy project, the City of Portland's commercial Strategic Energy Management achievements, energy-saving projects at the Columbia Boulevard wastewater treatment plant and a second energy-efficiency project at a Clackamas County wastewater treatment plant. Margie provided details on a recent Northwest Environmental Business Council event where she presented the Energy Trust 2015-2019 Strategic Plan.

Margie highlighted a recently published evaluation of energy savings associated with Nest thermostats in homes with heat pumps. A pilot is underway to evaluate savings associated with smart thermostats in gas-heated homes.

Margie described completion of two major milestones related to the Integrated Solutions Implementation (ISI) project. In early March, IT staff updated Energy Trust's web services and forms to a new server for greater web security, reduced maintenance and costs, and increased reliability and performance. In late

March, staff across the organization completed the transition of customer site data from the FastTrack project tracking system to the Customer Relationship Management (CRM) system. The transition centralizes this information so staff can see all customer project history in one place, enhances the ability to conduct analysis and improves customer service.

Margie provided a follow-up to questions the board asked at the February meeting related to changes in delivering Home Energy Reviews. Staff evaluated annual cost trends and program participation rates for in-home reviews and determined there was less demand for these reviews, costs were not decreasing and alternatives that are faster and more cost-effective at supporting customer actions were available. Currently, staff is ramping up delivery of both online and phone reviews, making direct customer connections to trade allies and retaining in-home reviews for those who request it. Additional cost and savings trends will be analyzed based on the historic approach as well as the new approach.

Three active OPUC dockets were highlighted. UM 1622 is the gas cost-effectiveness docket. Last fall, the OPUC provided direction to Energy Trust to discontinue some measures that had been receiving cost-effectiveness exceptions. The discontinuation of some of those select measures is scheduled on April 30, 2015. In addition, the OPUC directed staff to research a residential incentive cap. Staff provided the OPUC with options, and the OPUC staff recommendation related to the cap is expected to be delivered soon. UM 1713 relates to large customer funding limits. OPUC staff filed an Issues Framing Document at the end of February in which a number of questions were raised, including whether this funding situation poses barriers to Energy Trust acquiring all cost-effective electric efficiency. Staff is active in responding to information requests related to the docket. UM 1158 relates to Energy Trust's 2015 OPUC annual minimum performance measures. Margie reviewed a table of the draft measures, which correspond directly to the annual budgeting process. She described two new performance measures that will be in place as of this year. The first is setting a cap of 7.75 percent of total expenditures for staffing, using a three-year rolling average. The second is to report annually on activities related to NEEA and market transformation.

Margie announced recent staffing transitions, including Senior Planning Manager Elaine Prause moving to the OPUC, changes in residential sector lead and renewable sector lead positions, and the status of hiring the four new positions approved in the 2015 annual budget.

Margie provided a brief state legislative update and highlighted a bill (SB 324) signed by Governor Kate Brown that repeals the sunset provisions for Oregon's Low Carbon Fuel Standard and a bill (HB 2946) that would eliminate the cap on large customer funding for Energy Trust.

Margie concluded her report with a review of Smith Frozen Foods' recent industrial Strategic Energy Management participation and achievement of 1.1 million kilowatt hours saved.

Adjourn

The meeting adjourned at 3:20 p.m.

The next regular meeting of the Energy Trust Board of Directors will be held Wednesday, May 20, 2015, at 12:15 p.m. at Energy Trust of Oregon, Inc., 421 SW Oak Street, Suite 300, Portland, Oregon.

/S/ Alan Meyer
Alan Meyer, Secretary