RENEWABLE ENERGY ADVISORY COUNCIL
Notes from meeting on October 23, 2013

Attending from the council:
Bruce Barney, Portland General Electric
Robert Grott, NEBC
Juliet Johnson, Oregon Public Utility Commission
Suzanne Leta-Liou, Atkins
Jimmy Lindsey, Renewable NW Project
Vijay Satyal, Oregon Department of Energy
Tashiana Wangler, PacifiCorp
John Reynolds, University of Oregon
Frank Vignola, University of Oregon
Dick Wanderscheid, Bonneville Environmental Foundation

Attending from Energy Trust:
Shelly Carlton
Amber Cole
Chris Dearth
Fred Gordon
Margie Harris
Jed Jorgensen
Betsy Kauffman
Dave McClelland
Debbie Menashe
Dave Moldal
Elaine Prause
Thad Roth
Gayle Roughton
Peter West

Others attending:
Laura Uhler, OSEIA/Solar Ki
Kim Foster, Lockheed but representing himself
Thomas Farringer, REC Solar, OSEIA board vice-president
Bruce Griswold, PacifiCorp
Bill Eddy, One Energy
Shaun Foster, Portland General Electric

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

2. Q2 dashboard presentation
Betsy made some comments about the overall Energy Trust budget to provide context and opportunity for comment. About 85 percent of the budget goes to energy efficiency. The Energy Trust budget focuses on five themes—easy access, targeting, innovation, improved systems and processes, and looking ahead.

Another important note is that Energy Trust's savings and generation goals are no longer specified as "conservative" and "stretch" goals. Beginning in 2014 we will have a single goal for each program. Betsy reviewed the schedule for budget feedback. Important dates:

- Live webinar on November 15
- RAC/CAC updates on November 20
- Oregon Public Utility Commission, OPUC, public meeting, November 26
- Public comment due November 27

Juliet Johnson: OPUC staff will provide a memo on the budget, and comments will be considered if sent to juliet.johnson@state.or.us by November 13.

Betsy reviewed the strategic planning schedule and noted an opportunity to be involved by going to Energy Trust website.

3. Budget

Before discussing the Renewable Energy budget, Thad talked briefly about the JC Biomethane project that just came online in Junction City. It is now receiving commercial food waste from restaurants in the Portland area and is providing power to PGE. He also thanked Tashiana for hosting a tour for renewable energy staff of the PacifiCorp control center, which provided a better understanding of how Pacific Power and other PacifiCorp utilities provide services throughout their western service territories.

Thad Roth outlined the agenda for the budget presentation:

- Themes
- Revenue
- Budget trends
- 2013 Q3 dashboard
- 2014 budget allocation
- Program work plans

Thad mentioned that Jed's previous dashboard presentations have provided information on the P&L (current year spending) budget—this is the different from the "activity" budget. The activity budget looks at new funds that will be available and how they will be allocated.

The budget will look a little simpler in 2014. We will have completed the transition to two programs—Solar and Other—and, as mentioned earlier, we will have transitioned to one generation goal.

Thad outlined the budget themes. The budget will continue our portfolio management approach. We will continue to support the five technologies (solar, hydro, geothermal, wind, and biopower). We will focus on pipeline-building—finding projects that can move forward without the benefit of tax credits. We will continue to support a robust standard solar program and focus on soft cost reduction strategies.

Thad then presented the current 2013 dashboard, showing utilization of our budget through Q3. At this point, we have spent half the budget. There are two main reasons why we were unable to spend all that had been budgeted. First, we offered a request for proposals for $1 million for large solar projects, expecting those to be completed and paid in 2013. Instead, those funds will be spent in 2014. Also, we have two biogas projects that shifted to 2014, there was some money set aside for a project we didn't end up funding, and the Oregon Institute of Technology geothermal project is delayed to 2014. About $2.5 million will shift into future years.

Dick Wanderscheid: Is this an anomaly or does it happen every year?
Thad: These kinds of shifts in spending from one year to the next are not unusual. Projects sometimes take longer than expected. It is our challenge to manage that and we need to determine whether a project is no longer viable or if it is just taking longer.

Dave McClelland: It's been a tough year for solar reservations, and changes made last year really impacted this year. We had the smallest pipeline since 2007 early this year.
Thad: Here's the generation dashboard, with 2013-2015 numbers. We expect to fall short as projects have shifted into the coming years.

Jed Jorgensen: The budgeted goals that are set are related to our guesses. That goal was set a year ago based on our expectations for projects reaching completion.
Betsy: Often construction has begun and an unexpected snag comes up.

Thad: A review of activity budgets from 2010 to 2014 shows an overall decline. We expect the bottom to be $14.5 million dollars.
Suzanne Leta-Liou: Is this related to economic trends?
Thad**:** Yes, partially.
Betsy**:** The vast majority is due to using up budget carryovers from previous years.
Peter West: We are also paying more for projects now that there is no BETC.

Thad**:** The 2014 draft budget is just over $18 million. In the past, we have tried to not have more than 50 percent of the budget committed to any one technology, but this is a special year. More than half of the budget is going to solar. In addition, we expect to see more and more projects with no state support, and we don't expect to accomplish as much as we have in the past. A few years ago the goal was 3 aMW, and now it's closer to 2 aMW. Overall, 55-60 percent of the renewable energy budget is from PGE and the remainder is from Pacific Power. PGE is more heavily weighted to solar because more customers and contractors are located in their territory. The Pacific Power budget is the opposite—the market is not as robust for solar, and most non-solar projects are in Pacific Power territory.

Peter: Based on the numbers Thad just mentioned, 39 percent of the budget comes from Pacific Power.
Dick: You can shift dollars from one technology to another, right?
Thad: Yes, we have this flexibility.
Vijay Satyal: You've experienced significant delays in non-solar projects. I suspect you plan for these delays to some degree.
Thad: We don't pay before commercial operation. It's possible that a project could fail, part of the reason we pay over time.
Vijay: That was the biggest lesson for the business energy tax credit, BETC.

Betsy and Dave then outlined activity plans for 2014.
Betsy: We will focus on pipeline-building using feasibility studies and other forms of project development assistance. Bio and hydro are our priorities because those technologies are most likely to be able to leverage other resources and offset retail rates. We'll have competitive incentives in both territories. We plan to have targeted outreach to wastewater treatment plants, and we want to help projects leverage other funding opportunities.

Robert Grott: Has this competitive process changed the dynamic of project applications?
Betsy: We're seeing projects that are further in the development cycle before they get to us. We're also hearing from more people who are new to us. So far, we have not had to turn away a good project. Another effect is that we've asked people to tell us how much money they would like. People may not be saying what they need, but what they think will win the money.
Jed: Having projects apply when they are further along in the development process was intentional—we asked for proposals that were closer to construction.

Thad: Another effect is creating a group of projects that may benefit from project development assistance.
Betsy: We provide feedback about why their project is not ready, and they find that useful. We try to incorporate them into our pipeline whenever possible.

Dave then presented the solar activity plans.

Dave: 2013 was a tough year. Incentive reductions made last year were critical to make the budget, but we began the year with very few projects in the pipeline. Commercial incentives were not enough to move the market, and we increased incentives in April. We had a good meeting with PGE trade allies and came out realizing that we needed to increase the incentive again for PGE commercial projects.

Frank Vignola: Plans to do a similar thing for Pacific Power?
Dave: No. You saw the split for solar/other between Pacific Power and PGE. We have $6 million of incentives for PGE, and $2 million for Pacific Power. The combination of Blue Sky grants, USDA grants, and ODOE Renewable Energy Development grants is adequate to drive commercial projects in Pacific Power territory. It's going to be a stretch to spend $6 million in PGE territory. There's steady activity in PGE residential, driven mainly by third-party providers, but PGE commercial is where we needed to move.

Suzanne: Is part of the plan to have the feedback loop occur more regularly?
Dave: We're already moving faster than usual—and this is about as fast as we can move. It takes time to make a change and see the impact. We are thinking of a different structure for larger projects. Vijay, can you speak to RETC changes?

Vijay: This is not an easy task. The state incentive program does not have a clear budget and goals. We have to go back every year and look. We kept rates steady, but with costs coming down significantly, we are putting in a proposal to reduce our incentive from $2.10 to $1.90/watt. We have a formal rule-making meeting coming up.

Dave: We're looking for stability for next year. If we need to change, we can make 5-10 cent changes. PGE's number will be a stretch to reach. We are on track to spend about $4-5 million. We're working on an idea for a streamlined incentive process for projects larger than 250 kW. The RFP for large projects included a 10-page application with lots of financial detail requested. We think we can be more successful with simplified and quick bid process, followed by a more complete application. We can then push contractors through the standard application process after a rate has been set. We'll have at least $1 million if not more for the competitive process.

Dave: Another goal is reducing the soft costs for solar. We need to work on contractor development: business development, training, marketing support, and sales and quality management.

4. Solar projects for funding

Thad presented two solar projects that are proposed for incentive funding, both brought to us by developers as part of Pacific Power's request for proposals. Thad explained that Oregon's Solar Capacity Standard requires Pacific Power to add 8.7MW of solar by 2020. Energy Trust has participated in three utility solar projects to date—one for Pacific Power, two for PGE.

> As a result of its RFP, Pacific Power selected two projects to negotiate power purchase agreements and requested $1.97 million from Energy Trust to support them. Our budget did not anticipate these projects; however, we have $700,000 that remains unallocated from our summer competitive process in the Other program.
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> We reviewed the Pacific Power solar projects for eligibility, and the above-market cost was well above budget of $700,000. The incentive we are proposing would not cover the full above-market cost, but would result in a lower rate over the life of the power purchase agreement.

Bruce Barney: There will be a new power purchase agreement?
Bruce Griswold: Yes.

Thad: In this case the dollars we are offering are based on budget constraint. If we have dollars available, we can move them from one program to another to put the dollars to work.
Jimmy Lindsey: Would this project happen in the absence of Energy Trust?
Thad: Yes, this would happen. This will benefit ratepayers directly.

Juliet: Your question is a good one. These projects are ranked fourth of the four priorities for the renewable energy programs, but this is a good thing. We recognize that this is still valuable.
Thad: The new performance measures from the PUC create a priority of project funding: project development assistance, standard solar, non-solar, and then, if there are still unallocated dollars, projects like these.

Suzanne: It seems important to note that this money is not coming out of the standard solar program. Would you invest more in the standard program had these projects not come up?
Thad: These dollars would be considered unallocated funds and then re-allocated for the next year. These projects came to us as a package, and instead of trying to make the two compete, we decided to allocate the $700,000 between the two based on alternating current, AC, capacity. They support Goal Two of 2010-2014 strategic plan.

Thad provided details of the Bevans Point project, which is proposed for an incentive of $180,000. He said there are strong financing partners and listed project details, outlined in the attached PowerPoint.

Thad: We evaluate projects based on Pacific Power's qualifying facility rates and the double renewable energy certificates that these receive. This is a standard type of evaluation for this type of project. All numbers are net present value because we look at the full life cycle.
Dick: Does this forecast of funding exclude incentives?
Thad: No.
Robert: What if you used the power purchase agreement numbers instead of the qualifying facility values?
Thad: Costs would be higher.
Bruce Barney: Operating and maintenance costs look high.
Thad: These costs include the cost of the land lease. The renewable energy credits are all going to Pacific Power.
Thad outlined the second project—Stone House Solar, proposed for an incentive of $520,000. The project has a strong team and a passive tax equity investor, and needs to be operational by April 2014 to get its BETC. Project details are in the attached PowerPoint.

Bruce Barney: Are we paying for the property here?
Thad: Property is being purchased and is included in the capital cost.
Frank: Are these systems being cleaned?
Thad: There was a list of maintenance activities provided. The panel's overnight position is vertical, which means less dust gathering.
Bruce Griswold: There will not be frequent hosing.

There were questions about the capacity being expressed in AC, rather than direct current, DC.
Bruce Griswold: This has been built to 5 MW. They're proposing to overbuild DC capacity. One of the solar capacity rules is a fixed DC to AC conversion factor of 85 percent. We have put in a waiver request to the Oregon commission for this one project. Their inverter is sized, their transmission is set, both at 5 MW.

Dick: Will Energy Trust follow up to ensure that ratepayer bills will be reduced because of this?
Juliet: That's our role. We've been brought along during the entirety of the project. We'll bring this in during the rate case.
Thad: We did this in Black Cap too.

5. City of Astoria hydro project
Moved to next meeting.

6. Public comment
No public comment.

7. Meeting adjournment
Betsy thanked the council members for their participation and adjourned the meeting at 11:59 a.m. The next full council meeting is November 20, 2013.