Renewable Energy Advisory Council Meeting Notes

October 21, 2015

Attending from the council:
Diane Broad, Oregon Department of Energy
Shaun Foster, Portland General Electric
Robert Grott, Northwest Environmental Business Council
Michael O'Brien, Renewable Northwest
Elaine Prause, Oregon Public Utility Commission
Frank Vignola, Solar Monitoring, University of Oregon
Dick Wanderscheid, Bonneville Environmental Foundation
Peter Weisberg, The Climate Trust

Attending from Energy Trust:
Amber Cole
Hannah Cruz
Chris Dearth
Sue Fletcher
Matt Getchell
Jeni Hall
Margie Harris
Mia Hart
Jed Jorgensen
Betsy Kauffman
Debbie Menashe
Dave Moldal
Lizzie Rubado
Julianne Thacher
Peter West
Courtney Wilton

Others attending:
Wendy Brownell, 3Degrees
Kendra Hubbard, Oregon Solar Energy Industries Association
Wendy Koelfgen, Enhabit
Alan Meyer, Energy Trust board
John Reynolds, Energy Trust board
Rikki Seguin, Environment Oregon
Ann Siqveland, OneEnergy Renewables

1. Welcome and introductions

Betsy Kauffman convened the meeting at 9:00 a.m. The agenda, notes and presentation materials are available on Energy Trust's website at: www.energytrust.org/About/public-meetings/REACouncil.aspx.

2. Energy Trust budgeting 101

Betsy presented Energy Trust's budgeting process for the renewable energy sector. There are two renewable energy sector budgets: the Activity Budget and Profit and Loss, P&L, or Accounting Budget. The two budgets do not add together. They are two different ways of looking at the renewable sector budget.

> The Activity Budget is where we make commitments or reservations of funds, and the P&L or Accounting Budget is where we actually spend money. We make reservations for funds well in advance of payment. For a hydropower or biopower project, construction timelines are long and we may not pay an incentive for two years after reservation. To provide an analogy, the Activity Budget is like an engagement to be married, and the P&L Budget is like a wedding. For example, funds may be committed for a project and show up in the Activity Budget in year one. These funds may not show up in the P&L Budget until year three.

> Generation is booked when an incentive is paid. We don't claim generation when money is committed in the Activity Budget, so we could have a big year for committing funds but a low year for generation. Sometimes budgeted generation is delayed when projects take longer than expected to complete. This is what happened in 2014.
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> Payments may be broken out into multiple years, but 100 percent of generation is claimed in year one when the first payment is made. Generation is claimed in average megawatts.

Alan Meyer suggested making this presentation to the board.

Robert Grott: Do you have clawback provisions in your contracts?
Betsy: Yes.
Jed Jorgensen: All contracts have performance milestones that customers must meet.

Betsy: We budget like this because we often have long construction timelines and multiple payments. This way we make sure that money will be reserved and available for committed projects. Energy Trust's efficiency programs budget very differently.

Alan: If a new project can be committed and paid in one year, can we use funds that have been allocated for another project?
Betsy: Generally not, unless a project has cancelled. If an opportunity dropped into our lap, we would try to fund it with our Activity Budget, not the P&L Budget.

3. Draft 2016 annual budget and 2016-2017 action plan

Peter West presented Energy Trust's overall 2016-2017 draft budget. Energy Trust's budgeting process starts in July and wraps up in December. In September, we presented the budget themes to Renewable Energy Advisory Council.

> There are four building blocks to the budget and action plan: 2015-2019 Strategic Plan goals, utility Integrated Resource Plans and renewable resource assessments, market knowledge and context, and areas of emphasis.

Kendra Hubbard asked about renewable resource assessments.
Peter: This is how we determine how much resource is available and how much is possible and practical to achieve.

Peter West: For 2016, the expiration of the federal Investment Tax Credit is a big part of the market context, as is economic recovery.

> In 2016, we plan to invest $187.7 million to acquire 55.7 aMW and 5.7 million therms of clean energy efficiency. We plan to delivery highly cost-effective energy at 3.0 cents per kWh and 34 cents/therm. We need to spend more money due to increased project demand, different project mix and corresponding incentive growth.
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> We will continue to reduce budget reserves through tighter budgeting and use reserves when spending exceeds forecast. In 2015, we have successfully drawn down reserves, as planned. Our staffing and administrative costs will remain flat in 2016.

Peter Weisberg asked about the fee structure that covers costs.
Peter West: We build costs into the entire budget. We are funded by four utilities, and under SB 1149 a portion of the utilities' revenue is dedicated to support energy efficiency and renewable

energy. Those percentages are based on utility revenue requirements. Beyond the energy we can acquire through SB 1149, we plan what additional energy efficiency will cost and pitch that to the gas utilities.

Dick Wanderscheid: Why is the 2016 budget up 10.5 percent from the 2015 budget?
Peter West: We plan to achieve slightly more electric efficiency. We're also getting deeper energy efficiency, which is more expensive. The budget is going up because of near-term opportunities from economic recovery. There are more opportunities for new construction, and existing businesses can afford more capital expenditures. The budget also includes an additional $5 million to meet increased demand for solar incentives. On the efficiency side, we are considering lost opportunities—if we don't build efficiency into new construction, we will lose efficiency opportunities for decades. It's important that we invest in the most efficient new buildings. We may pay more upfront, but it will reduce the utility load for years.

John Reynolds: Of the 10 percent increase, how much is from reserves and how much is from utility revenue?
Peter West: Most of the increase for efficiency savings is from reserves. For renewables, it's cash carry-over from prior years and reserves.

Robert: Are utilities obligated to pay beyond what's collected through the public purpose charge?
Peter West: There were two bills. First, SB 1149 provides 3 percent of electric utility revenues. Then SB 838 created the Renewable Portfolio Standard, limited the size of renewable energy projects Energy Trust can fund to 20 MW and less, and said that the Oregon Public Utility Commission is obligated to fund all cost-effective efficiency. So if we find more efficiency opportunities, we talk with the OPUC and the utilities to fund that additional efficiency. This brings our funding up to about 4.5 percent.

Robert: With warmer winter weather, utility sales will go down. Is that a risk to Energy Trust funding?
Peter West: We provide the utilities a "grossed up" number, which includes a risk factor of 2 to 10 percent, meaning we can add another 2 to 10 percent if revenues are decreased. These are our reserves.
Courtney Wilton: Our revenue does fluctuate. Utility estimates are fairly accurate. In 2015, electric revenues are actually up from the hot summer.

Michael O'Brien: For SB 838, is the industrial sector included?
Peter West: The industrial sector is included, but sites larger than 1 aMW are not subject to the additional charge. These are not just industrial sites, but also commercial sites.

4. **Renewable energy draft budget presentation**
Betsy: The renewable sector strategic plan has three main focus areas: support all five eligible technologies, use a competitive approach to funding, and emphasize market and project development.

> In 2016, we will have a much larger focus on solar energy due to the expiration of the Investment Tax Credit in the end of 2016. We see this as a one-time opportunity to capture increased demand. The challenge will be meeting high solar demand with limited funding.
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> We will continue to build a pipeline for Other Renewables projects, with a focus on hydropower and biopower projects. We have one non-solar project scheduled to

complete in 2016. We will also be ready to adjust course midyear due to market changes, including Pacific Power's docket UM 1734 that could drastically impact our work.

Betsy presented Energy Trust's expected and achieved generation in 2015. Two-thirds of 2015 generation through the end of Q3 is from Other Renewables and about one-third is from solar projects. We expect to greatly exceed our 2015 generation goal. Two large solar projects are expected to complete in Q4.

Kendra: Are you so far above goal because these projects were delayed from last year?
Betsy: No, we had budgeted for those projects to complete in 2016. This year, projects expected to complete in 2017 were completed early in 2016.
Dave McClelland: As we shift dollars from Other Renewables to Solar, we spend those dollars faster. We will be well above goal for the Solar program in 2015.

Betsy: In 2015, we were able to allocate some Other Renewables budget to Solar to meet very high demand. In 2016, we will not have the flexibility to transfer Other Renewables funds.

In 2016 in PGE territory, about 75 percent of renewable energy Activity Budget is dedicated to solar. It's unlikely we'll have funding for large custom solar projects in 2016, as demand for standard solar will be very strong.

Alan: Are we starting with a lower incentive in 2016, given increased demand?
Dave: We don't reset incentives at the beginning of the year, so recent incentive reductions will stay in place. Incentives in Portland General Electric will continue to go down. We are about to make our fourth incentive reduction in PGE territory in 2015.

Diane: How would you treat an opportunity for solar and battery storage project?
Dave: We don't provide additional incentives for storage.
Betsy: That said, this is an area we will start thinking about.
Dave: We would like to collaborate with other organizations who are working on storage and resiliency.

Dick: What's a large custom solar project?
Dave: Our standard program is targeted at net-metered projects capped at 750 kilowatts in Pacific Power and 250 kW in PGE territory.

In Pacific Power territory, we have increased standard solar incentives slightly. Our budget for 2016 in PP territory includes about $1 million for a large custom solar project that is still being evaluated. For Other in 2016 in Pacific Power territory, a large project cancelled this year. Most of our money was spent on project development assessment work. Some of the 2015 uncommitted Other funds were moved to the solar program, and the rest of this budget was moved to 2016. There is a big pipeline of Other projects expected to apply for incentives in 2016 and beyond.

Rikki: What's the process for transferring budget from Other Renewables to Solar?
Betsy: Sector staff has authority to transfer funds between Other Renewables and Solar. Because of this, our budget changes throughout the course of a year.
Jed: In the past, we've allocated more for Other Renewables and then shifted funds later. In 2016, we're allocating tightly for Other Renewables and anticipating strong demand for solar projects.

Betsy: In 2016, the Pacific Power budget is about 60 percent Solar and 40 percent Other Renewables. Other Renewables is about 32 percent of the entire renewable energy sector's budget, and Solar is about 68 percent of the sector's budget. (These are Activity Budgets.)

> In early years of Energy Trust, we built up renewable sector budgets with reserves, and then we spend them over several years. Now that we've used most of these reserves, our annual renewable spending will go down slightly. The general trend line is going downward. (These are Activity Budgets.)
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> In the overall Energy Trust budget, P&L Budgets are included. In 2016, the renewables sector expects to book 2.84 aMW, slightly less than in the 2015 budget (3.47 aMW).

Alan: Why are we planning to spend $5.8 million for Other Renewables in 2016 and only generate 0.01 aMW?
Betsy: That spending is for second year payments for several projects where generation has already been claimed in prior years. Large projects have second and third payments that don't correspond with generation claimed. It also includes project development assistance which doesn't have generation associated with it.

Shaun Foster: For 30 percent more solar dollars in 2016, you're getting double the solar generation.

Betsy presented the stages of the current pipeline of projects. The pipeline starts with education and relationship building, then project development assistance, then application, then a contract and project construction. Based on rough analysis, projects receiving project development assistance take about three years to complete.
Jed: We saw two projects complete in 2015 without Energy Trust incentives but that did receive Energy Trust project development assistance several years ago.
Diane: The outcome of the OPUC docket will have a big impact on your pipeline.

Jed presented on strategies and activities for the Other Renewables program. The focus will be on hydropower and biopower projects and we will be open to other new opportunities. We will continue to develop irrigation modernization projects that also capture other benefits like drought resilience and water conservation. We will also focus on developing projects with wastewater treatment plants and food and beverage processes. There are opportunities for management of regional waste streams. In 2015, we invested heavily in project development assistance in Pacific Power territory, and we expect that to continue next year. We will also continue efforts to convene project owners to exchange information and support.

Elaine: In the pipeline graphic, what are the two biopower projects?
Jed: One would be at a wastewater treatment plant and the other at a food processor. Both are net-metered for onsite use.
Elaine: The geothermal project is a qualifying facility?
Jed: Yes.

Dave presented strategies and activities for the Solar program. We plan to reduce our incentives as demand goes up and begin planning strategically for a different market in 2017 without the Investment Tax Credit, which may include higher incentives. However, we won't be able to fill a 30 percent gap. We aim to help small business contractors prepare for 2017, including through the soft cost reduction initiative and road map.

Betsy presented benefits from 2016 investments, and encouraged Renewable Energy Advisory Council members to attend Conservation Advisory Council this afternoon for more information about the efficiency budget. A draft budget outline will be available in late October and public comments are due Nov 20.

Peter West: The most useful time to receive your input is prior to November 6. If you have input or questions now, please share.

Frank Vignola: How does your generation offset the needs of the utilities?
Betsy: Utilities are already on track to meet 2020 Renewable Portfolio Standard goals through large projects. We meet the needs of citizens and communities interested in renewable energy.
Peter West: Utility load growth is flat or increasing at one percent, so we're keeping load growth minimal.
Robert: Energy Trust reflects the market for small projects better than any other organization.

Kendra: Do you have a projection for the number of projects to be engaged in 2016?
Dave: In 2015, we have 50 percent more projects than in 2014. We expect 1,600 to 1,700 solar projects this year. We expect about 40 percent more next year, probably more than 2,000 projects.

Kendra: Is there an average incentive package in terms of dollars per watt?
Dave: PGE incentives will probably go down to the range of 40 to 50 cents per watt, about half of where we started this year.

5. **Project presentation**

Dave McClelland presented the Ewauna 2 solar project, a custom project selected through a competitive solicitation for Pacific Power projects. Early in 2015, Other Renewables conducted a competitive solicitation for projects, however no projects were selected. Funds were reallocated to the Solar program and used for a competitive solicitation. The Solar program received 16 applications that went through readiness screening and above-market cost screening. The remaining projects were scored based on Energy Trust published criteria. Project details can be found in the Renewable Energy Advisory Council slides.

Ann Siqveland: All of the key project milestones have been completed, including long-term lease agreement and zoning. A number of different issues have gone through land owner review. This is one of the best commercial/industrial installation we've seen in regards to property management because there will still be room for grazing on the property after the installation is completed.

Robert: Is the method of modeling the renewable qualifying facility rates standard or did you develop it specifically for this project?
Dave: This is the first time we're reviewed a qualifying facility project with a rate schedule, which includes a transfer of RECs to the utility. We worked with OPUC staff on our methodology.

Kendra: Is there any concern about SolarCity overvaluing projects? Does this affect Energy Trust as a partner?
Dave: SolarCity has been a good partner thus far for Energy Trust. They've installed quality projects throughout the state. The project valuations are more of a concern at the federal level and doesn't directly impact our incentive. OneEnergy Renewables has been great to work with on the selected project, and provided detailed cost information, so we're confident about our incentive offer.

Elaine Prause: Are you planning on a lump sum payment or multiple payments?
Dave: A performance payment is the norm, though our plan for this project has not yet been negotiated.

Robert: What happens if a new building is developed on an adjacent property that blocks the arrays?
Ann: There's very low likelihood of that issue with the land owner we're working with. It would have to be extremely close to the system.

Michael: Is that the project cost before the incentive?
Dave: Yes, it's the capital cost of the project.

Peter Weisberg: Does the above market cost calculation take debt market rates into account?
Dave: In our model, we put in as much debt service coverage ratio that the project could potentially support.

Dick: Will the projects with the lower rates go forward?
Dave: Yes.

Kendra: If the two remaining projects you reviewed were submitted at the same level of readiness, would they both have been funded?
Dave: We chose the one we did because it was clearly ready to go. If both were ready, we could have potentially funded each one based on funding availability.

6. **Renewable Energy Certificate policy change follow-up**

Jed Jorgensen presented a summary of the Renewable Energy Certificate, REC, policy changes. The REC policy review took 18 months. This included a robust review of the existing policy by Renewable Energy Advisory Council members and Energy Trust staff. In addition, a study was completed with the aid of Bonneville Environmental Foundation to determine where the current REC market is and how Energy Trust fits into it.

> We've reviewed feedback on our proposals and have made adjustments. If the changes are approved by the board, we'll be implementing an annual REC policy review process which will include Energy Trust board members, the utilities and the OPUC. This will be a review of current REC values to ensure the policy is up to date in regards to market trends.
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> We propose not entering RECs into Western Renewable Energy Generation Information System, WREGIS, for Other Renewables projects where neither the project owner nor the utility have an interest in registering RECs in WREGIS. This includes small wind projects and ranch-scale small hydropower. For standard solar projects, we propose not registering RECs in WREGIS until it makes sense to do so in regards to the cost of additional meter installations and the ability to obtain readings.

Alan Meyer: The most important thing is maintaining flexibility in the policy.
Betsy: We're trying to look at things where they stand today, and the point of the updates we're making is to allow continuous review of the policy. We're hoping to do cost-benefit analysis where part of the cost includes staff time. While we could do more extensive analysis of REC values, the staff time involved does not balance the minimal additional understanding that would be gained.

Diane Broad: RECs are hard to quantify, but they have some impact on viability of projects or their ability to move forward. An example is trading RECs. Do you think you will lose projects by not allowing REC substitution?
Jed: Yes, we will lose some projects as a result of not allowing projects to provide substitute RECs, but it's something we've accepted. With both utilities opposing the addition of trading to our REC policy, it wasn't the right move at this time.

Peter Weisberg: In a solar project, do utilities hold the RECs to see if they can be banked in the future, or sell them? Are they just holding the RECs and seeing no value?
Jed: There are different ways they can use them, but it has to benefit the ratepayers. The RECs are eligible for banking and can be used for RPS compliance. Utilities would be able to sell the RECs, but only if it was benefiting ratepayers.

7. Public comment
There was no additional public comment.

8. Meeting adjournment
The meeting adjourned at 12:00 p.m. The next Renewable Energy Advisory Council meeting is scheduled on November 20, 2015, from 9:30 a.m. to 12 p.m..