RENEWABLE ENERGY ADVISORY COUNCIL
Notes from meeting on October 26, 2011

Attending from the council:
Troy Gagliano, enXco
Robert Grott, Northwest Environmental Business Council
Thor Hinckley, Portland General Electric
Juliet Johnson, Oregon Public Utility Commission
Suzanne Leta Liou, RES Americas
Glenn Montgomery, OSEIA (by phone)
Frank Vignola, University of Oregon
Dick Wanderscheid, Bonneville Environmental Foundation
Tashiana Wangler, Pacific Power

Attending from Energy Trust:
Kacia Brockman
Amber Cole
Fred Gordon
Jed Jorgensen
Betsy Kauffman
Elaine Prause
Thad Roth
Sue Meyer Sample
John Volkman

Others attending:
Dan Enloe, Energy Trust Board of Directors
Matt Hale, Oregon Department of Energy
Ben Hoyne, member of the public
Justin Hovland, member of the public
John Reynolds, Energy Trust Board of Directors (by phone)
Theresa Gibney, Oregon Department of Energy
Robert Hall, member of the public
Peter Weisberg, Climate Trust

1. Welcome and introductions
Betsy Kauffman called the meeting to order at 9:00 a.m. September minutes were approved. Betsy noted that Lizzie Rubado left Energy Trust after six years of service. She is now working at Clean Energy States Alliance, which is opening a West Coast office.

Betsy reminded council members that Energy Trust will move its office in November. Starting November 21, the new address will be 421 SW Oak, Suite 300. The next council meeting will be in the new space.

2. 2012-2013 budget
Elaine Prause presented the 2012-2013 draft budget. Handouts of draft budget “one-pagers” showing a summary of program activities were provided for information. Slides from her presentation are attached.

Questions:

Suzanne Leta-Liou: Are the wind projects community scale or are these smaller systems?
Elaine: We have a community wind project in the pipeline and some smaller system applications in hand now.

Matt Hale: Do we see another decline in our budget for 2013?
Elaine: If all goes as planned, there would be no carryover in PGE, and overall our budgets will step down again and we will plateau, budgeting even with revenues in future years.

Kacia noted that the Business Energy Tax Credit timelines are driving the activity in 2012.

Thad: Even though the projects don't always get built in the year where we commit the funds, 2012 is a year where the projects will likely get built because of the Business Energy Tax Credit timeline and deadline.

Dan Enloe noted that there could be a carryover associated with a large project not happening. In that respect, the stretch goal generation numbers are reflective of the full budget. If a project falls off there would be less generation and a carryover.

Suzanne: Of the solar budget, what is the million dollar figure associated with the utility scale solar versus commercial and residential?
Kacia: It's about $3 million.

Frank: Have you seen any effect of the feed-in tariff on your projects?
Kacia: It will be interesting to see what happens as the feed-in tariff draws to the close; we've seen activity in our program grow in parallel to the feed-in tariff.

Dan commented that given the speed at which the feed-in-tariff was subscribed, the setting of the rate needs to be revised. He believes there are better ways to set rates such as a reverse auction on the web: a live auction with anonymous bidders that can see the bidding. The bids come down as the auction closes. You can also structure the bidding to give 50 percent of the award to the winner, 30 percent to the second place company and 20 percent to the third place bidder, creating a diversified supply as well as market pricing. He believes Energy Trust and the utilities need to explore the best pricing options.

Tashiana asked about the difference between the Renewables funds slide referencing $6.2 million and the $5.7 million on the Pacific Power slide, pp 6 and pp 11 respectively.
Elaine: When we get to the final budget, the numbers will match, this is part of our budget refinement process.

Suzanne: Are we finding success with biopower projects; how is it going overall?
Thad: We'll be talking about it in a bit, with two proposed projects. There are about 10 projects actively being developed right now. What happens after the state incentives diminish or the extent to which the federal government incentives are reduced, plus the success of the projects built, will determine how we can continue this investment. That's on the biogas side. On the woody biomass side, the activity is pretty uneven. One large project has decided not to move forward, and I've just heard of another that will go forward, but we'll see. They are larger capital cost projects and it takes a lot to get them across the finish line. Fundamentals right now for renewable projects look pretty bad, in general.

Dan: Are we still working to get PGE uncommitted carryover money subscribed to solar projects?
Kacia: That's one reason the PGE solar budget is so large in PGE territory. Projects funded by the carryover funds are by definition going to support projects without a tax credit on the commercial side.
Dan: So these will be harder funds to spend?
Elaine: Yes, but residential tax credits are still available and that's why we expect to see a lot of residential activity.

Juliet: Why is the Pacific Power solar budget only 54 percent of what it was? Is it the lack of carryover?
Elaine: Yes. That, plus a reduction in revenues and a slightly smaller internal allocation.
Juliet: You set the allocation for each technology by utility based on what is out there?

Kacia: Yes.

3. Off system qualifying facility discussion follow-up

Betsy reviewed feedback from the last council meeting on the topic of off system qualifying facilities. She reported that Energy Trust plans to review the costs of wheeling associated with a project before it comes to the council. Energy Trust met with Pacific Power to talk over communication issues. Prior to the projects that will be reviewed today, Thad provided additional detail to Pacific Power and PGE. Energy Trust also brought the issue to its Policy Committee and it is in agreement with the feelings of the Renewable Energy Advisory Council and the steps to improve communication.

Question:
Suzanne: For a solar project that would be off system but not QF (a negotiated PPA), I'm assuming you would handle it the same way?
Betsy: Yes.

4. RES Agriculture LLC 1 MW biogas project

Thad Roth presented the details of this project. Slides from the presentation are attached. He referenced advance communications with Pacific Power and PGE on both projects he will present today.

Questions:
Dick: Are they using the exact same digesters at these plants as the previous installations, or do they base them on the number of cows they have?
Thad: At the first four, they used roughly the same size; at the next two, the vessels/tanks will be larger.
Dick: So it's the same technology?
Thad: Same design. It was originally developed for the swine industry and is being used as such in another state; Oregon will help them expand the application.

Frank: Are they bringing down costs since they are larger?
Thad: Yes, capital costs have come down. The capital costs of the two proposed sites are 25 percent lower than the four sites we have already funded. There is a lot of plumbing with penetrations through the tank walls. They've figured out how to make the penetrations in the factory instead of on-site. They are using local labor on the site. Each one of these projects represents about 10 permanent jobs.

Dan: One suggestion on how to save money. As some industrial sites I see companies scrapping big fiberglass tanks. They usually go sit at a site until somebody landfills it. If you could use a big fiberglass tank, Hoffman Construction would be a good contact to see if there are any available. Just a tip for those of you that need large tanks.

Suzanne: On the jobs number, if it's construction it's not permanent.
Thad: Had a trades representative visit him and say, don't forget that permanent jobs for trades means multiple projects to keep tradesmen employed—consistent development. We don't take credit for jobs, so I'm just using this as an example.

Troy: How can projects afford to wheel?
Thad: The price right now is $5 per kW per month. We did some analysis on in-system and out of system. Everything we do is in lifecycle cost and interconnection is another big cost. The cost of the projects with wheeling were not the most expensive projects overall. The examples we've

seen so far seem to indicate that interconnection will be less in consumer-owned utilities, than in investor-owned utilities. We're not exactly sure why.

Juliette: So wheeling costs are going up, but interconnection costs are going down?
Thad: There is that interplay. But location is so important in these projects and it can be more important than those costs.

Tashiana: We still have concerns with off system QFs and we are agreeing to disagree. Pat Egan summarized it nicely on our call: we're hopeful that as Energy Trust transitions to a competitive approach, we won't see this much in the future, and we'll see more projects located in our service territory.

Robert: Where is the ownership line from the farmer to the project?
Thad: There is a receiving tank. And that's where ownership of the manure has to change for the project to be able to utilize the biomass tax credit.

Dan: Say the project puts in a generator, and it's putting off less energy than it is capable of, is the developer allowed to buy extra natural gas to get it up to full generation?
Thad: It cannot be a QF facility in that case. It has to meet all aspects of being a QF to receive these rates.
Dan: My question is: is this legal?
Juliet: California is working on this, and so is Oregon around RECs. I'm not familiar with the rules, but I know some folks are working on this.
Thad: That would modify your ability to qualify for rates offered by the utilities.
Dan: Since it is messy, it behooves the operator to fill that thing to capacity to make sure it is generating.
Thad: Yes. That is the objective.

John R: I enjoyed this presentation and will be supporting this project at the board meeting.

5. Green Lane Energy 1.6 MW biogas project
Thad presented the details of this project. Slides from the presentation are attached. Thad introduced the project by saying anaerobic digestion has been around for a long time for a range of waste management uses, such as wastewater treatment or at breweries to treat their waste water. On the other end of this range, it can be used in more of a refinery situation. Through a biological process, co-products will result that reflect the inputs. These co-products can be maximized in value. Think about this project as more of a refinery.

Dick: Have you ever done a construction loan like this before.
Thad: No. It was approved by the board about a year and a half ago. We have talked to one or two other projects and gone down the road a little.

Dick: Obviously $1.5 million wouldn't cover all the construction costs, so they'd need more financing.
Thad: About two years ago we did a survey to understand what folks—developers and lenders—need to get projects done. And we learned that for developers the incentives and tax credits at the end of the project are not very persuasive to a lender. Lenders said they are looking for partners so they could be more comfortable with "unproven" technologies. We would be working closely with the lender to minimize our risk and get the timing of disbursements correct. We would use the incentive to do debt forgiveness over a five-year period based on them hitting performance targets. It's riskier because the lender is ahead of us, but we will be putting money at a point that is more useful to the project.

Robert: You're right. Clearly we have learned over time that the construction loan is a barrier. I'm happy to see Energy Trust doing this leveraging of resources. I'm observing that this is $2 million on a $2.7 million above-market cost, versus higher incentives relative to above-market cost. So you've structured it to leverage.
Dan: And this may allow us to fund another project.

Grott: We've had similar conversations about the state energy loan programs. The learnings you get out of this project can help inform other approaches for the state loan program.
Thad: It's riskier, but we've capped the amount that can be used to support the loan financing. This project has a lot of resources associated with it and we've got some other conditions in place to minimize the risk. We feel we have protected the ratepayer dollars here.

Thor: You didn't mention anything about carbon credits.
Thad: The specific feedstocks probably don't qualify.
Peter Weisberg: The ones they have lined up right now don't qualify for credits. But if the Metro RFP contract comes through, they probably would.
Thor: That could create a windfall.
Thad: I wouldn't call it a windfall; it's a much more challenging waste stream to process.

Matt: Are there any early indicators of cost overruns with this project?
Thad: Not that have been shared with us. We do have final design so they have been successful at accomplishing that and it is being reviewed now by local engineering firms to make sure it meets local codes. They have changed the size of the engine on this project for a few reasons, so there was that change.

John R: I really like what I hear about this, but the thing that most worries me is the Junction City Psychiatric Facility because that has been up and down for years. I hope we can find a facility for the heat.
Thad: There is a local wood products facility nearby that may be able to take the heat for drying. There is also another option to use the excess heat to power an organic rankine cycle generator. That's not the most efficient use of the heat, but there are other ways to monetize it if they can't find an off taker.

Robert: I don't know if you should get all the credit, but two years ago I didn't see how we would ever get dairy digesters in Oregon. The fact is that it is remarkable to see these things happening. Even with the tax credits, it was hard to pay for the digester.
Thad: Nationally, there are more legs for this model. So you are starting to see projects in Idaho. There are a number of projects there, and a few are starting in Washington. The incentives of the Oregon Business Energy Tax Credit really attracted some development capacity that was necessary to take these projects on. The third-party development model was really what allowed for this kind of development. RES approached us three years ago, and these projects are just getting built. What I'm hoping we can do now is communicate about the best practices involved in getting these projects built. The other thing we did was co-fund some education of the dairy industry in Oregon so the dairy farmers gained some comfort with these projects. And, when you can write checks, it helps. That's why they come to us.

Juliette: Question about timing. Will it be tight to get this operational by end of next year for the Business Energy Tax Credit?
Thad: Yes. As soon as they get approval from us on financing and incentives, they'll be able to get final financing and will know how to move ahead. They have roads and some site work done. Their process design and engineering folks feel confident. We'll see.

6. Public comment

There was no public comment.

7. Meeting adjournment

Betsy thanked all council members for their participation and adjourned the meeting at 11:35 a.m. The next full council meeting is November 30, 2011, in the new office space: 421 SW Oak Street, Suite 300, Portland, OR 97204.