Renewable Energy Advisory Council Meeting Notes
May 11, 2016

Attending from the council:
JP Batmale, Oregon Public Utility Commission
Jason Busch, Oregon Wave Energy Trust
Kendra Hubbard, Oregon Solar Energy Industries Association
Suzanne Leta-Liou, SunPower
Matt Mylet, Beneficial State Bank
Michael O'Brien, Renewable Northwest
Rikki Seguin, Environment Oregon
Frank Vignola, Solar Monitoring, University of Oregon
Peter Weisberg, The Climate Trust

Attending from Energy Trust:
Hannah Cruz
Chris Dearth
Sue Fletcher
Matt Getchell
Jeni Hall
Jed Jorgensen
Betsy Kauffman
Dave McClelland
Dave Moldal
Jay Ward
Peter West
Robert Wyllie
Lily Xu

Others attending:
Erik Anderson, Pacific Power
Thomas Endicott, Portland resident
Don MacOdrum, Home Performance Guild of Oregon
Alan Meyer, Energy Trust board
Dan Orzech, Clean Power Cooperative
John Reynolds, Energy Trust board
Terra Soma, Soma Collaborations

1. Welcome, introductions, updates

Betsy Kauffman convened the meeting at 10:45 a.m. The agenda, notes and presentation materials are available on Energy Trust's website at: www.energytrust.org/About/public-meetings/REACouncil.aspx.

Betsy described this meeting as shorter than typical to allow for a lunch presentation on transactive energy. Betsy welcomed JP Batmale as a new Renewable Energy Advisory Council member representing the Oregon Public Utility Commission and serving as liaison between Energy Trust and the OPUC. Betsy also acknowledged the successful Oregon Solar Energy Conference recently attended by many.

Betsy provided an update on an Energy Trust renewable energy sector planning process that will engage Renewable Energy Advisory Council members starting at the June meeting. The current sector strategic plan was written two years ago, and market changes like the extension of the federal Investment Tax Credit necessitate updating the plan. The OPUC has also requested that the plan be updated in light of Renewable Portfolio Standard legislation passed last legislative session and the ITC extension. Betsy reported that the OPUC is interested in looking at how Energy Trust maximizes the impact of ratepayer funds in a changing market, including for opportunities such as grid support, grid services and end-of-line issues. Energy Trust staff develop a draft, provide discussion questions to Renewable Energy Advisory Council members over the next few weeks and gather input at the June 22 meeting.

JP Batmale added that Energy Trust has provided value to the small-scale renewable energy market in Oregon, and the OPUC is excited to see how Energy Trust can provide value in this

changing market. JP expressed that now is a good time to see where we are and where we are going.

John Reynolds: Do we have information on the new 10-megawatt solar installation near Sisters?
Dave McClelland: No, but last year we conducted a request for qroposals for large solar projects. We received 15 applications. We did not fund many because they didn't need us.
Eric Anderson: We could come back with more information.

Frank Vignola: Are community solar projects on Energy Trust's radar?
Betsy: Yes, community solar is on our radar. The community solar legislation says that Renewable Energy Credits, RECs, need to stay with the owner of the system. Energy Trust takes RECs, so that is an issue that we will need to understand.

Rikki Seguin: What is the time frame for completion of the plan? How is it distributed?
Betsy: We would like it done before end of 2016, and we welcome thoughts on distribution.

Kendra Hubbard: Is the Renewable Energy Advisory Council the venue for participation?
Betsy: Yes.

2. Oregon Clean Power Cooperative

Dan Orzech from the Oregon Clean Power Cooperative gave an update on the cooperative's progress and upcoming plans. The co-op is one model for facilitating community-owned renewable energy. Dan presented on how solar projects can be financed with the Oregon Clean Power Cooperative. Energy Trust and Bonneville Environmental Foundation provided a small grant for part of Dan's work.

Dan: Senate Bill 1520 helped pave the way by allowing Oregonians to come together in cooperatives to finance renewable energy projects in their communities without having to file a complex financial prospectus. There is a huge amount of interest in this financing approach, but a financial and legal structure is needed. A number of projects have already been identified for financing through the co-op, and they range from Lakeview High School to the Portland Mazamas' building. The co-op can work beyond solar and see opportunities with small hydropower.

> Here's how it works. Oregon residents join the co-op as members. Members invest in projects. The investments allow a solar project to be built, and then the co-op sells the power to the host site. This revenue stream pays back the members. When fully paid back, the equipment is sold to the host organization. This model is quite attractive to the host organization, and the co-op hopes it will allow projects to move forward that have been concepts for years.
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> Stakeholders include contractors, members and host sites. The co-op needs to consider and be fair to all of them. Supporters of this effort include Energy Trust, Bonneville Environmental Foundation and Sustainable Northwest. Additional benefits include preparedness during natural disasters and locally produced solar keeping dollars circulating in our economy.

Alan Meyer: Can members be businesses?
Dan: Only individuals can be members in the co-op. A person who owns a business could become a member as an individual.

Peter Weisberg: Is all of the capital coming from the co-op?

Dan: No. The projects will get other funding, such as incentives and tax credits.

Alan Meyer: Are there limitations on the types of sites?
Dan: No. We have talked about working with businesses, but it is easier for businesses to get financing or capital. Nonprofits and public entities have a harder time and are therefore better candidates for the co-op model. We do expect that we will work with businesses as well. Also, part of the idea behind this model is that members are giving value, in the form of a solar installation, to an entity that they care about, such as a local church or school.

Dave McClelland: Will members have a role in selecting projects?
Dan: They could, but right now we have a long list.

Peter Weisberg: How much is this in terms of capital investment?
Dan: $2 to $3 million.

Rikki: Are you indifferent in terms of the utility provider and just looking for sites?
Dan: Yes, though we are starting in investor-owned utility territory.

Jay Ward: Is the co-op a tax exempt organization?
Dan: No, we do pay taxes. All profit goes back to members.

Jay: What is the contribution level of a member?
Dan: The minimum contribution amount is $1,000.

Alan Meyer: Are the member investments part of one large pool or for a specific project?
Dan: The investments are for a specific project.

Betsy: Co-ops have been used for years effectively in the agriculture community. Can an you speak to that?
Dan: It is a widespread business model. It is a plus for us that it is a recognized approach, particularly in rural communicates that are familiar with agricultural co-ops.

Michael O'Brien: Are all projects net-metered? Are they sized based on load?
Dan: Yes. Most are probably less than half of the load of the project site.

Jeni Hall: Have you thought about how contractors will come on board?
Dan: We are not settled on this approach, but will likely use some sort of request for proposals process with preference for local contractors. Some projects came to us from contractors. All contractors will need to be Energy Trust trade allies.

Jeni: System size drives the financials. What is the process for determining system design?
Dan: The installers have been guiding the system design.

Jeni: Nonprofits are more expensive to work with, with smaller projects and great need for support from the co-op.

Alan Meyer: I don't see why I would go with the co-op over Solar City, for example.
Dan: We don't care if you go with the co-op model or another organization, as long as you are installing solar. We believe that we will be a better deal for the projects that choose to work with us. We don't have to make a profit, so we can provide a 10-year power purchase agreement.

Kendra Hubbard: How do you value solar equipment after 10 years?

Dan: We look at the revenue stream from the power purchase agreement or depreciation from bill cost. The equipment value after 10 years is relatively low.

Betsy: How does the co-op intersect with the work at OPUC on community solar?
Dan: We offer community-financed solar. With the community solar model, an individual works with a utility to own a piece of a system and receive utility bill credit. We also expect to do some community solar projects.
Rikki: A key difference between community-financed solar and community solar models is on-bill versus off-bill financing. Also, the open investigation at the OPUC on available incentives has a connection to the success of efforts like this one.
Dan: Net-metering does not impact us for the most part. Our projects will likely not produce more energy than the site uses in any one month.
Jeni Hall: The load profile would be a helpful consideration in relation to net-metering.

Frank: How do people reach out to you?
Dan: They should visit www.oregoncleanpower.coop.

Dave McClelland: Are there barriers holding you back at this time?
Dan: We are negotiating power purchase agreements, but the real challenge is working on the financial and legal structure.

Michael: How are you handling the RECs?
Dan: All of the initial projects will use Energy Trust incentives, so right now we are looking at the host having the RECs for the first five years, then transferring them to Energy Trust.

Kendra Hubbard: Is this model being used in other states?
Dan: There are efforts in Washington, D.C. and New England, but they are different than our approach. Minnesota has the most similar model. We will get attention with our first project. It is a unique approach. Canada and Germany do a significant amount of solar installations this way.

John: From a resiliency point of view, the solar installations will located in buildings where people go for support. My inclination is that the plug option, rather than battery storage, is the better approach in a natual disaster.
Frank: There are new inverters with islanding and the ability to provide some power during an outage as part of design. The company is called SMA Solar Techniology.

Peter West: This seems like a lost opportunity for net-metering in schools. Schools operate during the most expensive time of the year to deliver energy during peak periods. We should have peak and off peak prices. Schools can then deliver energy at peak prices.
Michael: The Oregon Department of Energy suggested time-of-use pricing.

Peter Weisberg: Are members getting the RECs? If they grow in value, this could be a considerable benefit.
Dan: Members get principle and interest. They don’t get RECs or tax credits.

3. Public comment
There was no additional public comment.

4. Meeting adjournment
The meeting adjourned at 11:50 a.m. The next Renewable Energy Advisory Council meeting is scheduled on June 22, 2016.