Renewable Energy Advisory Council Meeting Notes

Friday, September 14, 2018

Attending from the council

Bruce Barney, Portland General Electric
Kendra Hubbard, Oregon Solar Energy Industries Association
Jaimes Valdez, Spark Northwest
Adam Schultz, Oregon Department of Energy
Anna Kim, Oregon Public Utility Commission
Les Perkins, Farmers Irrigation District
Erik Andersen, Pacific Power
Michael O'Brien, Renewable Northwest
Andria Jacob, City of Portland
Frank Vignola, University of Oregon
April Snell, Oregon Water Resources Congress (phone)
Oriana Magnera, NW Energy Coalition

Attending from Energy Trust

Lily Xu
Michael Colgrove
Chris Crockett
Phil Degens
Emily Findley
Matt Getchell
Shelly Carlton
Jeni Hall
Betsy Kauffman
Julianne Thacher
Dave McClelland
Spencer Moersfelder
Dave Moldal
Lizzie Rubado
Zach Sippel
Mariah Willis
Lily Xu
Jed Jorgensen
Debbie Menashe
Josh Reed
Hannah Cruz
Rachel Wilson
Joe Hernandez
Robert Wylie
Amber Cole

Others attending

Alan Meyer, Energy Trust Board of Directors
Ernesto Fonseca, Energy Trust Board of Directors
Mark Kendall, Energy Trust Board of Directors
Jeff Stollerd, Water Environmental Services of Clackamas County
Brett Reidstadt, Water Environmental Services of Clackamas County
Miranda Bonifield, Cascade Policy Institute
Charlie Coggeshall, CCSA
Shelley Beaulieu, TRC Solutions
Kate Hawley, TRC Solutions
Rebecca Smith, Oregon Department of Energy (phone)
Jon Miller, Oregon Solar Energy Industry Association

Executive Summary:

1. Draft 2019—2020 Action Plans:
    - Staff presented the draft action plans and concepts that will form the foundation of the 2019-20 budget for the renewable energy sector
2. Water Environmental Services of Clackamas County Biopower Project Decision
    - Staff presented on a proposed cogeneration biogas project at the Water Environmental Services of Clackamas County water resource recovery facility in

Oregon City (0.49 aMW, $1.8 million proposed incentive). Renewable Energy Advisory Council members supported the project, which will be presented to the board for approval of the incentive at its October 17 meeting.

3. Renewable Energy Certificate (REC) Policy Review
    - Energy Trust's REC policy is up for review. Staff held a workshop to enable Renewable Energy Advisory Council members to discuss a set of considerations and provide feedback. Most members felt the policy should be changed significantly. A minority of members believe the policy should continue as is. Renewable Energy Advisory Council comments will be incorporated into a memo to the board policy committee.

1. Welcome, introductions, announcements

Jed Jorgensen called the meeting to order at 9:01 a.m. The agenda, notes and presentation materials are available on Energy Trust's website at: https://www.energytrust.org/about/public-meetings/renewable-energy-advisory-council-meetings/.

Jed Jorgensen introduced a few new Renewable Energy Advisory Council members: April Snell of Oregon Water Resources Congress, Anna Kim of the Oregon Public Utility Commission, Oriana Magnera of NW Energy Coalition and Andria Jacob from the City of Portland.

Dave McClelland announced staffing changes on the solar team. Jed Jorgensen reviewed the agenda and recapped a recent field trip to a Hood River irrigation district attended by Renewable Energy Advisory Council members.

2. Draft 2019-2020 Action Plans

Staff presented the draft action plans and concepts that will form the foundation of the Energy Trust's 2019-20 budget for the renewable energy sector.

Jed reviewed the budget timeline and process. He provided a reminder about the upcoming board budget workshop and how it departs from the process followed in previous years. Jed reviewed the budget schedule, emphasizing the role of Renewable Energy Advisory Council members in advising the board of directors on the budget. Jed then presented the Other Renewables draft program action plan. A new activity the team will take on is exploring non-energy benefits and grid benefits of projects supported through this program.

Michael O'Brien: By non-energy and grid benefits, do you mean not just generating onsite to reduce peak load but also shifting peak to other times of day?
Jed Jorgensen: Yes, the goal is to figure out the broad menu of capabilities. It might be easier to find out what they can't do, so we're open.
Michael O'Brien: How would you assign value to peak management?
Jed Jorgensen: Great question. That's what we're trying to find out—if they have benefits and how to value them. Where does the value go? To utilities, Energy Trust or the local community? What is Energy Trust's role in promoting the value?
Michael O'Brien: Is solar thinking about the same issues?
Dave McClelland: The Solar program has similar things going on. In some ways we might be further along.
Jed Jorgensen: Dave's work in the Solar program can inform my work in the Other Renewables program.
Les Perkins: Are you going to explore microgrids and islanding, or is that further along?
Jed Jorgensen: I don't know. We have to think that through

Betsy Kauffman: We are looking to see what is possible, then what roles we can play. At this point, we need to broaden our thinking about what projects can do besides generating energy. What flexibility can they provide? Josh Keeling of PGE emphasized the options for flexibility.
Alan Meyer: In other parts of the country that are more capacity constrained, utilities see value in flexibility and will pay for it.

Jed discussed additional considerations and diversity, equity and inclusion planning.

Jaimes Valdez: Regarding the diversity initiative, are contracting labor requirements part of what is looked at on a project?
Jed Jorgensen: Not currently, but that's something we've been talking about. Is that the right layer to add in?

Ernesto Fonseca: How are the funds for the Other Renewables program being used?
Jed Jorgensen: There are two pathways. One is project development assistance, such as a feasibility study where we look at the scope of work. At that point we don't look at the labor practices; we just look at the work. When they finish it, we reimburse for 50 percent of the cost. Installation incentives work similarly. We bring larger projects to the Renewable Energy Advisory Council and the board, or we approve smaller projects internally. There may be one payment or a series of payments.

Dave McClelland presented an overview of the Solar program and 2019 draft action plan. He reviewed new activities, such as plans for increased collaboration with utilities.

Michael O'Brien: What does collaboration with utilities on storage docket mean? Is it engaging the OPUC proceedings or a request for proposals?
Dave McClelland: It's the programs that come out of the dockets, so that's probably not the right language. At the August Renewable Energy Advisory Council, Josh Keeling presented many things being done in distributed energy resource, so this would be collaboration with Josh's team as they roll out their storage program. We see overlap in the customers who will be interested in residential storage or a microgrid with solar customers. Ideally, customers would get both storage and solar.

Oriana Magnera: Are there considerations around equity, considering many of these projects are being deployed in areas with limited access?
Dave McClelland: There is opportunity for that, but no specific program has been developed yet. Your input would be great. It's a major consideration. In our resiliency work with the City of Portland and Multnomah County on the Renewable Resilient Power for Portland group, equity has been major filter we've put on in how we site projects.

Dave discussed the idea of collaborating with efficiency programs in advancing solar ready construction.

Andria Jacob: Did Governor Brown's executive order last year addressing solar ready do anything to move the needle? I'm not sure what the impact was on the existing status.
Dave McClelland: It didn't go as far as our current solar ready standard and incentives, but it is helping push conversation in terms of builders being more interested. There is an opportunity in the south Hillsboro development that is one of the PGE testbeds for demand response work. We're looking to partner with Josh Keeling's program on how to get new homes there to incorporate high-efficiency and storage.
Andria Jacob: There is another testbed in Portland that will test different things.

Dave McClelland: For PGE there are three testbeds: south Hillsboro, north Portland and Milwaukie. PGE is working on taking the work from demand response pilots and scaling it up in a location. Does it have substantial impact on load?

Anna Kim: In the testbeds, are you talking to them about adding solar? Is there something specific?
Dave McClelland: Nothing at this point except collaborating with Josh to present our wide variety of options. We would like to have a clear and coherent set of options for them that include renewable energy.

Anna Kim: Since you're already there, are you going to take the opportunity to talk about solar and other options?
Dave McClelland: We have outreach to customers as well, and trade allies who are out there selling, and they will have information about the utilities' opportunities as well as ours. Josh has envisioned that these testbeds are an area where we'll deploy storage systems, in south Hillsboro in particular. How can we avoid confusing customers by providing conflicting messages, but instead come to them with a clear and consistent set of options?

Jaimes Valdez: Some of those options are low- or no-cost but others would require investment or financing. Is there a path for that piece as well, for education and how to pay for these things?
Dave McClelland: This is an action plan for next year, and we're very early in collaboration but it needs to be done. How are we not stepping on each other toes and providing consistent messaging, particularly with solar and storage? We've seen a lot of interest for storage and expect to see interest from existing solar customers. The Internal Revenue Service, in a letter ruling, said you can take a tax credit for adding storage to an existing solar system. We need to line up our messaging.

Frank Vignola: Are you working with utilities so they can manage storage with the grid?
Dave McClelland: Storage installed through the utilities' programs would need to meet utility needs. There will be some sort of payment through that program for particular needs.
Bruce Barney: At a high level, the battery will benefit utilities and the customer will be compensated. Like sharing the battery, it can provide emergency backup, but utilities can also use it for our use cases

Ernesto Fonseca: Peak loads occur during extreme heat or cold. At night, how are you going to manage the quality of energy from the battery?
Bruce Barney: There are different peaks—one might be on a particular feeder different from our system peak. Winter peak occurs at 5 a.m. Peak management mostly consists of what you see in hot or cold days, but we may have peaks on a feeder that don't coincide. We're planning testbed locations based on local constraints. In terms of power quality, these inverters are very good, and we don't anticipate issues. We're looking at this as an aggregated resource.

Ernesto Fonseca: In terms of the battery capacity, are they are going to be available for emergency backup?
Bruce Barney: The utility would always leave reserve capacity. For example, if a battery can store 100 units, we might not go below 30. We always leave some for the customer.

Ernesto Fonseca: Is the long-term goal to integrate capacity into the grid, thereby reducing production?
Bruce Barney: Yes, for meeting our peak demand.

Oriana Magnera: Looking at the focus on new construction in south Hillsboro, it's not likely to reach communities who haven't had access to new technology. How are you going to ensure those technologies are reaching more communities? Future code will put a burden on affordable housing. Are we going to work with multifamily to help them meet code?
Dave McClelland: Yes, we share your concerns. We are being pushed in two directions and we're looking for feedback on how to find balance. How can we push forward future technology and make sure solar is a viable part of an efficient, flexible grid? Some of that incorporates expensive leading-edge technology. The other direction is commitment to improving access.
Andria Jacob: In talking to Jason Klotz of PGE, he said they're looking at this on a territory-wide basis. Milwaukie has different demographics than Hillsboro. On a portfolio basis, they're reaching a lot across the three testbeds. You do want to test some of them on upper demographic that can help adoption by lowering costs.

Mark Kendall: How does solar ready work relate to overall resource over the long-term at a macro level? In the 1970s, 30 jurisdictions had solar zoning that prohibited a neighbor's hedge from blocking your solar. In Benton county, someone challenged the use of solar zoning code, but they didn't know they had it on the books or enforce it. There's opportunity to look broader and longer.
Dave McClelland: The key thing about solar ready is less about access to a solar window and more about connecting builders and trade allies, getting solar on their minds. It's not hard to take the next step and install. If every builder decided to install, that would be the ideal outcome. I see this more as making solar standard. For new buildings, there is heavy engineering going on and you can easily design a building that can't accommodate solar. That's important to avoid. It's important to get solar into the first design charette.
Mark Kendall: That's good. Education is critical. All jurisdictions that saw solar zoning go away were lobbied out by home builders
Jaimes Valdez: I worked with the City of Portland. Solar access has a different meaning than in the early 1980s, back then it was about vegetation and sun access. Local jurisdictions had a hard time defending against the property rights of local neighbors, and we'll continue to deal with this. This work for solar ready is trying to make basic building orientation with the sun in mind, in line with natural resource. Continued access for a system is still an issue.

Dave discussed plans for a low-moderate-income solar and an upcoming new grant opportunity to provide $8,000 grants to develop new program concepts for delivery solar to low-income communities.

Kendra Hubbard: What types of organizations are you expecting to apply for direct grants?
Dave McClelland: Typically, a community-based organization who will partner with a technology expert to bring in cost information and help find other sources of funding. These will develop into model projects that can be replicated. Then we can allocate additional funding to the model projects
Betsy Kauffman: The idea is to see the field and get different program concepts going, then see what's viable and come back and incorporate findings into standard program new offerings.
Kendra Hubbard: For 2019?
Betsy Kauffman: We will release solicitation to apply this fall, then contract by year-end.

Oriana Magnera: Is there any support for leveraging those dollars? $8,000 might not go far on an ambitious project.
Betsy Kauffman: That $8,000 amount isn't for the project installation. It's for figuring out a program model. Incentives for the project itself would require a separate application. This is for

a group that needs, for example, to hire a grant writer, do work with accountant or spend additional staff time working on it.

Jaimes Valdez: They are capacity building activities?
Dave McClelland: Yes.

Alan Meyer: Where are the dollars coming from?
Betsy Kauffman: Our solar budget.

Dave McClelland described diversity, equity and inclusion activities for Solar in 2019.

Jaimes Valdez: For the diversity, equity and inclusion work the low- and moderate-income solar group is doing, is there an opportunity to play a role in other parts of Energy Trust renewable programs?
Dave McClelland: There is interest in broadening the view of that group.
Betsy Kauffman: Do you mean the low- and moderate-income solar workgroup?
Jaimes Valdez: Yes.
Betsy Kauffman: We view that as a subset of renewable diversity, equity and inclusion work, but with regard to that group, this year is a capacity building effort. We brought in interested solar groups that don't have expertise and tried to widen that. That group is going to help us figure out how we form our diversity advisory council.
Debbie Menashe: That's one of a few different ways we're reaching out to community groups. In November, there is a new low- and moderate-income working group and time dedicated to leverage that work and connections to serve on advisory council. There will also be individual outreach to solicit people to work on the council. By February 2019, we'll have the council in place. The low- and moderate-income working group is a good resource. They know about Energy Trust, have knowledge of solar and are working to create new strategies.

Dave finished reviewing the slide on diversity, equity and inclusion activities, describing diversity in the solar workforce, particularly gender diversity. He then presented on additional considerations such as tax credit impact on project volume and community solar.

Jed asked the group if they had any feedback.

Kendra Hubbard: Going back to the grant process, how will that be messaged to the public?
Betsy Kauffman: We've got a big distribution list to community-based organizations and welcome them to forward that to their contacts. For the general public, it will be messaged to trade allies.
Kendra Hubbard: Through Insider?
Betsy Kauffman: Yes. We could also consider a press release.

Jed reviewed next steps on the budget process and invited future feedback from the Renewable Energy Advisory Council group at any point.

3. Water Environmental Services of Clackamas County Biopower Project Decision
Staff presented on a proposed biopower cogeneration project at the Water Environmental Services of Clackamas County water resource recovery facility in Oregon City (0.49 aMW, $1.8 million proposed incentive).

Dave Moldal introduced the applicant's representatives, Jeff Stallard and Brett Reistad. Dave reviewed the benefits of the project and the evolution of waste water treatment services,

explaining how municipal facilities reduce greenhouse gases. He presented a summary of biopower and combined heat and power technologies at wastewater recovery facilities in Oregon. Energy Trust has provided incentives to 7 of 10 wastewater recovery facilities that have operating cogeneration systems.

Bruce Barney: For the Kellogg Creek plant in Clackamas County, is that biopower project expansion upcoming?
Dave Moldal: Yes, a feasibility assessment is the next step. They have an existing, aging cogeneration set, which needs to be replaced.
Jaimes Valdez: What do you consider high-strength waste?
Dave Moldal: This includes organic material with high volatile solids content—food processing waste; fats, oils and grease; post-commercial food waste; and brewery waste.

Dave continued describing some of the projects, emphasizing the reliability of the technology. He discussed biopower potential at 11 additional wastewater recovery facilities in Oregon with anaerobic digesters, which are smaller and more expensive and likely have higher above-market cost.

Les Perkins: Is the heat produced used primarily used on-site or delivered to other sources?
Dave Moldal: Typically, the facility uses all the heat produced by the cogeneration system to heat the digester or for other process heat loads. Digesters are typically heated to 98 to 103 degrees. The City of Salem extended a heat loop from the new cogeneration to an administration building.

Dave showed a promotional video from Clean Water Services describing their new biopower cogeneration project with fats, oils and grease receiving at the Durham wastewater recovery facility.

Mark Kendall: With clean burn technology, does co-digesting fats, oils and grease increase air emissions problems?
Brett Reistad: Most of the compounds that cause air emissions are in wastewater. For example, sulphur dioxide is a byproduct of breakdown of existing sulfur compounds.
Mark Kendall: So you could increase biogas production without increase air emissions problems?
Brett Reistad: Yes. Fats, oils and grease is unlikely to increase air emissions in a lean burn cogeneration system. Fats, oils and grease is a digester's favorite food. It is 100% volatile solids.

Dave Moldal summarized the City of Gresham's cogeneration story and reviewed a graph showing bill savings over time.

Bruce Barney: There is overhead involved in operation. What is the economic impact if you were to overlay that?
Dave Moldal: The operations and management costs are about 3 cents per kwh generated.
Bruce Barney: So, about half of the pure electricity is used up with overhead?
Dave Moldal: Yes, you see the effect of increased generation and revenue from tipping fees.

Dave Moldal reviewed an annual savings slide showing the project reduced overall load through energy efficiency, buying clean wind and adding solar. Through cogeneration and solar, they achieved net-zero in 2015.

Dave mentioned that the Metro Council voted in July 2018 in favor of an ordinance requiring food scrap separation and recovery, which starts in 2020. Co-digestion of food waste and other organic material at wastewater recovery facilities can make biopower possible at many smaller wastewater recovery facilities. Dave also mentioned future pathways for optimization of renewable energy at wastewater recovery facilities.

Bruce Barney: Would the biogas be stored to work as a battery?
Dave Moldal: Wastewater recovery facility load goes up and down through the day. As they're continuing to produce biogas, there may be more than the plant needs at certain times. They may be able to use batteries to offset energy use at certain times of the day?
Jaimes Valdez: In event of a Cascadia earthquake, could a wastewater recovery facility use cogeneration island from the rest of the grid?
Dave Moldal: Potentially yes, but from a regulatory standpoint, it is typically not permitted.
Bruce Barney: If the grid goes down, they have to separate from the grid.
Dave Moldal: I don't think any of these plants have the ability to do that today.
Les Perkins: Have you explored potential in rural areas? In Hood River County, we have an issue with solids from portable toilets used in agricultural areas, with nowhere to take it. That's where I think there's value. There's nowhere to take waste if the city stops taking it. It's the same in most rural counties with agriculture.
Bruce Barney: Is most of the waste from the septic tank already digested?
Les Perkins: They're dumping it into the Hood River wastewater collection system. It's a capacity issue in the region. Every orchard has portable toilets, and as food security issues increase that issue becomes even bigger.

Dave Moldal continued with the Water Environmental Services of Clackamas County project. Tri-City water pollution control plant is a 12-million-gallon per day plant that provides wastewater services to the Cities of Gladstone, West Linn and Oregon City. He described the proposal to demolish the existing cogeneration system and install a new generation system. No new buildings need to be built. By 2029, there is estimated to be enough biogas to run the cogeneration set at full out, then it will produce excess biogas. An external review by Kennedy Jenks found that the incentive application is complete, the project is low-risk, and the analysis used conservative assumptions. Renewables staff is proposing an incentive of $1.8 million to be paid in two installments.

Bruce Barney: Would the incentive allocate 100 percent of the Renewable Energy Certificates (RECs) to PGE?
Dave Moldal: Yes
Alan Meyer: How did we calculate the $1.8 million?
Dave Moldal: The suggested incentive assumes a $2.1-million Renewable Development Fund incentive from PGE.

Dave continued going over the project timeline, and Jeff Stollard stated that the Tri-City wastewater recovery facility started construction of a new digester.

Alan Meyer: Will current cogeneration be able to run until the new one is operational?
Dave Moldal: Yes, they made some critical repairs, and its operating today but at low efficiency. Fiber optics are already at the location, because Tri-City participates in PGE's distributed standby generation program.
Bruce Barney: If the existing connection to PGE system wasn't there, I would estimate that an additional $100,000 interconnection cost would be required, so there's a benefit in already having that connection.

Mark Kendall: What role does siloxane removal have in the longevity of cogeneration equipment?
Brett Reistad: Digester biogas contains siloxanes. It is a silicon-based compound that originates from health care products such as lotions and deodorants. If the siloxane is not removed from the biogas, it ends up on the inside of the cogeneration set, which causes operations and maintenance problems. That's the primary reason for the gas treatment system—to remove contaminants in the biogas.
Mark Kendall: Are those chemicals part of why the existing system is so ragged?
Brett Reistad: Yes, the existing treatment system is using biogas with contaminants and combusting it. The operators deal with the repairs.
Dave Moldal: The existing engine is at the end of its useful commercial life and has had lots of repairs.
Brett Reistad: The existing engine is running at 30 percent fuel efficiency, and the new one will operate at 41 percent efficiency for converting input fuel energy to electricity.
Jeff Stollard: Excess heat from the cogeneration system will be used to heat the administration building and lab.
Mark Kendall: Are there natural gas savings, too?
Michael O'Brien: Is the 8-percent discount rate picked by you?
Dave Moldal: Yes. That's a typical discount rate for municipally owned biopower projects.
Jed Jorgensen: We've been looking at most municipal projects at an 8-percent discount rate.
Erik Andersen: What's the contingency if the PGE Renewable Development Fund funding doesn't come through?
Jed Jorgensen: We would circle back with Water Environmental Services and consider a different incentive. We'll be taking it to the Energy Trust board, and we like to get sense from Renewable Energy Advisory Council before that whether the group has concerns about the project.

Frank Vignola: In terms of budget, you only have so much to spend each year?
Jed Jorgensen: We have the budget. This is a project we foresaw based on project development assistance incentives. We try to be ready with enough budget to support the project. This is part of that money we set aside.
Frank Vignola: What is the percentage of the total budget?
Jed Jorgensen: If we say this incentive is around $2 million, our total for PGE budget was around $6 million. The Salem project was $3 million. So, roughly 30 percent.

Dave Moldal asked the group if they had any concerns about the project. There were no objections to moving forward.

4. Renewable Energy Certificate (REC) Policy Review
Energy Trust's REC policy is up for its every-three-year review. In a memo to the Renewable Energy Advisory Council, staff presented a set of considerations for discussion and feedback through an interactive exercise.

Renewable Energy Advisory Council members were seated at four different tables with at least one Energy Trust staff member per table to answer questions.

Jed began by providing some background on Energy Trust's REC policy. Since 2004, Energy Trust has had policy on RECs, which was identified as a need early on by the board of directors. It was noted that there is nothing about RECs in the public purpose charge legislation. The REC policy originated with the understanding that RECs are part of the value of renewable projects

and an asset that can be transferred to ratepayers. Energy Trust requests a percentage of RECs from installed projects related to the percentage of above market cost that Energy Trust's incentive covers. There has been a lot of change with renewable markets and the value of RECs over time.

> The value of RECs spiked early on and then steadily declined. We now have more capacity, so supply increase has caused REC values to fall. As values dropped, Energy Trust takes more from a project with the goal of providing value to ratepayers. In 2015, we asked to stop trying to transfer RECs from small scale projects into Western Renewable Energy Generation Information System (WREGIS). We are taking contractual ownership of RECs but not putting net metered projects into WREGIS. One of the biggest changes now is that Oregon's community solar program directly conflicts with Energy Trust's current policy, limiting the new market Energy Trust could have a role in. The policy precludes us providing an incentive because Community Solar projects must give RECs to participants.

Alan Meyer: Why was that a requirement?
Michael O'Brien: For additionality reasons, if the REC is held on behalf of a customer, it helps the utility comply with the Renewable Portfolio Standard and make the usual set of claims.
Jaimes Valdez: Also, from marketing perspective, people need to be able to talk about the benefits of participation in community solar.
Alan Meyer: So logically, Energy Trust would be investing in brown energy.
Jaimes Valdez: The question is, why in 2004 Energy Trust though it was important as a condition of the incentive.

Bruce Barney: Can you help us understand the magnitude of the dollars and how much RECs are worth?
Jed Jorgensen: RECs are about $0.25 to $2.00 each, but there's not much of a market.
Bruce Barney: There's an overhead involved in registering with REGIS to get the RECs.
Rebecca Smith of ODOE by phone: REC values are more volatile looking forward because of changes in the RPS that affect their shelf life. You can't bank them as long. We removed the solar bonus and are seeing fewer RECS delivered from those projects. The Oregon voluntary market continues to grow, and RECs are becoming more difficult to acquire.
Jon Miller from Oregon Solar Energy Industries Association: This isn't a legal requirement but an internal policy. Is it changeable?
Betsy: Yes, it is an internal policy.

Jed prompted the small groups to begin a 20-minute discussion regarding the REC policy. Each table summarized their discussion:

Betsy Kauffman for group one: Most people, with one exception, feel the current REC policy is not providing much value to customers. Bruce Barney stated that while ratepayers are generally excited about installing renewable energy, they aren't thinking much about RECs. RECs represent value but don't need to represent renewable value. One person felt RECs do represent renewable value and Energy Trust should continue collecting them. With regard to community solar, the group generally feels it would benefit Energy Trust to not have a policy get in the way of providing customer benefit.

Erik Andersen for group two: We had some of the same concerns. With regards to the existing REC policy, there is a value. We seem to be focused on how there is limited value today, but the market is dynamic. California has a 100 percent renewable mandate so there are surplus

RECs, driving down value. As things mature, decisions shouldn't be made based on the status today. Even if we were to disband it, it creates complexity on above market cost calculations. RECs have a marketable value. Factoring that into above market costs in a dynamic market to determine an eligible incentive is not insurmountable, but it is a challenge.

> How do we forecast value in the market of a 20-year asset? It increases administration costs and challenges to figure out how to value that. That's one issue of disbanding the REC policy. With regards to community solar, it seems that when a project is envisioned to be small scale, there is an impediment. They are closer to net metering than a 2-MW hydropower facility. Maybe there is some sort of breaking it up and treating differently, using different analyses, or using the more complex methods employed for larger renewables projects.

Lizzie Rubado for group three: This group had a consensus that the policy is not facilitating Energy Trust's work in supporting renewable markets and should be amended broadly for all projects to eliminate REC requirements. Energy Trust involvement in the REC market is not central to our mission and is creating complexities in our broader policy work around greenhouse gases and community energy. Is that a dynamic that should exist? With regards to equity and inclusion, the policy is potentially positioned to harm environmental justice communities. We want environmental benefits to be retained within those communities.

Jaimes Valdez: An additional criticism is that the REC policy is violated all the time, so is not serving its original purpose. Double claims are frequently made by residential and commercial customers. Nobody announces in year six that their solar system is not greening up their energy anymore. Nobody announces when the RECs are transferred. The option for municipalities having to re-purchase RECs that are owned by a city seems strange. We should liberate Energy Trust from that role of having to manage RECs.

Oriana Magnera for group four: While we didn't arrive at specific answers, we asked a lot of questions about the value of RECs. Based on our discussion, we're leaning toward a view that the policy is not accomplishing its intentions and is creating barriers for developers, municipalities (because solar systems can't claim benefits) and environmental justice. We also had a caution from the OPUC that RECS do provide a small benefit for ratepayers and we should consider what replaces that value if we change this. Anna Kim suggested that if Energy Trust is no longer tracking RECs, those resources could be put elsewhere, and Energy Trust should define that value to ratepayers.
Jaimes Valdez: There is still a REC impact value to investments made by Energy Trust by generation, reduced load and obligation of utilities to purchase RECs. There is still an RPS impact even if RECs are held by customers.
Erik Andersen: For qualifying facilities, we're giving something back they can then sell.

Jed stated that staff have gathered this feedback to provide to the board policy committee to inform their work in looking at this policy. This might be the first of a few Renewable Energy Advisory Council conversations that will be relayed to the board.

5. Public comment
There was no public comment.

6. Adjourn
The meeting adjourned at 11:55 a.m. The next scheduled meeting of the Renewable Energy Advisory Council will be Friday, October 12, 2018.