

Conservation Advisory Council and Renewable Energy Advisory Council Joint Meeting Notes

February 2, 2019

Attending from the council:

Holly Braun, NW Natural
Kari Greer, Pacific Power
Charlie Grist, Northwest Power and
Conservation Council
Anna Kim, Oregon Public Utility
Commission
Lisa McGarity, Avista
Dave Moody, Bonneville Power
Administration
Kerry Meade, NW Energy Efficiency Council
Warren Cook, Oregon Department of
Energy
Danny Grady, City of Portland Bureau of
Planning and Sustainability
Josh Halley, PGE

Jason Salmi Klotz, PGE
Emily Moore, Northwest Energy Efficiency
Alliance (for Julia Harper)
Michael O'Brien, Renewable NW
Erik Anderson, Pacific Power
Frank Vignola, University of Oregon
Wendy Gerlitz, Northwest Energy Coalition
Al Spector, Cascade Natural Gas
Les Perkins, Farmers Irrigation District
Alexia Kelly, Electric Capital Management
Bruce Barney, PGE
Jason Busch, Pacific Ocean Energy Trust
Suzanne Leta, Sun Power

Attending from Energy Trust:

Tom Beverly
Hannah Cruz
Fred Gordon
Thad Roth
Peter West
Betsy Kauffman
Ryan Crews
Debbie Menashe
Dave McClelland
Justin Buttles
John Volkman
Dave Moldal
Jackie Goss

Cameron Starr
Julianne Thacher
Kenji Speilman
Mana Haeri
Alex Novie
Samuel Girma
Michael Colgrove
Lizzie Rubado
Mana Haeri
Eleni Eisenhart
Spencer Moersfelder
Steve Lacey

Others attending:

Alan Meyer, Energy Trust board
Henry Lorenzen, Energy Trust board
Elee Jen, Energy Trust board
Mark Kendall, Energy Trust board
John Fazio, NW Power and Conservation
Council
Dan Hua, NW Power and Conservation
Council
Jeffrey Tamburro, NW Natural
Rick Hodges, NW Natural

Matt Doyle, NW Natural
Josh Peterson, University of Oregon Solar
Monitoring Lab
Steven Simmons, Northwest Power and
Conservation Council
Massoud Jourabachi, Northwest Power and
Conservation Council
John Molnar, Rogens Machinery

Executive Summary

1. Staff from the Northwest Power and Conservation Council presented forecasted temperature trends and extreme weather events and highlighted the feasibility of using this information to assess potential impacts of climate change-driven weather forecasts on the future value of energy savings and future measure development at Energy Trust.
2. Staff provided an update on progress made in 2018 to the organization's Diversity, Equity and Inclusion initiative, including developing goals related to increasing participation in programs, and increasing trade ally participation and completed projects.
3. An interactive discussion took place about the development of the 2020-2024 Strategic Plan. Discussion centered on a list of future opportunities the organization could pursue and the council member's perspectives on whether the organization has the strengths and capabilities to play a role in each opportunity.

1. Welcome, Old Business and Short Takes

Hannah Cruz convened the meeting at 1:03 p.m. The agenda, notes and presentation materials are available on Energy Trust's website at www.energytrust.org/about/public-meetings/conservation-advisory-council-meetings/.

Hannah relayed that the November 27 meeting will move to November 20.

2. Guest Speaker: Northwest Power and Conservation Council

Senior Power Systems Analyst John Fazio and Power System Analyst Dan Hua presented forecasted temperature trends and extreme weather events. Dan Hua explained the research method, which analyzed 10 general circulation models selected for their comparability to climate conditions in the Pacific Northwest. A GCM is a model of how climate and weather work, and the relationship to whatever is driving it. Dan Hua described different emissions scenarios, which compared historical carbon emissions starting in 1950 with future emissions predicted by the models. Some scenarios included efforts to reduce emissions while others reflected business as usual. There are a wide range of predictions in the report, but they generally show a greater increase in temperature inland than at the coast. They also predict a greater number of days with temperatures over 90 degrees and a decrease in days where the temperature falls below freezing.

Jon Fazio presented about how climate change is expected to affect load forecast. He focused on one GCM, running it through a load forecasting model that used historical data to calculate the load at predicted temperatures through 2035.

Alexia Kelly: Why is the distribution more tightly clustered in the projections?

Jon Fazio: As you push the temperatures up, you get a more limited response [greater variation.]

Massoud Jourabachi: The response to temperature in winter is greater than in summer. Inland regions will have increased temperatures compared to coastlines, and most of our population is near the coastline.

Jon Fazio: We used the weighted average of four large cities in the region, including Seattle and Portland.

Jon Fazio compared regional average loads through 2035. In the future scenario, the level of adequacy stays the same, but the capacity need moves from winter to summer.

Alan Meyer: This is historical and adjusted historical. If it gets warmer in the summer, more air conditioning would cause the summer load to go up.

Massoud Jourabachi: Increased air conditioning is one of our assumptions. We brought information from our long-term model, which includes greater penetration of air conditioning.

Les Perkins: Did you factor in electric vehicles?

Jon Fazio: This report does not assume any additional electric vehicles.

Charlie Grist: You're picking up on two important things. Temperatures will change, and that has an effect on building loads, but temperature isn't the only thing. The value of energy efficiency also changes over time and is tied to how the electric system as a whole performs. Weather and population growth effect resources, so that dynamic can change. Our confidence has a great amount of uncertainty, and that is just one of the 10 models.

Jason Salmi Klotz: In 2014, the OPUC asked PGE and Pacific Power to do similar modeling in 2016. You'll see that they show similar results.

Charlie Grist summarized high-level conclusions. All the models do a good job of predicting historical temperatures, so we can assume they're relatively accurate. By the 2030s, the models predict there will be an increase of 1 to 1.5 degrees, which can have significant impact. Even that amount of change has a great effect on snowpack and therefore hydropower. There's also significant variation among the best GCMs, but they all predict an increase. The GCM we focused on predicts twice as many hot days, and that will change consumer behavior. The implication for Energy Trust is that temperature changes will impact savings for measures that are temperature-dependent, and the value of savings for utilities.

Fred Gordon: We were thinking of what questions we could even address today. Will conservation measures save more or less? Should we be converting daily temperature forecasts into degree days, and calculating that for base versus future scenarios? Models show we're already warmer. Second, what's the value of capacity savings in summer and winter, when the peaks are different? This is a more difficult question because it depends on how Oregon IOU prices relate to the hydro system, and on changing peak patterns. We could begin by working on the first question.

Frank Vignola: Have they also looked at wind and solar resources and how that impacts the model?

Jon Fazio: We didn't look at that. We kept that as a constant.

Frank Vignola: I've done over 30 years of solar, and direct production has increased by about 10 percent. It would also affect billing loads.

Jason Salmi Klotz: There is a 2015 Arizona study that shows rising temperatures and how that affects solar, thermal and wind generation. Both utilities should look at it.

Betsy Kauffman: If we have increased summer peaks, does that make solar more valuable?

Jon Fazio: The short answer is yes, but we haven't studied to what degree.

Jaimes Valdez: To what degree did the model predict customer-based generation?

Jon Fazio: We are assuming as time goes forward there will be more, and that trends will persist into the future.

Massoud Jourabachi: The structure is frozen, but to capture those kinds of effects we would bring in a consumer choice model, a long-term model. The amount of solar behind the meter goes up.

Fred Gordon: The importance of this analysis is to see the effects with all things being equal.

Jon Fazio: If you're interested in this, the full report is available in Nature magazine.

Anna Kim: What is the council going to do with this data?

Charlie Grist: That will be up to the council members. We'll soon be kicking off 2021 power planning and there is a lot of interest around climate change.

Anna Kim: Will this start showing up in different meetings?

Charlie Grist: We will soon start collecting input to find out what people are after.

Alexia Kelly: Did you also project out to 2040?

Charlie Grist: The models go way out, but this is an average around the 2030's.

Jon Fazio: The next power plan will go through 2036.

Massoud Jourabachi: We are extending the load forecast to 2050 because in most studies about penetration of electric vehicles, that's the long-term model. We did a report on the economic effect on the northwest that's not published, but we can forward it to you. It shows significant increases in peak energy.

3. Diversity, Equity and Inclusion Operations Plan

Staff provided an update on progress made in 2018 to the organization's diversity, equity and inclusion initiative, including developing goals related to increasing participation in programs, and increasing trade ally participation and completed projects.

Debbie Menashe gave an update on activities leading up to the formation of a Diversity Advisory Council over the next few months. Jessica Kramer reviewed the DEI goals relating to residential program participation, which aim to increase uptake in diverse communities.

Michael O'Brien: On the residential participation goal, the baseline shows 24 percent participation. Do we know what percentage of the community is diverse as a whole? Is that low or high?

Debbie Menashe: That's statewide, not by census track. It's the statewide average for what we've identified as communities of color.

Dave McClelland: The CAC has already seen the baseline data work, but RAC members have not. We will make sure to bring that to the RAC.

Jaimes Valdez: In terms of demographic information, at what point in Energy Trust programs is that collected, and how would customers self-identify?

Debbie Menashe: At this point we don't collect that, so the data was determined by geography not household.

Jessica Kramer reviewed the commercial participation goals, which will focus on small and medium businesses, and very rural businesses.

Kari Greer: Do you have definitions available for rural versus very rural?

Alex Novie: Yes, we will get this to you.

Jessica Kramer reviewed the industrial participation goal and the renewable participation goal. The renewables goal differs from the other sectors by addressing all three DEI indicators and looking at projects instead of individual customers.

Josh Halley: How do you differentiate between a racially diverse community versus a low-income customer?

Dave McClelland: Our current strategy is income-focused. We've been working for two years with a low-to-moderate income workgroup. It has been great to engage with community-based organizations, and we are now focused on developing an income-qualified offering. Layered on top of that, we'd like to do some geographic targeting to areas that are more rural or ethnically diverse. We now have a way of tracking success on that. But the focus is working with individual community-based organizations and supporting their work. Our recent solar innovation grants are one way to help build capacity at those organizations.

Josh Halley: That seems like a challenge.

Dave McClelland: Yes, we also don't collect demographic information, so we are going to look at the right level of asking those questions. This is one imperfect method, but a good place to start looking at it.

Holly Braun: Did you think about looking at the percentage of overall savings versus participants? Having the goal as a function of savings seems intuitive, but it didn't go that way.
Jessica Kramer: For the DEI goal, our focus is on increased participation and awareness. The assumption is that savings will follow.

Holly Braun: It's not bad, but I'm curious if the overall goal for the organization is saving energy, why is this focused on participation?

Ryan Crews: It does allow us to break out participation in large capital projects, so we can measure that. There will be a lot of ways to measure what we achieved, but we'll be slicing results in different ways, including savings. It is something we're thinking about. To be truly equitable we have to make our offers equally available, big and small. Partnerships being developed will help us figure out how to do that. We've narrowed it down to a small area where we can find diverse customers, but other organizations will know how to connect with them.

Jaimes Valdez: Incentive dollars would be another clear measurable way to determine impact. I would suggest adding that.

Emily Moore: Are you intending to track the cost of delivery separately? That would impact the cost-effectiveness of capturing those savings.

Ryan Crews: Yes.

Debbie Menashe: We can easily do that, but we don't have a metric, which is what you're suggesting. Thank you.

Cameron Starr presented on the first trade ally goal, which aims to increase enrollment of women and minority-owned businesses in Energy Trust's Trade Ally Network.

Kendra Hubbard: If there aren't diverse-owned businesses for Energy Trust to enroll, is there a way you can spur that? What if a robust population of women-owned solar companies doesn't exist yet?

Cameron Starr: We are also looking at the value to a contractor of joining our network. We are talking to Prosper Portland and a consulting group, to find out if there is a special package, we could create to support the new trade allies with training benefits or added incentives. We're trying to identify what the need is.

Kendra Hubbard: When prospective diverse trade workers are actually getting training, could they have a connection to Energy Trust to help start their own businesses?

Cameron Starr: Yes, for example when they are getting Construction Contractors Board training. We are trying to figure out how to integrate efficient training into the educational component. We are also leveraging our field staff. They are heavily involved reaching out to contractors. We'll be doing journey mapping to learn about barriers. For example, the barrier of working with more than one of our programs, which have different requirements. We're looking at this goal holistically to lower barriers across the board.

Alan Meyer: For context, what is the current total number of trade allies?

Cameron Starr: For trade ally contractors, about 1,400. Across the entire network, including retailers, the total is 2,300 to 2,400. In 2018, 118 new allies joined. With that, we think this goal is achievable, but it will take work. We also need to ensure that we support newly enrolled contractors once they have joined the network.

Cameron reviewed the second trade ally goal, which aims to increase the number of projects submitted by trade allies who are diverse. A recent survey showed that about half of contractors hadn't submitted a project in the last year.

Kendra Hubbard: I'd be interested to know which projects include energy-efficiency versus solar.

Cameron Starr: We have two solar contractors in that list, so there's room for improvement.

Kendra Hubbard: If they are doing some portion, the value of dollars spent will paint a different picture.

Lisa McGarity: Are you also going to look at it regionally?

Cameron Starr: Rural contractors are not left out of overall goals. We're implementing an increased cap for rural contractors to use business development funds. We have defined rural contractors and are looking at percentage of projects. We also opened up the offer to increase reimbursement to non-diverse contractors who are doing outreach to a diverse community. We're also looking at redesigning commercial and industrial business development offers.

Josh Peterson: Have you reached out to schools in Oregon to draw connections for future workers?

Cameron Starr: We haven't yet.

Josh Peterson: If you start early, you could grow your next generation.

Debbie Menashe: We have a scattering of those sorts of efforts, and these goals give us an opportunity to focus those efforts.

Josh Peterson: What's happening this year and next year will be different in 10 years.

Mana Haeri: New Buildings is doing work with internships to hire students to help meet net-zero goals. They're doing a lot with workforce development in design and construction.

Cameron Starr: Creating a more coherent program would be beneficial.

Debbie Menashe asked if there were any suggestions and whether any members saw points of intersection with their own organizations.

Holly Braun: I'm curious about intersection in a different way. When there is another advisory council, how does that interact with us? The diversity advisory council will monitor the DEI goals, but what is their expertise? Before, we had talked about stacking existing councils with people who are better at reaching underserved communities. Why is this group a stand-alone, and how do we learn from their expertise?

Debbie Menashe: We had the same discussion with the foundational DAC. They want to look at our core business mission and expand participation, so they're not operating in a vacuum. Part of the discussion was about interaction with RAC and CAC. There is an opportunity to review a meaningful advisory council role with this group that will give ideas to RAC and CAC.

Holly Braun: Who are the seven members?

Debbie Menashe listed all the members.

Charlie Grist: Thank you for putting your shoulder to this. I think you're out there on the leading edge, at least in the energy-efficiency realm. I hope you will share learnings with others around the region who are also starting to engage with this work. We have a lot to learn, and we will stumble but part of the value is to share those experiences.

Debbie Menashe: Thank you for giving feedback on the data work. We're going to present it at Efficiency Exchange in May. I'm proud of our staff for digging in.

4. Strategic Planning Development

Energy Trust staff lead an interactive discussion about the development of the 2020-2024 Strategic Plan that centered on a list of future opportunities the organization could pursue.

Hannah Cruz presented an overview of the internal strategic plan team and summarized the process to date to produce our next strategic plan. The latest activities lead to identifying a group of the most likely future scenarios expected to impact Energy Trust.

Jason Salmi Klotz: Regarding the opportunity around increased grid management tools, what's your thinking?

Fred Gordon: This is just the scenario for our environment, this does not necessarily describe us or our role. We're assuming it's going to be more important to deal with capacity and fluctuation

that come from wind, local and regional peak load. Increased sophistication would add value to the grid.

Hannah summarized the engagement that led to the scenarios being chosen and prioritized, explaining that the exercise to follow is meant to get feedback on the opportunities and think through a list of questions that was provided to the group earlier in the week on whether Energy Trust has the strengths and capabilities, and is uniquely positioned, to potentially play a role.

Mike Colgrove talked about roles for Energy Trust that relate to the future opportunities. Some are in line with Energy Trust's current scope, while others are beyond or tangential to the scope. Mike described a few examples for areas to innovate, evolve and improve upon that are within the organization's current scope, such as improving our ability to deliver targeted offerings and communicating customer benefit as offerings move more midstream and upstream.

Holly Braun: Why does maintaining customer connection matter as long as you get the savings?

Mike Colgrove: We have to explore to what extent that's important. Customers understanding that they received support, or a benefit, is important. When you don't have consumer facing materials in a transaction, how do you message that?

Jason Salmi Klotz: How does moving offerings mid- and upstream change your relationship with NEEA? PGE wants to work more closely between energy efficiency and demand response. This statement is very broad: understanding the interactivity.

Mike Colgrove: That's one of the opportunities on your worksheet, thinking about what that is. I think that engagement with you is what we're going to need. It's broad, partially because I don't know if anyone has fully defined what it could mean. We need to explore that. The targeted load management pilot has helped, but without further conversation with utilities, we don't know what role we should play. I don't know if there's a good answer right now.

Jason Salmi Klotz: You're asking us to help you define that role, but you should also ask input from OPUC and NEEA.

Mike Colgrove: Our residential program has already gone through changes that modified engagement mid- and upstream—I don't think it's new. It's evolving and we have to re-assess that relationship on an ongoing basis. How do we coordinate our work, building on one another? I don't think it will fundamentally change, but we'll have to continue having these conversations.

Lizzie Rubado introduced the group discussion activity. She passed out worksheets listing five roles and opportunities which Energy Trust could take part in the future. Participants were asked to complete questions on the worksheet, which asked to what extent the member thought Energy Trust was equipped to play a part, and how much they supported Energy Trust engaging in those roles.

Lizzie encouraged council members to participate to whatever extent they were comfortable, acknowledging that advisory members may feel uncomfortable expressing an opinion on behalf of their organization. She also noted that the responses would be confidential.

After participants completed their worksheets, Lizzie asked them to mark their answers on five posters, one for each role. They were asked to mark their positions on a continuum from strongly disagree to strongly agree for each of the five. After each participant added their feedback to the continuums, the group re-convened to discuss the results, as follows. There was not time to address all of the topics as a group.

A. If our natural gas utilities get involved in production and purchase of renewable natural gas, Energy Trust could use its existing expertise and relationships from renewable biogas electricity development to cultivate local sources of RNG at customer sites processing organic materials. Many respondents had a neutral response to supporting Energy Trust in this, but a few strongly agreed or agreed.

Elee Jen: I put neither, because you're talking about renewable biogas. I wanted to confirm if there is a high cost to participate in this market.

Michael O'Brien: When renewable natural gases burn, they still release greenhouse gases. We don't support that but wouldn't get in the way of others way who are trying to do it. It's very complex and not always clear what the impact is.

Al Spector: This is something we've been asking for and would support. You are positioned to incubate the resource within the region. We wouldn't necessarily want you to get into independent renewable natural gas business, but we support being a partner.

Holly Braun: We are in a similar position. We might have obligations around this, but we wouldn't want to get in the way and would support incentives and resources. In many cases, you're making a much better impact to air quality and emissions by capturing methane and harnessing it in a useful way.

Anna Kim: The OPUC is neutral to mildly supportive of Energy Trust having a role in renewable natural gas development, assuming that you're able to find a funding stream and the efforts would not impact delivery of the public purpose charge. This opportunity is one you are most uniquely positioned given your biogas expertise.

C1. In order to enable and support projects that may not be cost-effective, Energy Trust could quantify the economic value of non-energy benefits (like conserving water and other resources, improving health, better agricultural outcomes, and mitigating carbon and other environmental risks on energy-burdened populations) and use this to bring additional funding sources to the table.

Lizzie Rubado clarified that this opportunity refers to Energy Trust playing a role to quantify economic value of non-energy benefits in a deeper way, and then using that quantification to bring in additional funding sources from those who value those benefits. That may allow Energy Trust to carry out work that is not currently cost effective. Any changes to the cost-effectiveness test are the purview of the OPUC.

Les Perkins: We are on the strongly support side. From experience in a rural setting, lots of projects have benefits that haven't been quantified. There is too big of a gap, but we know from experience there are other benefits that need to be quantified.

Wendy Gerlitz: It seems like you're doing the same thing in both of those [C1 and C2] in terms of the process.

Lizzie Rubado: Yes, they're about the same 75 percent of the way, and then the ends are different.

Mark Wyman: We're talking about economic analyses. One creates parallel structure, the other opens up what we work with today and modify to assess all. They're different processes and ramifications.

Henry Lorenzen: I put down strongly disagree, because in my work on the council, it was a very time-consuming process even looking at one small thing, like getting people off of woodstoves.

Discussion went on for a long time and was complex. If you layered that into Energy Trust work, it would take enormous time and be controversial. I'm not sure what the ultimate benefit would be. If we want to prime projects that wouldn't make the cut, that can be done in other ways.

Anna Kim: I could marry both positions. Energy Trust is already working on different opportunities to quantify other benefits and funding streams, and the OPUC is supportive of that. We're not interested in funding costly, controversial quantifications, but ones that are reasonable to do are ok.

C2. In order to enable and support projects that may not be cost-effective, Energy Trust could quantify the economic value of non-energy benefits (like conserving water and other resources, improving health, better agricultural outcomes, and mitigating carbon and other environmental risks on energy-burdened populations) and add these as new value streams to the Total Resource Cost test.

Anna Kim: The OPUC defines what the cost-effectiveness test is, and we determine what measures could be given a cost-effectiveness exception. We are puzzled by the appearance of this in the list. That's within our purview and we're already in conversation about what the total resource cost test looks like. That's a conversation with OPUC staff.

D. Using a similar structure to our energy efficient/renewable energy market transformation programs, Energy Trust could play a role in administering funds to promote the purchase of electric vehicles and chargers, or to encourage the adoption of more efficient or demand response-enabled options of these technologies (to support charging during off-peak times to support grid flexibility objectives).

Frank Vignola: I don't think Energy Trust has much strength in that right now, but I'm very supportive of it. Energy Trust would have to develop some expertise.

Alexia Kelly: I strongly support, because there is a gap in electric vehicle infrastructure in Oregon. You're already equipped to do consumer-facing incentives, so it might not be a leap. It seems like a no-brainer, and there's more complex work around electric vehicle charging infrastructure.

Danny Grady: I think it's more of a question of your current administrative roles. Since it's not conservation or renewables, are you allowed to do it?

Lizzie Rubado: This scenario assumes a different funding source than our current funding. Your question about alignment with mission is a great one. How does vehicle electrification fit with our mission?

Emily Moore: From the NEEA perspective, it is a question in terms of wheelhouse, but potentially I see a complementary role. At NEEA, we're going to look at the infrastructure side of things. If Energy Trust takes on the consumer-facing role, that could complement our work.

Charlie Grist: I'm thinking about all of these in terms of scale. In my view, one huge contribution of Energy Trust is the development of the Trade Ally Network and relationships. I view that as a success and a unique attribute. Are the same skills as valuable in the electric vehicle world? It's so new that many groups may be vying for space ownership. You ought to think about whether there is anything in particular that's different for electric vehicles than for these other scenarios. It seems different to me because it could touch other markets you haven't touched.

Suzanne Leta: My overarching concern is how we make sure Energy Trust is not taking existing limited funds and using for one of these things. If these are within an expanding pot of money, and doing more in addition, using funds more efficiently, I'm generally supportive. It's unclear which of these would take funding away from current business.

Lizzie Rubado: The assumption is that other funding sources would be leveraged in order to pursue this larger work. But your point is still relevant. How do you manage scarce resources to serve a core mission, and where is there potential for distraction?

Anna Kim: It depends on the strategy. The OPUC is neutral assuming you can find the funds and the new activity wouldn't impact the public purpose charge.

5. Public Comment

There was no additional public comment.

6. Meeting Adjournment

The meeting adjourned at 4:05 p.m. The next Conservation and Renewable Energy Advisory Council meetings are scheduled for Wednesday, February 27, 2019.