

Conservation Advisory Council Meeting Notes

October 12, 2018

Attending from the council:

Holly Braun, NW Natural
Tom Elliot, Oregon Department of Energy
Will Gehrke, Citizens' Utility Board of Oregon
Kari Greer, Pacific Power
Charlie Grist, Northwest Power and Conservation Council

Anna Kim, Oregon Public Utility Commission
Lisa McGarity, Avista
Jeff Mitchell, Northwest Energy Efficiency Alliance
Dave Moody, Bonneville Power Administration

Attending from Energy Trust:

Mike Bailey
Adam Bartini
Tom Beverly
Mike Colgrove
Hannah Cruz
Andy Eiden
Fred Gordon
Jackie Goss
Mana Haeri
Kate Hanson

Andy Hudson
Marshall Johnson
Jessica Kramer
Steve Lacey
Spencer Moersfelder
Amanda Potter
Thad Roth
Zach Sippel
Peter West
Mark Wyman

Others attending:

Lisa Wood, ICF
Mike Christianson, Energy350
Rick Hodges, NW Natural
Mark Kendall, Energy Trust board
Angela Long, Pacific Power
Alan Meyer, Energy Trust board
John Molnar, Rogers Machinery

Elaine Prause, Oregon Public Utility Commission
Colin Podelnyk, ICF
Dan Reese, CLEAResult
Chris Smith, Energy350
Josh Weissert, Energy350

Executive Summary

1. Draft 2019 action plans for Planning and Evaluation and Northwest Energy Efficiency Alliance
 - Staff provided an overview of activities planned for 2019.
2. Targeted Load Management Pilot Findings
 - Staff described results of the Energy Trust and Pacific Power targeted load management pilot in the North Santiam Canyon area.
3. Development of Energy Trust 2020-2024 Strategic Plan
 - Staff led a discussion of likely market scenarios in the next five years. Scenarios will inform strategies for 2020-2024.

1. Welcome, Old Business and Short Takes

Hannah Cruz convened the meeting at 1:35 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/.

There were no changes to the September Conservation Advisory Council notes.

2. Draft Planning and Evaluation 2019 Action Plan

Hannah Cruz reminded members that the 2019 action plans will be presented in a board workshop next Wednesday, October 17 from 1:00 pm to 4:00 pm. Conservation Advisory Council members are encouraged to attend. One piece of feedback from last year's budget process was the need for more interactivity. This is an opportunity to interact with staff regarding the budget.

Spencer Moersfelder summarized the Planning and Evaluation action plan and context. In 2019, Energy Trust will likely change reporting methods from net savings to gross savings. We don't foresee roadblocks preventing this change.

The region is in a more capacity-constrained environment than ever before. This will factor into planning and will require a framework for how energy efficiency and demand response factor into energy savings and utility demand management.

Planning works extensively with program staff to update and develop new measures using measure approval documents. There will be significant measure change work related to new codes in 2019. Existing Buildings measures are expected to be impacted.

Holly Braun: What's the typical duration for measures?

Spencer Moersfelder: They normally expire in three years, unless the measures change more rapidly.

Will Gehrke: What measures are included in the expiring measure approval documents?

Jackie Goss: Expiring measure approval documents include measures that programs no longer use or are no longer cost-effective.

Fred Gordon: Mike Bailey presented information on expiring measure approval documents a few meetings ago, so information is available in Conservation Advisory Council meeting notes.

Peter West: Keep in mind that there's a whole family of measures within one measure approval document. Didn't we review about half of our measures in these measure approval documents?

Jackie Goss: Yes, I believe we reviewed about half of our measures, or roughly 1,000 to 1,500 measures.

Spencer Moersfelder continued that that the market is buying more efficient equipment, meaning Energy Trust can claim fewer savings. This is most dramatic in electric savings for the Residential program due to reductions in lighting and water saving devices.

Angela Long, Pacific Power: In looking at energy efficiency and demand response in cost-benefit analysis, are you talking about adding benefits or also costs? Will you talk to the utilities?

Spencer Moersfelder: This will be a collective discussion with the utilities.

Spencer Moersfelder continued that there are a few major process evaluations in 2019, along with impact evaluations. There will also be market research efforts and pilots.

Dave Moody: You're looking at a process evaluation for the entire Residential program. Will you do customer surveys? What other methods will be included?

Phil Degens: We haven't determined the full slate of methods we'll use.

Dave Moody: It does seem like a substantial effort.

Tom Elliot: Are you considering energy imbalance balance markets to address peak load?

Angela Long: That would probably come from electric utilities. There are tons of ancillary services provided and we would normally include that information in avoided costs that we give to Energy Trust for analysis.

Tom Elliott: Are you asking if there are ways to encourage it in other contexts?

Angela Long: Energy storage value is something we're actively looking at. I don't know if it's utility specific.

Andy Eiden: It would be at the utilities' behest to do that, but a storage water heater, for example, could be valued very differently depending on market rates.

Fred Gordon: We're working with PGE to better understand how storage with solar integrates with the grid. How do we understand values across multiple power markets? Defining this across markets is our strength.

3. Targeted Load Management Pilot Findings

Andy Eiden, planning project manager, described results of the Energy Trust and Pacific Power targeted load management pilot in the North Santiam Canyon area.

We began working with Pacific Power in fall 2016 by looking at its load planning and Energy Trust's projects in the pipeline. The North Santiam Canyon area is about 20 miles southeast of Salem with about 2,500 people. It's a small area, but it is similar to other rural territories on Pacific Power's grid. It has a flat load profile over summer and winter, and a lengthy peak time. It has a mix of residential and commercial customers with a couple of very large industrial plants. The pilot goal was to reduce demand during specific time periods.

This was a new effort for Energy Trust and Pacific Power that crossed functional areas and required coordination between Pacific Power and Energy Trust staff. As part of this pilot, we did not change or create new measures. We focused on targeted marketing and program delivery tactics to this geographic area.

We offered solar incentives, but they didn't exactly match the load shape of the area, so we did not include them in targeted efforts.

We offered a new measure for heat pumps in manufactured homes, which had not yet been screened for cost-effectiveness. Since there were manufactured home parks in the area, we decided to deploy it.

Hannah Cruz: How did you identify projects that were influenced by the targeted load management pilot efforts?

Andy Eiden: Results were based on projects that came in after the effort. We didn't survey customers directly, but we can in the future. We saw an increase in participation. Direct installation of lighting got people to participate right away. There was an increase in winter kilowatts above baseline. We offer a lot of heating measures. There was a project with a large process load that helped reduce energy use in summer and winter.

Charlie Grist: On the 22 percent participation increase, that's over how many quarters?

Andy Eiden: About a year.

Charlie Grist: Compared to the average over a three-year period?

Andy Eiden: The point of comparison is a 12-month average over a three-year period. It's scaled over a year, not seasonally distorted. This was a learning pilot to see what we can further hone in on in the future.

Tom Elliott: Did you pull out the few large customers that made up the bulk of the energy saving? Everyone that's left might help you tease out the effects.

Andy Eiden: Commercial projects increased from one to 14. Residential is harder to sort out because we have limited data. Once you isolate large industrial customers, savings are not enough to be meaningful for load planners. We did observe a large project in 2016 at the end of the baseline period.

Alan Meyer: Industrial businesses normally can't make upgrades within one year.

Andy Eiden: We'll close the pilot at the end of this year and reflect on how that integrates into planning next time around.

Charlie Grist: How many commercial customers are there? Projects per customer will help determine that.

Andy Eiden: There were 100 to 300 commercial customers.

Lisa McGarrity: Can you give an example of what caused the decline in summer energy use?

Andy Eiden: That was dependent on large industrial projects and the load shape of savings.

Chris Smith, Energy350: There was a large heater project that had zero summer load, as an example.

Andy Eiden: Energy350 has kept up with different plants in the area, which helped.

Chris Smith: We have a lot of projects from now through early next year. There's a time lag and we'll see results later.

Dave Moody: What's the cost compared to traditional transmission and distribution efforts?

Andy Eiden: We need to take a close look at the numbers before we can speak to it.

Charlie Grist: You took your program savings by measure. The green is lighting. It's a nice depiction. Everything contributes. It doesn't have to be a peaky resource to contribute.

Andy Eiden: Pacific Power's engineers were able to conceptualize what contributed. They could see what lighting changes would contribute, for example.

Andy Eiden continued in the future, we need to plan and coordinate communications more completely and further in advance. We also need to distill what we want to answer with the next pilot. We are working with Pacific Power to design the next pilot. We may use bonus incentives that would allow us to keep current measures. We also want to select a location that allows us to integrate rooftop solar.

Charlie Grist: There's a lot of lumber and wood processing in North Santiam. The shape for that depends on whether they run one, two or three shifts. It depends on wood being available and demand for wood products. You need to look more specifically at the plants. If they are one-shift plants, the savings would just happen anyway.

Andy Eiden: These analyses are dialed in to plant specifics, using a mix of stock load shapes.

Charlie Grist: What's driving the problem, and what's addressing it? You'd want to pick up differences in shifts between summer and winter.

Fred Gordon: What's important is different from one distribution point to the next, and you have to collect information quickly to understand it. How do you get information and proceed quickly?

Lisa McGarrity: Is this an electric-only area? How do you account for that in your analysis? You'll have effects from lighting on gas.

Andy Eiden: We haven't accounted for it, but we can in the future. We're working with NW Natural now.

Lisa McGarrity: What uptake did you have on the gas side?

Andy Eiden: We haven't evaluated gas results yet.

Steve Lacey: We need to see if there was an increase in gas savings due to marketing for electric upgrades.

Andy Eiden: If we can start answering research questions to help understand load in an area, we should include them. Summer load changes lead to questions about heat pump impact on summer load.

Charlie Grist: It's diversified: Not every house heats their water at the same time.

Andy Eiden: We are looking into how to use prescriptive measures to treat diverse households.

Holly Braun: There's an idea of having constraints that drive targeted efforts. There are also communities that have action plans and they look to the utilities to help. This is similar to targeted efforts. So many communities may want targeted efforts, and this may be replicable.

Angela Long: There's a transmission and distribution planning process before any of our projects. Cost isn't how we look at this. We have upgrades we're required to do. Through a capital projects process, we narrow it down to projects that would be competitive in cost. We vet the communities and give that list to Energy Trust for further refinement. Andy has done a great job at the front end of the process. Now we are working on the back end. This pilot was focused on rapid deployment.

Andy Eiden: There are obvious overlaps with our diversity, equity and inclusion efforts.

Holly Braun: You had to create support, but if you have a community doing that on your behalf, awesome!

Andy Eiden: We saw that with the Bend Energy Challenge, for example.

Alan Meyer: Have we proven that this works?

Andy Eiden: No, not yet. Right now we're using power council load shapes. Power council load shapes may not always align with the actual load shape of the area due to factors like plant closures. There are things we need to understand better. We didn't do a full impact evaluation, like billing analysis or customer interviews.

Hannah Cruz: Having a local champion who really knows the customers was helpful, like Alan Meyer Jr., and the OPUC.

Angela Long: Alan has been promoted, but there are other people who can help. It will depend on the situation in the community and who is there with connections.

Charlie Grist: This is really great. It seems like there are secondary findings on scaling up and increasing pace. In the hard-to-reach market report we did last time, the annual touch in most segments is 0.5 percent. Commercial could be 14 percent, but there's a big cost. The findings will be helpful.

Fred Gordon: While the PGE demand response testbed is focused on system peak versus local peak and has not yet been approved by the OPUC, it has ambitious goals and commensurate costs. If you want to achieve 16 percent market share in two years, that's difficult. Maybe you will be successful if you pay most of the cost of equipment. Targeted efforts are built around intensive marketing of off-the-shelf technologies.

Kari Greer: Is this waiting for OPUC approval?

Fred Gordon: I don't think they've seen the final proposal yet.

Charlie Grist: I'm happy to see your extreme weather comment. All of our shapes look at normal weather.

Andy Eiden: We need to partner with other groups to make sure the research is thought out.

Hannah Cruz: I included more resources about this in our packet, including activities in other states and other organizations.

4. Draft Northwest Energy Efficiency Alliance 2019 Action Plan

Jeff Mitchell summarized NEEA's 2019 action plan. On the residential side, we will still focus on heat pump water heaters. It's an important measure to the region, and sales have continued to grow from less than 1,000 to over 13,000 units. We will transition out of the ductless heat pump market, which we've been in since 2008 and market infrastructure is strong. Next Step Homes will be NEEA's first dual-fuel program in 2019. We've historically focused on electric.

On the commercial side, we will move out of the low watt T8 program, which impacts commercial maintenance. We've done exciting work, but the impact was less than we expected. We're working on a very high-efficiency, dedicated outside air program. Case studies on these pilots will be available soon.

Our commercial building stock assessment is in development, and we hope to wrap up the field work by Q4.

There are a number of efforts going on in natural gas, including a gas heat pump water heater. We are working on how to bring a market rate product in next year.

Alan Meyer: What is a gas heat pump water heater?

Jeff Mitchell: It's driven by a gas engine instead of an electric motor. There's a coefficient of performance above one on a heat pump. A gas heat pump can give between 1.2 and 1.4 COP.

Holly Braun: Now that there will be new homes through NEEA and Energy Trust, we want to understand who is doing what and what savings come from NEEA versus Energy Trust.

Peter West: This is part of our conversations with NEEA and the utilities.

Jeff Mitchell: In 2018, we did a lot of work to define gas savings and understand opportunities.

Holly Braun: Deployment wouldn't happen in 2019?

Jeff Mitchell: It would be the following year, most likely.

5. Development of Energy Trust 2020-2024 Strategic Plan

Lizzie Rubado led an exercise to develop future scenarios that can be used to test potential strategic plan strategies. What will be the key drivers in scenarios? What is a plausible future?

Anna Kim: How will these be used in the planning process?

Lizzie Rubado: The scenarios give us context as we think about the future, along with boundaries for our five-year strategic plan. The scenarios provide context and help us think through whether our strategies will be effective in that context.

Conservation Advisory Council members believed that carbon policy or carbon pricing, a greater focus on utility peak, and an increasing focus on equity in energy policy will have a large impact in the future.

Lizzie Rubado led the group in a discussion about the policy outlook and market potential for the next five years, and asked attendees to share opinions about whether the outlook five years from now is better, worse or similar to today. Participants were given time to consider their responses independently on worksheets, then shared their thinking with the group.

In this discussion, Conservation Advisory Council members speculated that the outlook for distributed renewables will improve in the next five years, driven by carbon policy, customer concerns and interest in resilience, consumer and local government interest in climate planning and goals, and evolution of utility rate structures and business models that will benefit distributed resources.

Conservation Advisory Council members had mixed opinions about the outlook for energy efficiency, with many members speculating that the market potential will not change much from today. Some members thought the outlook will improve slightly, impacted by carbon policy, increased avoided costs and technology will bring more opportunity than expected. Other members thought that the outlook will worsen, speculating that carbon policy will not have any impact on the economics of energy efficiency within five years, avoided costs will continue to decline and the market is already saturated with lower-cost technologies.

6. Public Comment

There was no additional public comment.

7. Meeting Adjournment

The meeting adjourned at 4:30 p.m. The next Conservation Advisory Council meeting will be held on Friday, November 30, 2018.