Conservation Advisory Council Meeting Notes

February 4, 2015

Attending from the council:
Garret Harris, Portland General Electric
Holly Meyer, NW Natural
Blake Shelide, Oregon Department of Energy
Jason Klotz, Oregon Public Utility Commission
Don MacOdrum, HP Guild
Don Jones, Jr., Pacific Power
Brent Barclay, Bonneville Power Administration
Andria Jacob, City of Portland
Scott Inman, Oregon Remodelers Association
Wendy Gerlitz, NW Energy Coalition
Jim Abrahamson, Cascade Natural Gas
Stan Price, Northwest Energy Efficiency Council

Attending from Energy Trust:
Kim Crossman
Peter West
Tom Beverly
Fred Gordon
Jay Ward
Hannah Hacker
Julianne Thacher
Sarah Castor
Amber Cole
Sue Fletcher
John Volkman
Debbie Menashe
Dan Rubado
Jessica Rose

Others attending:
Alan Meyer, Energy Trust board
Mark Kendall, Energy Trust board
Becky Walker, CLEAResult
Marty Stipe, ODOE
Nick O'Neil, Energy 350
Chris Smith, Energy 350
Tom Phillips, Honeywell
Tim Miller, CEWO
Christina Cabrales, CSG
Sara Fredrickson, CLEAResult
Audrey Burkhardt, NW Natural
Cameron Gallagher, Nexant

1. Welcome and introductions

Kim Crossman convened the meeting at 1:30 p.m. and reviewed the agenda. The agenda, notes and presentation materials are available on Energy Trust's website at: www.energytrust.org/About/public-meetings/CACMeetings.aspx.

2. Old business

3. 2015 CAC Operating Principles (discussion)

Kim Crossman called for feedback and comments about how CAC operates in 2015.

Don Jones: There are other users of the information. How has it worked for them over the last year? We've memorialized our rules and they have worked; at least there weren't any issues that came up that didn't seem to be covered in the rules.

Kim: Staff appreciate the good discussion here and walk away pleased with the results.

Peter West: Our action plans included a number of things that came out of the discussions here. I found them valuable from that perspective. At the staff and management level these are good rules of engagement. The same is true for RAC.

Alan Meyer: I thought the strategic plan discussion was helpful. Being here and seeing the interaction and the results was good.

Mark Kendall: We are still growing into something Don mentioned: we are formalizing and making things more overt. At what level do the things here rise to the board? We took this on a couple of years ago, and articulated and clarified it here. It has begun. It's beholden on board members who attend these meetings to be a touchstone for other board members. There are issues that seem urgent here but end up as a bullet in the board packet. The call for more board participation was important and good. Now let's operationalize it in a meaningful way. We want to keep that process part conscious.

Don Jones: My question was a reality check for how it's working: knowing how it flows back from us to staff for planning. I wanted to check my perception.

Holly Meyer: Item number two says 'draft a schedule and set expectations for the year'. I feel like we haven't really looked at that for 2015.

Kim: You'll see that at the next meeting at a high level. It's a to-do for us.

Holly: It makes a lot of sense to have board members here because it seems like that creates a better connection to the board. Also, new CAC members are here, and we want to make sure they have a mentor or some orientation.

Kim: We will take a lesson from the RAC and do more onboarding work with new members.

[Holly Meyer and Don Jones indicated an interest in being a touch-point for new members.]

CAC adopted operating principles for the year.

4. Preliminary Results (information)

Peter West discussed preliminary savings results from 2014. These are unverified numbers but reasonably close to final.

Peter: We've had a great deal of turnover in the residential sector. Thad Roth temporarily replaces Diane Ferington. Betsy runs the renewable programs in the interim. There is a search underway and a posting on the website.

Mark Wyman replaces Matt Braman who went to CLEAResult. Taylor Bixby works with him in particular. Marshall is still in place. Christian Conkle has moved to the forms manager position.

Kate Scott is the temporary Multifamily manager. Scott Swearingen is working with IT on our data processing replacement project.

See slides for program results.

Finals will be available in April. Right now these are preliminary and contents may settle.

Scott Inman: How is residential lighting tracked; like if I bought lighting at Home Depot?

Peter: Once the retailer scans it, they have the information and charge us for the difference. We work with BPA in dual utility areas using algorithms that NEEA helped us develop.

The slides show net savings.

Mark Kendall: How closely aligned are these now or are they aligned on IRP goals?

Peter: For 2014 we have a timing issue with both PGE and Pacificorp. We are slightly off from IRP goals. If we can identify more savings the process allows us to achieve and reach them.

Mark: We align ourselves with IRP now, correct?

Don Jones: You're off the year it's filed for Pacificorp and back on the following year. It alternates every other year.

Holly Meyer: It was interesting to look at industry vs. residential. They're close to each other on the electric side but it's double on the gas side. It's interesting for us to see this as measures change on the gas cost effectiveness docket.

Kim Crossman: We've been doing gas industrial work for 5 years now, and a lot of people are on transport gas. You also see NEEA savings on the electric side which has a big impact.

Don Jones: Did the financial side land commensurate with the savings?

Peter: We were right on target for what we forcast in September. We underspent our official budget, as predicted. The financials are closing and we need to get that back to people. April will show the full answer.

5. Path to Net Zero (information)

Jessica Rose presented information about the Path to Net Zero pilot and current initiative.

Jessica: CLEAResult, formerly PECI, delivered this in the New Buildings program. Becky Walker, Cindy and Nicole helped build this from a pilot to what we have today.

See slides for details.

There is public information on New Buildings Institute website about the 200 buildings nationwide that are net zero.

Mark Kendall: Were most of the early adopters owner occupied?

Jessica: When we started, the majority could be placed in that category, but it's changing. As more tenants get involved it will become a bigger piece of the pie.

Don Jones: This is the 212 code reference?

Jessica: This is 2014 code.

Wendy Gerlitz: Can you give us a sense of how many buildings in Oregon this would be each year?

Jessica: I think we may be around five percent for our territory.

Becky Walker: The number always comes out in square footage. We enrolled 500 projects in our program. There are maybe 1000 projects across Oregon.

Don: You want a numerical construction start number, right?

Wendy: Where is the starting point? You did nine pilots, but what is the goal by 2030 in number of projects? I'm interested in the scale.

Jessica: Going 30 percent beyond code is possible in our custom program. We see that happen now. It's hard to know and we'll measure on a quarterly and annual basis. It will be a portion of the approximately 500 buildings we enroll in a given year. If you imagine that 40 percent beyond code, that's the starting point. We want at least 10 to go beyond that. We may manage up to 30 buildings at a time which are at various stages on the path to net zero.

Don Jones: You hit them at about 50 percent CE and it seems that you've hit the BE process. We have sometimes hit them twice: once at 50 percent CE level and then come back at about 80.

Jessica: We are looking at 50 percent and we will come back. We have installation incentives we can put out.

Mark: Is commissioning design review having someone come in and review during the design phase, or is it waiting until the project is built and saying it's wrong?

Jessica: Ideally, they will be part of the design team, but it's during design review. Early is best.

Don Jones: Those model savings incentives are regardless of cost, right? You end up with a negative incremental cost otherwise?

Jessica: We don't pay more than 100 percent of incremental costs and have a cap of $500,000. Negative costs aren't typically paid. It should be captured in the design process.

Overall, we don't want the program itself to be a barrier.

Garrett Harris: What are the levelized costs and how do they compare with standard New Buildings costs?

Jessica: It's a little more costly. Some buildings don't get the installation incentives. It will vary. It doesn't show up, being such a small number out of the program's 500 buildings. There are much deeper savings, so it may be more cost effective.

Holly: Was the Edith Green building in the pilot?

Jessica: Yes.

Mark: What was the big surprise learned from the pilot?

Jessica: It's always surprising there isn't more early engagement. Things move rapidly, and taking the full day with us in early design is a big step beyond a typical charrette. We really help them focus with the early design meeting. They are often getting worried at the charrette because of accelerated timelines.

Don: Is an owner's rep, outside the architecture and engineering firm required at the charrette? It's a wake up and engagement challenge.

Jessica: It's a requirement: a good connecting point.

Mark: What engagement has the state building codes division shown in this pilot with their cycle of code development?

Jessica: This is a picture of transforming the market. Organizationally, we engage with ODOE. They are well aware of the program. There is potential for tax credits to help. The second piece is bringing the bottom of the market up. That happens through NEEA quite often. That came out of their recent process. That dialog is happening.

Mark: As we look at new commercial buildings, with the advent of LEDs, getting 20 percent better than code is like falling off a log. Is there an initiatiave to move the baseline as part of our strategy?

Jessica: They are on their own timeline. There are things we can do with incentive design to influence it.

Wendy Gerlitz: Are there other entities offering anything around net zero, nationally?

Jessica: There are others all over the map: Chicago, California and others. They are very similar in design.

Andria Jacob: The city's coming action plan supports net zero. What support would be helpful from a jurisdictional standpoint?

Jess: There's a lot of jurisdictional creativity that can happen. We can talk offline.

Blake Shelide: ODOE offers tax credits that could help align and advance reach code. There is some work with Warren Cook. How is net zero being defined? How is site vs. source being looked at?

Jessica: We look at site usage. A lot of customers want to know their own energy bill.

6. NEST Thermostat Evaluation (information)

Dan Rubado presented results of the Nest thermostat evaluation.

See CAC meeting slides for details.

Mark Kendall: Is Nest an acronym?

Dan: It's the company name: Nest Labs, which is now owned by Google.

Mark: So Nest's capabilities are not in the thermostat? They have to source those from the Internet?

Dan: The logic is inside the thermostat, but it has to receive weather data and remote control capabilities from online. It also updates its operating system from time to time.

Mark: Did we correlate savings with people making changes to the settings?

Dan: We did, but the numbers were small and we may not be able to tell much.

Don Jones: There's a single motion detector in the unit?

Dan: Yes. You would have to pass the thermostat during a two hour period to avoid occupancy sensor changes. It's supposedly tuned so it doesn't pick up pets.

Holly Meyer: What's the best point about the Nest?

Dan: Being able to turn it on and off with a smart phone and automation.

Don MacOdrum: Does it track energy use?

Dan: It tracks furnace run time, and will tell you if you're making whatever changes that cause the furnace to run.

Mark: Is there any anticipation of cooling load savings?

Dan: Nest claims 15 percent from recently published studies.

Brent Barclay: What did they claim on the heating side?

Dan: They claimed 10 to 12 percent – which is what we saw.

Mark: What portion of that savings is attributable to these settings?

Dan:

Jim Abrahamson: Was the baseline the home's actual metered use?

Dan: Yes.

Holly: You offered a free Nest, and the people who took the offer may have a propensity toward energy savings. It could be a skewed sample.

Dan: The people who would go out and buy it would already be a skewed sample. There was a small percentage of uptake on the offer. We sent it out to over a thousand people.

Wendy Gerlitz: There's backup heating savings that happen automatically. Other things are their voluntary efforts. Did the survey pick those apart?

Dan: We tried to look at that: what features they used, like auto-away and smart phone settings. The numbers between people were small. They did impact things but not significantly.

Don Jones: Was there any temporal overlap with Home Energy Reports?

Dan: We screened those out.

Alan Meyer: I am participating in the Lyric pilot. I saved a lot while I was away and could monitor while I was away and could turn the heat back up before I came home. Even if you don't do anything, it will save energy.

Brent: Was one of the baseline questions whether they use the fan continuously or just when the system is running? One of the motivations to move off the max savings setting may be made up with running the fan more.

Dan: I don't know that part. Once this is an incentive in the market it will be a self-selecting group that is comfortable with the technology.

Mark: What kind of data do we know about the control group?

Dan: We assume they were similar. We don't know much more than that. They were the same group of people with same selection criteria.

7. GHG Emissions Reduction at Northwest Natural Gas (information)

SB 844 passed during the 2013 legislative session and allows natural gas utilities to develop voluntary projects to reduce greenhouse gas (GHG) emissions. Guest speakers Bill Edmonds and Barbara Summers of NW Natural will describe briefly how this new law works and describe some of the early emission reduction projects under development.

See slides for details.

Mark Kendall: Does the MW capacity include transport?

Barbara Summers: It does, and I'm indifferent to whether it's transport. Energy Trust would pay for efficiency and ODOE would look at upfront capital investment. We have the same eligibility criteria and same evaluation and verification processes. We would have to verify and measure over the entire period we pay 844 incentives.

Don Jones: This assumes that none of these come in under a QF – no PERPA contracts.

Barbara: I haven't addressed that at all.

Kim Crossman: When we talk about what's efficient enough to receive it, on our side QFs aren't going to be efficient enough to receive incentives.

Barbara: If it isn't utilizing the waste heat, we probably aren't going to use it because it won't be efficient enough.

Don Jones: It seems like that would be perfect to get them to QF status.

Barbara: I haven't looked at it, but it's on my list.

Mark Kendall: This is an innovative program. Are others around the country engaging their commissions in other states?

Bill Edmonds: This new law allows this kind of thinking and opens things up. Washington is also thinking about it. The Oregon law was a commissioner's idea to begin with.

Mark: There is a long lead time and background work. Is that allowable under the four percent?

Barbara: We asked that of the commission and we can incur this as a utility cost. A lot of times they are separate, but this is different.

Don MacOdrum: We got the update on the highlighted programs. What about oil conversion?

Bill: There's not much more than what I covered, but there is a team working on it and the barriers are gas availability, low income and renters. Others are still slow to take up conversion. Low oil prices aren't helping either. How do you overcome those barriers? On-bill financing for one.

Kim: If there were people here who consider themselves stakeholders, but aren't plugged in, where do they learn more?

Bill: They can send me an email. Public process will be more formal and will be at the commission. Jason Eisdorfer will likely oversee that process at the commission.

Kim: This is something very unusual and innovative, and something for Oregon to be proud of.

8. Natural Gas CHP at Energy Trust (discussion)

Overview and discussion of program and technical guidelines for high efficiency CHP projects, including proposed incentive change. Customer projects and the custom process are not well understood. This is really indicative of the custom process.

Kim Crossman: There has been great coordination between Energy Trust, ODOE and NW Natural. ODOE has been the convener and we are grateful for their playing that role.

See slides.

Don Jones: When we say 'new turbine', that's new as of when?

Kim: That's 2006, currently. This isn't the baseline; just the hurdle it needs to pass. We didn't see any immediate need to update the baseline, but we can.

Mark Kendall: Is this the standard for siting?

Don: There are select people at my organization who would have to look at these slides and I'll take them back for review.

Peter West: This is a reference point.

Kim: This was agreed to between the utilities and CAC back then. That's something that belongs with Fred's shop. Some micro turbines won't meet our cost effectiveness tests. Fuel cells won't, either.

Holly Meyer: Are you allowed to count non-energy benefits?

Kim: Yes, and that's the beauty of the custom process. There are quantifiable non-energy benefits to this. This is a true retrofit, but people are also trying to solve other problems. It must be cost effective, like all custom projects.

Wendy Gerlitz: I'm wondering how that level relates to the cost effectiveness?

Kim: By and large it won't drive it hard. The costs remain the same wherever we set the incentive.

Wendy: What's the threshold you wouldn't want to go beyond?

Kim: We have programmatic cost effectiveness requirements. Let's say four cents levelized. It's far below 25 cents and all the programmatic costs get layered on top of that. We are well under where we want to be on our levelized costs.

Fred Gordon: They come in cheap.

Kim: They are expensive projects. The savings do come in cheap enough, but won't come in on the cheap end of cheap.

Chris Smith: It's a measure of the amount of extra fuel you are pulling in to generate electricity vs. what you would use for heat anyway. It's an apples to apples comparison.

Don: Is this new or a revision of something you had?

Kim: It's new, but it's a combination of what we already did. It lived in many different places. Chris Smith and Nick O'Neil had a huge hand in taking all of this and converting it into the documentation.

Mark: This is industry standard arithmetic, correct?

Kim: This is industry standard.

Don Jones: How does this relate to the IRPs?

Fred: It's not in the supply curves. There's a little increment the board put in for other things that might happen. We used it to slightly hedge up our goals.

Garrett: We decided that eight cents was the incentive, but how does this work with 844?

Kim: The point here is that there are stacked incentives. We don't know what the NW Natural share is. ODOE is fairly clear. What portion of project costs are we supporting? We tend to be first in.

Fred: This is capital costs, not fuel costs.

Kim: Yes, this is capital.

Chris: NW Natural's payment is annual, by the way.

Mark: That's ITC, does it include accelerated depreciation?

Chris: No. It's simpler than that.

Kim: We are also looking at much more complex models, but for our designs we don't have a lot of flexibility. We wouldn't pay more than other custom incentives. Our cap is at 25 cents. We are trying to see if we can optimize everything. Our incentives are not an insignificant part of project costs.

Holly: When you say 'current' you mean with the NW Natural 844 work?

Kim: The economics weren't there previously, but they still aren't slam dunks.

Peter: Based on my renewables experience, the ITC and accelerated depreciation would drive you to a spot near the hurdle rate. You still need someone with a tax liability to do this.

Mark: The red squares today would be off the top of the slide.

Kim: Will it actually fly even with higher incentives? We don't know.

Don Jones: I will reiterate my QF comment. There's a QF incentive in there too. Would you pay all of this?

Alan Meyer: With avoided costs is there a QF incentive? I don't believe so.

Holly: I'm thinking of the bottle bill. When it was instituted, five cents was worth what 25 cents would be today. I'm glad you are looking at higher incentives.

Brent Barclay: If you had a straight heat recovery to electric conversion with no net gas consumption would it go through this program?

Kim: If it's heat recovery it goes through gas efficiency. This is all about policy stuff. If it's straight heat recovery with no gas, it's a power generation question.

[The CAC was tentatively supportive of an incentive increase when polled.]

Jim Abrahamson: I get a little nervous with this being the last presentation of the day and asking how we feel. We may rethink it later.

Kim: Generally, incentive increases are vetted here, but we generally carry them out inside the programs. CHP is odd, so I wanted folks here to see it. We know we have to increase incentives. The question is where we set the level.

Jim: What would be the dollar impact on Energy Trust of doubling the incentives for CHP?

Don Jones: What was spent on OSU?

Holly: It's electric, so not us.

Kim: At worst case we are coming in under two cents per kWh and under the OPUC threshold.

Peter: Not more than 1mm per year.

Wendy Gerlitz: I wonder if you'll be quickly bumping against the cap if a couple of large projects come in?

Kim: Calling this the same as everything else makes it easier to ramp it back like everything else we do. If we end up picking and choosing, it gives CHP a level playing field with others. We end up two years down the road and have already crossed the threshold. Larger sites are the ones which are best for CHP. We hope for a lot of them on the smaller end.

Don Jones: At this point, Pacific Power will abstain until we consult with some internal folks.

Kim: We can talk. We have at least a month before we roll anything out.

Mark: This wouldn't come to the February board meeting, so we can discuss it here next time, correct?

Kim: I will be out, but Peter will be here. I'm hearing that the other incentives will be ready in June or July. We do have three customers considering CHP and are curious about more money being available.

9. Meeting adjournment

The meeting adjourned at p.m. **The next scheduled meeting of the Conservation Advisory Council will be on March 11, 2015, from 1:30 p.m. – 5:00 p.m.**