Conservation Advisory Council Meeting Notes

September 9, 2015

Attending from the council:
Warren Cook, Oregon Department of Energy
Charlie Grist, Northwest Power and Conservation Council
Julia Harper, Northwest Energy Efficiency Alliance
Garrett Harris, Portland General Electric
Don Jones, Jr., Pacific Power
Don MacOdrum, Home Performance Guild of Oregon
Holly Meyer, NW Natural
Elaine Prause, Oregon Public Utility Commission

Attending from Energy Trust:
Susan Badger-Jones
Mike Bailey
Amber Cole
Kim Crossman
Sue Fletcher
Jackie Goss
Fred Gordon
Marshall Johnson
Erika Kociolek
Steve Lacey
Ana Morel
Thad Roth
Erin Rowland
Adam Shick
Julianne Thacher
Katie Wallace
Mark Wyman

Others attending:
Dave Backen, Evergreen Consulting
Susan Brodahl, Energy Trust board
John Frankel, NW Natural
Sara Fredrickson, CLEAResult
Chris Smith, Energy 350
Cameron Gallagher, Nexant
Mitt Jones, Home Performance Guild of Oregon
Alan Meyer, Energy Trust board
Tim Miller, Clean Energy Works
Greg Stiles, Ecova

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

The council approved July meeting notes without comments or changes.

3. Executive director hire and transition

Susan Brodahl, a member of the board's Executive Director Transition Committee, presented plans for recruiting, hiring and transitioning to a new executive director. Energy Trust's current executive director, Margie Harris, will retire at the end of 2016.

Susan Brodahl: Based on discussions with the board, the Executive Director Transition Committee proposed a list of desired traits and capabilities of a new executive director: strategic thinking, planning and execution; executive level management; effective communications; belief in mission; sustaining Energy Trust's culture; and in-depth industry and subject matter knowledge. The committee is reaching out to stakeholders for input, and is seeking input and new ideas today from council members.

Susan Brodahl: What current and future opportunities and challenges should the board have in mind when selecting an executive director?

Julia Harper: Implications of the Environmental Protection Agency's Clean Power Plan.

Don Jones, Jr.: Flat or declining utility loads.

Marshall Johnson: Climate refugees.

Greg Stiles: 2020 federal lighting standards

Marshall: Opportunities related to carbon markets.

Garrett Harris: Challenges regarding cost-effective energy-efficiency measures given low costs of natural gas, changing code standards and market saturation of energy-efficiency measures.

Holly Meyer: Strategic thinking to position Energy Trust to solve the next challenges, such as how Energy Trust can fit into carbon reduction efforts. I also want to stress the challenge of finding cost-effective gas-saving measures.

Julia: Opportunities and needs to combine energy-efficiency with water conservation efforts.

Steve Lacey: Political acumen is missing from the list of desired traits.

John Frankel, NW Natural: Increased housing density in the Portland market and increased multifamily building construction.

Marshall: An urban planning background may be helpful.

Warren Cook: The current and future state of the public purpose charge and SB 838 funding.

Don Jones, Jr.: Energy policy chops, especially at the state level.
Don MacOdrum: I agree that the new executive director needs solid policy experience and legislative savvy.

Tim Miller, Clean Energy Works: A background in innovation, such as folding in other publicly funded objectives like resilience. Innovation in looking at new marketing channels, such as through partnerships.

Susan Brodahl: What capabilities and traits are most and least important to you?
Don MacOdrum: A new executive director needs all of those traits. We should be talking about the depth of expertise they need to have in each category. What is the minimum level of expertise or skill needed?

Susan: What's the least important trait? What can we train for?
Don MacOdrum: You can train for Energy Trust culture. In fact, less exposure to Energy Trust's history and culture may facilitate more innovation and opportunities to forge new relationships.
Don Jones, Jr.: I agree that culture is something you can train for.

Garrett: I don't think it's a bad thing for the new executive director to challenge Energy Trust's culture. I would tweak the language from "sustain" to "sustain and enhance." I think industry

knowledge is critical, but the incumbent does not necessarily need deep subject matter knowledge.
Holly: I agree that deep subject matter knowledge is not critical. I suggest breaking out industry and subject matter knowledge into two bullets. Communications skills are extremely critical.

Garrett: I suggest adding collaboration to the communications bullet.

Julia: The top qualities are strategic thinking, management and communications. Industry and subject matter knowledge are secondary to those core management and leadership skills. Finding someone who believes in the mission should be easy.

Don Jones, Jr.: Some industry and subject matter knowledge is important, though it doesn't need to be the candidate's top strength.

Don MacOdrum: You could combine the culture and mission bullets, and create a new policy bullet.

Susan Brodahl: Is it important for the person to be from the Pacific Northwest?
Council members agreed that it's an advantage but not critical.
Warren: The Pacific Northwest has unique energy issues that a candidate must understand.

Marshall: Innovation. Creativity. Change management. IT systems expertise.

Julia: Integrity is an important trait to add. It's important to preserve the integrity of the organization.

Susan Brodahl: What is most important about this hiring and transition process?
Don Jones, Jr: Hire the right person. Founder and successor transitions are very difficult.
Susan Brodahl: The committee is not just focused on selection, but also transition. We will be involved in the incumbent's first 18 months.

Don Jones, Jr.: Will the new executive director be an at-will or contracted employee?
Susan: Likely at-will, but I will need to refer that question to Human Resources.

Don MacOdrum: Continuity of leadership is important. We need systems in place that allow for the executive director to be innovative and creative.

Susan Brodahl: Send additional questions or comments to Ken Canon, Executive Director Transition Committee chair. Your feedback will be consolidated by the committee and presented to the full board.

Greg Stiles: I want to note what I learned in another stakeholder session, which is the committee will not use a headhunter.
Susan Brodahl: Energy Trust has a strong network and reputation, and we're not sure it's needed.
Don Jones: It could be helpful for a headhunter to find and encourage as many qualified applicants as possible.
Susan Brodahl: There is room in our timeline to engage a headhunter after we receive a first round of applications, if needed.

Holly: I feel strongly that the candidate should embrace the role of natural gas in our clean energy future, and not just focus on electric efficiency opportunities.

4. Gas fireplace market transformation studies

Mark Wyman, New Homes and Products manager, and Adam Shick, Planning project manager, presented the results of several recently completed studies on the market for direct-vent gas fireplaces and implications of these findings on future program design. Currently, Energy Trust provides incentives only for fireplaces in existing, not new, homes.

Adam: There are two components of fireplace efficiency: FE and ignition systems. Fireplace efficiency, or FE, is an estimate of the efficiency of gas fireplaces, also called thermal efficiency. Higher is better. Standing pilot lights are on constantly. With intermittent pilot ignition, IPI, the pilot is ignited first and then is used to turn on the main burner. When you turn the fireplace off, the pilot light turns off immediately. In this presentation, IPI and electronic ignition are used interchangeably.

> Energy Trust began offering incentives for gas fireplaces through a pilot in 2009. The offering was intended to get consumers to purchase fireplaces with higher FE ratings and move the market away from standing pilot lights and toward efficient ignition systems. In 2009, a survey of Oregon hearth vendors was undertaken to estimate the market baseline FE and prevalence of IPI. That study found that just under 40 percent of fireplaces had IPI and the average FE was 61 percent.
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> The survey was replicated in 2013 when the program received anecdotal feedback that the fireplace market in Oregon had changed rapidly since the 2009 survey. The 2013 survey observed a large increase in average FE, from an average of 61 percent to an average of 68 percent, and a very large jump in the proportion of fireplaces with IPI, from 40 percent to 76 percent.
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> To understand if these large changes were driven by Energy Trust, interviews with three market actors were undertaken in 2014. The outcome of the interviews was inconclusive. This led Energy Trust to undertake a more comprehensive study of the fireplace market, which is being presented today.
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> In 2014, we conducted a market transformation study, asking manufacturers and distributors to forecast gas fireplace sales in Oregon and a comparison region consisting of Eastern Washington, Idaho and Montana through 2020. Idaho and Montana lack fireplace incentive programs. We looked for changes over time and differences between regions. We learned that the proportion of direct-vent gas fireplace sales with IPI were much higher in Oregon than in comparison regions. The proportion of high FE fireplaces was also higher in Oregon than in comparison regions. FE differences between regions are relatively consistent, and FE levels are not expected to change significantly by 2020.

Don Jones, Jr.: Are all gas fireplaces sold through distributors?
Mark: We have more to learn about the distribution model.
Don Jones, Jr.: In my experience, distributors have an accurate understanding of their markets.

Julia: Do any distributors cover Oregon and other states?
Adam: Yes, two of the three distributors we interviewed work in both regions.

Warren: Do rural differences account for differences in fuel sources?
Adam: No.

Susan Badger-Jones: How do you define rural?

Adam: The researchers advised us that the comparison regions were more rural than Oregon.

Adam: To learn about gas fireplace prevalence in new homes, we also conducted a survey of people living in homes whose builders received incentives through Energy Trust's New Homes program. We found that gas fireplaces are prevalent in new homes, and average FE and IPI prevalence appears to be lower than what we see in the Existing Homes market. We interviewed new home buyers to learn how much fireplaces are used in new homes, and found that they are used much less than fireplaces installed by residents of existing homes—an average of eight hours per week in new homes compared to 15 hours in existing homes. We concluded that the best opportunities for new home fireplace efficiency is in IPI.

John Frankel: The New Homes study is based on self-reported data from a warmer-than-average year and the Existing Homes study is based on metered data during a colder-than-average year. How can you compare these two studies?
Adam: For Existing Homes, we surveyed residents in addition to metering energy use. We calculated the difference between surveyed and metered results and applied that factor to the New Homes data.

Don Jones, Jr.: Builders of new homes install gas fireplaces for aesthetics, not for primary use as a heat source.
Mark: Fireplaces in new homes are not generally used as a secondary heat source. Additionally, new homes have more efficient mechanicals and shells, resulting in a lower baseload of heating to be displaced.

John Frankel: For new homes, awareness by builders about FE were low. FE is not posted on fireplaces, so it makes sense that awareness is lower.

Mark: The program is working on including fireplaces in Energy Trust's EPS™ model for rating the energy efficiency of new homes. Based on these studies, if Energy Trust were to offer incentives for fireplaces in new homes, the incentives would differ significantly from incentives for fireplaces in existing homes. This could result in market confusion.

Holly: I thought new homes incentives were based on packages, not individual incentives.
Mark: Yes, this is true for homes rated with EPS. We also offer incentives for individual products. We are collaborating with Northwest Energy Efficiency Alliance to develop a protocol for a standard performance-based new construction program. One limitation is the modelling software.

Mark: Objectives in 2016 include maintaining momentum on the prevalence of IPI. Research indicated that we have accomplished a lot of progress in the market, and we want to achieve 100 percent IPI. Two-thirds of gas fireplaces are installed in the new construction market. We want to continue momentum through the retail channel. We need more sales data to determine if we can achieve market transformation.

> In 2016, we will continue downstream incentives for FE and develop new mid-stream distributor incentives for IPI. The mid-stream incentives will help us make inroads into the new homes market. Thermal efficiency is not a viable resource in the new homes market. Electronic ignition savings are cost-effective in both markets.

Don Jones, Jr.: What are key efficiency features that determine the FE score of a fireplace?

Mark: It's like an Annual Fuel Utilization Efficiency, AFUE, rating. It's hard to isolate the cost of efficiency because the units have a lot of aesthetic features. More energy-efficient units can have lower costs in some cases
John Frankel: Everything about the fireplace determines the FE rating score, including glass, box type, log type and how the unit is sealed.

Fred: It's difficult to decide if we should do more research, which can be very expensive. Our research is well ahead of everyone else in the country.

Mark: The proposed 2016 Existing Homes downstream thermal efficiency offer is a $150 incentive for units with 70-74 percent FE and $250 for units with 75 percent FE or higher. Incentives today are $250 and $350, respectively. IPI would be required for all units to receive incentives.
Marshall: Units cost around $2,000.

Holly: What is the incremental cost between efficient and non-efficient units?
Mark: There is not consensus.
Warren: Current tax credits are $350 and $500.

Mark: The 2016 proposed residential midstream electronic ignition offer is $30. This is a distributor-facing offer. Savings are discounted. The goal is to hold the line on prevalence of electronic ignition in 2016 as incentives are transitioned upstream.

John Frankel: How do you define distributors?
Mark: Distributors are defined as anyone who buys from a manufacturer.

Mark: 2016 will be a transitional year. The limited upstream approach will provide a framework to forecast savings, allow time to build new business relationships and provide opportunities to establish distributor level baselines to transition to performance-based goals. This will give us a foothold to launching a mid-stream offer.

Holly: How do you know if $30 is enough to motivate distributors to fill out the paperwork?
Marshall: Distributors would install a quantity of fireplaces so that the $30 would add up to significant benefit.

Holly: Why are overall incentives going down?
Mark: We now better understand our impact on the market, and are working to finalize a determination as to the rate of influence our incentive has had. This influence rate will be applied as a net to gross ratio, discounting the amount of savings we claim on each IPI to reflect the degree to which we believe our incentive is responsible for the current market-wide prevalence of IPIs.

John Frankel: Regarding reducing FE incentives, on the HVAC slide, you have a better understanding of what the market looks like because you survey distributors. How do we know a customer will choose a more efficient unit when we drop incentives? I am concerned that we will lose ground by reducing incentives.
Mark: We can pull back from this offer if we feel like we are losing ground. We believe there is enough momentum in the market that this offer will be successful.

Elaine: With 91 percent of the market having IPI, distributors will get $30 for most of their sales.

Warren: Energy Trust shouldn't give up on serving the new homes market with gas fireplace offerings.

Fred: The challenge is how to identify new home buyers who will actually use their fireplaces.
Holly: Even if the first homebuyer doesn't use the fireplace, subsequent homeowners may.

John Frankel: Furnaces installed in new homes are two-thirds of the market and have a very low average efficiency level. Given our study took place during a very warm winter, we need to take another look at gas fireplace opportunities in new homes.

5. Turning on a dime: Efficacy of incentive bonuses in Production Efficiency
Jackie Goss, Planning engineer, presented an analysis on how bonus incentives influence project completion rates or enrollment patterns. Using project-level data from the Production Efficiency program, staff studied the effects of five distinct bonus design structures on participant attrition, energy savings and completion timeliness.

Jackie: Bonus incentives allow us to respond to changes in the market, encourage quick action, increase participation and test program design ideas. We've offered five bonuses since 2010. Each bonus was a response to a unique situation and we analyzed them each a bit differently.

> In 2011, the Oregon Department of Energy Business Energy Tax Credit was eliminated, resulting in fewer projects in the pipeline. The Production Efficiency program offered a 20 percent bonus to new custom lighting and streamlined projects that completed before year-end. The bonus accounted for a 13 percent increase in project volume and a 3.6 percent increase in electric savings, indicating that many small projects participated in the bonus.

Julia: How did the savings increase compare to the cost increase?
Kim: Cost increase was not analyzed. All bonus incentives remained cost-effective.

Charlie Grist: Do you think the bonus attracted smaller projects?
Jackie: Only small projects could complete during that time period.

Jackie: In 2012, the program offered a 20 percent bonus for new custom, lighting and streamlined projects if capital equipment was purchased within 90 days. The bonus was successful in increasing new project enrollments early in the year. Of those enrollments, 87 percent of bonus recipients completed projects in 2012, which is a typical completion rate.

> In 2014, the program offered a year-end bonus to encourage projects to complete in 2014. The bonus was a 20 percent additional incentive for custom capital projects completed by October 15, 2015. The goal was to reduce attrition. Four percent fewer projects than usual were abandoned, with 2.7 percent fewer projects delayed and 8.5 percent more projects advanced, which means they closed in Q4 2014 instead of Q1 2015.

Julia: Do bonuses take activity away from future quarters?
Jackie: I don't think this is a big concern. Industrial customers do multiple projects. The sooner they complete one project, the sooner they will move onto the next project, and the sooner society reaps the benefits of using less energy.
Kim: Bonuses give project champions a tool to move projects forward within their organizations.

Susan Brodahl: Does this create a workload burden during an already busy time of year?

Kim: Yes. When projects increase 13 percent, so does paperwork.

Jackie: In 2010, during an economic slump, the Production Efficiency program launched a 90x90 bonus, with an incentive cap of 90 percent of project cost for projects completed within 90 days. We raised the incentive cap instead of the incentive rate. The bonus was for operations and maintenance projects, which tend to be quick and low cost. In 2010, there was a huge increase in completed projects. This was repeated in 2011. After two years, it became a standard offering. However, more people took advantage of 90x90 when it was a limited-time offering. An additional goal of 90x90 was to get projects to complete on time. Average project time to complete dropped from 12 months in 2009 to four months in 2010.

> The last bonus, in 2014, was a Program Delivery Contractor, PDC, performance compensation bonus. Typically, most projects close in the last two months of the year. To encourage projects to complete earlier in the year and help the program evaluate achievement of goals earlier in the year, the program launched a PDC performance bonus. As a result, projects completed in Q2 increased and projects completed in Q3 and Q4 slightly decreased.

Kim: The hockey stick may be driven not by the market but by Energy Trust's contracting structures.

Garrett: Can self-directing customers take advantage of bonuses?
Kim: Yes, but we don't notice a difference between self-direct and non-self-direct customers taking advantage of bonuses. Self-directing customers are eligible for 50 percent of incentives.

Holly: Did you also have more projects in 2014?
Kim: Yes, that's the general trend.

Don Jones, Jr.: It is the contractors' behavior making the hockey stick. One year my company switched our programs and contracts from a calendar year to a fiscal year, and the hockey stick just moved forward to the end of the fiscal year.
Charlie: Is the shift to Q2 statistically significant?
Jackie: I'm not certain.

Chris Smith, Energy 350: From a PDC perspective, achieving the mid-year goal is an important measure of our success.
Kim: The mid-year PDC bonuses give us a big impact for a relatively small dollar amount. This is an example of applying an internal intervention for an internal problem.

Jackie: We need to balance the benefits of bonuses with disrupting the market.
Kim: The industrial sector is unique because when you pull savings forward, you get more savings in the long run. We're not just pulling forward a limited energy-efficiency resource. The capacity of staff at the facility to implement projects is one of the main limiters to efficiency, and when they get a project done earlier than planned, that creates room to do others sooner. The manufacturers and measures are changing so fast that there are always additional energy-saving opportunities.

Jackie: Bonuses can also impact customer expectations. Limited-time offers create urgency to start, accelerate or revive projects. Savvy customers are like savvy shoppers. They may wait for a deal. We want to mitigate the risk that customers will expect bonuses and wait for a bonus to do a project. This is one reason why we vary bonuses from year to year.
Kim: That is why we are not running any bonuses this year.

Jackie: In summary, bonuses that reward projects for completing by a date are best for achieving same-year savings. Enrollment bonuses generate volume, but may not reduce delays. Quick-turn projects are often small projects. Mid-year deadlines and bonuses improve the program's ability to forecast.

Don Jones, Jr.: Kim, what are your takeaways?
Kim: I would like to explore more interventions like the mid-year PDC bonus strategy. On what to avoid, the fall bonus had a significant impact on increasing staff workload at year-end.

6. Public comment
There were no additional comments.

7. Meeting adjournment
The meeting adjourned at 4:00 p.m.

The next scheduled meeting of the Conservation Advisory Council will be on October 21, 2015, from 1:30 p.m. – 5:00 p.m.