

CONSERVATION ADVISORY COUNCIL

Notes from meeting on June 6, 2012

Attending from the Council:

Scott Davidson, Northwest Energy Efficiency Alliance
Juliet Johnson, Oregon Public Utility Commission
Scott Inman, Oregon Remodelers Association
Don Jones Jr., Pacific Power
Don MacOdrum, Home Performance Contractors Guild of Oregon
Holly Meyer, NW Natural
Sarah Moore (for Brent Barclay), Bonneville Power Administration
Anne Snyder-Grassman, Portland General Electric
Bill Welch, Eugene Water and Electric Board

Attending from Energy Trust:

Taylor Bixby
Matt Braman
Sarah Castor
Amber Cole
Kim Crossman
Diane Ferington
Sue Fletcher

Lakin Garth
Fred Gordon
Jackie Goss
Marshall Johnson
Steve Lacey
Ted Light
Bradford McKeown
Jessica Rose
Scott Swearingen
Peter West

Others attending:

Kendall Youngblood, PECE
Marilyn Williamson, NW Natural
Berenice Lopez, Home Energy Life Performance Group
Jeremy Anderson, Weatherization Industries Save Energy
Ginger Roberts, Home Performance Contractors Guild of Oregon
Bobby Kosh, Conservation Services Group
Phil Damiano, PECE
Wendy Koelfgen, Clean Energy Works Oregon
Tracy Scott, Lockheed Martin

1. Welcome and announcements

Kim Crossman, Industrial & Agriculture sector lead, convened the meeting, and said that the agenda will be primarily focused on the Residential Sector. She walked through the agenda, and directly into the first presentation. The meeting agenda and presentation materials are available on Energy Trust's website by clicking [here](#).

2. Residential trends

Diane Ferington, Residential Sector Lead, presented on the trends in savings for the Existing Homes and New Homes and Products programs. The focus was on how 2011 compared to past years, and implications for 2012.

Slide 2 – Nearly all programs exceeded their stretch goals in total kWh and therm savings, with only Existing Homes coming in slightly below at 96 percent. Diane noted that the gas savings were achieved mostly through gas hearths and gas water heating equipment.

Don MacOdrum: Do these savings include or exclude the Opower program?

Marshall Johnson: They do not include Opower. The purpose of this presentation is to demonstrate trends, and the Opower offering is a pilot and was not active in previous years.

S4 – Energy Saver Kits represent a significant portion of the savings in both the gas and electric categories.

Holly Meyer: How is the LivingWise kit different?

Diane Ferington: The LivingWise kits are a standard offering for sixth-grade classrooms, and the other kits are customizable.

Holly Meyer: What is a single-family home?

Diane Ferington: They are individual homes, as opposed to multifamily homes such as duplex and triplex. The category includes all of the Prescriptive single measure installations or non-Home Performance installations and represents the largest savings category for the Existing Homes program.

S5 – The “Other” category referenced is a single, small 12,000 therm custom project in Sunriver with Cascade Natural Gas. There is an opportunity for a similar project to take place in 2012.

Holly Meyer: Is there a concern that the kits will saturate the market, and the savings will begin to taper off?

Marshall Johnson: Last year’s LivingWise strategy was to double the number of kits. This is partially because we will lose compact fluorescent light bulb savings in 2014 due to a new standard, so we doubled up in 2011 to serve more classrooms. We also distributed kits through PGE. LivingWise kit volume in 2012 will be roughly 50 percent what it was in 2011. This is because we effectively served two sixth-grade classes in spring and fall in 2011, but as a result are only serving the fall class in 2012.

Bill Welch: What kind of trends are you seeing in weatherization?

Diane Ferington: I will address this on the next slide.

S6 – All home performance projects involve weatherization.

Bill Welch: In 10 years will you have the housing stock remaining to continue this kind of growth trend?

Lakin Garth: NEEA and others are gathering information on penetration rates in both gas and electric homes, and our resource assessment is being updated. We currently do see the remaining resources to continue.

Kim Crossman: It’s important to note that this presentation shows program trends, what is actually occurring in the market, but this data is different than the resource information that the Planning Group uses for resource assessments.

S7 – Savings are going up, but sites served are fewer. This is because the number of measures per home has increased, which has resulted in an increase in the total savings per home served.

Diane Ferington: The mobile home duct sealing portion of savings will likely trend down in the future due to market saturation.

Marshall Johnson: 2012 volume will probably be similar to 2011.

Juliet Johnson: Can you estimate how many devices in the kits are actually being installed?

Diane Ferington: Process evaluation surveys address that.

Sarah Castor: We are currently using 2009 results. A new survey is being done in the next quarter to update those estimates.

Marshall Johnson: The current kit ordering process allows people to select or deselect items so they don't get items they won't use.

S8 – This shows a major project ramp up, and also shows more measures being undertaken per site over time.

S9 – The Savings Within Reach track was formerly called the moderate income track. Clackamas County matched \$1,000 with our savings, so there was much activity there. A loan product for Savings Within Reach is expected to launch in the fall as well, which will help provide no capital cost upfront up to \$5,000.

Peter West: The sites weatherized by year slide includes Savings Within Reach?

Marshall: Yes, in the dark blue bar.

Peter: How are you going to grow that through customer engagement?

Marshall: Home performance segment activity has largely been driven by Clean Energy Works Oregon. It is notable that while that program is growing, single track weatherization in single-family homes is maintaining. The customer engagement model helps to ensure that applicants are more quickly sent to the program they need. We expect to see increased activity in both segments.

Scott Davidson: Was it just the economy that's kept it flat?

Marshall: 5,600 projects to 6,700 projects in three years demonstrates growth in weatherization.

Kim: Sites weatherized slide.

Marshall: The chart is the number of sites served, not the total savings trend. We should explore if total measures are growing.

Holly: The slides don't match.

Marshall: Slide six is sites weatherized, which doesn't include kits, etc.

S12 – Matt Braman: We are working on revising the EPS scoring system to avoid allowing people to manipulate their score in order to receive a net-zero rating that isn't genuine.

S13 – Scott Inman: What percent of sales are energy-efficient refrigerators and freezers?

Diane Ferington: We look to NEEA for that kind of data.

Matt Braman: Approximately 20-25 percent in our service territory.

Don MacOdrum: Were recycled refrigerators and freezers ever part of the Existing Homes program? Could you be recycling a refrigerator you've already provided an incentive to purchase?

Diane Ferington: No. It's possible, if someone recycled a 3-year-old fridge, but not likely.

Peter West: The key to this recycling program is to get to newer and newer refrigerators. At some point the savings will decline because you're recycling more efficient units.

Don Jones: We've been running a similar program for eight years, and are beginning to run into that.

Sarah Moore: Savings for Bonneville's program dropped by about 30 percent at a similar point in the implementation.

S14 – The increasing gap in the electric graph is a divergence due primarily to continuing to market the program in PGE territory while discontinuing it in Pacific Power territory.

3. Residential HVAC market study

Lakin Garth, Planning Analyst, presented the results of a recent study of residential high-efficiency HVAC equipment sales for years 2009-2011 in Oregon. Lakin introduced Taylor Bixby, a new Energy Trust intern.

S2 – This presentation applies to the existing residential market, specifically updating homes which have already been built, not new construction or small commercial.

S3 – Planning looked at both primary and secondary data sources.

S5 – Holly Meyer: Does the national data include new homes?

Lakin: The Oregon data includes only existing homes. The national data includes all homes new and existing.

Peter: The new homes market includes gas HVAC; the right hand column underestimates the total numbers.

Lakin: We have reasonable data for new homes. The Oregon data in this survey is just existing homes.

S6 – Comparing 2009 study to data from 2009-2011. We were very close to our forecasts for efficient furnaces.

Juliet Johnson: 90 percent and above is considered efficient?

Lakin: Yes.

Holly: This doesn't capture existing stock?

Lakin: Correct.

Scott Inman: Do you know how many are out there?

Lakin: NEEA is working on a study on the existing stock within Oregon, which should be finished by the end of the year.

Scott: I'm surprised sales of efficient units are trending downward.

Holly: The tax incentive went away.

S7 – This survey is consistent with the trade ally survey. The trend is downward.

S8 – There is a steady downward trend in heat pump sales in Oregon, both overall and efficient units only.

S9 – We began a similar study in 2009, however we discovered problems with that study. When we redesigned the study it turned out that we actually doubled our original estimates for efficient unit sales despite the drop off in total sales.

Holly: When is market considered to be transformed?

Lakin: There is no specific number. You have to look at various factors, including comparable markets.

Holly: When do you begin to consider the heat pump market transformed?

Lakin: I'll get there in a slide or two.

S10 – Ductless sales are trending upward. This data includes only existing homes.

Kim: Are you drawing a correlation saying that lower heat pump sales are because of ductless heat pumps replacing them?

Lakin: We think so, but this study does not provide a scientific basis to say that. We will continue to follow that issue to learn more.

S11 – NEEA tracks sales data very well, which allows us to compare our data to ensure it aligns with theirs.

Bill: Why are you asking this question?

Lakin: It is the basis for how heat pumps are designed, measuring total displacement. Multiple indoor heads or outdoor compressors might not necessarily be realizing savings if they don't provide greater displacement.

Marshall: Replacing a unit with a new one with multiple heads may increase the cost without meaningfully increasing the savings over a single head installation if it doesn't change the displacement.

Fred Gordon: We don't have a lot of data on what one outdoor unit with two indoor heads does. It may have better distribution, but not more capacity. You could actually be saving less with more equipment.

Peter: To Bill's point, you could actually be saving more.

Don Jones Jr.: That's why you want to know this.

S13 – Kim: A clarifying question. Does #2 answer Holly's earlier question about when you would look for signs of market transformation?

Lakin Yes, we're there.

Holly: For #1 to say that there is no expanded support for continued furnace rebates doesn't totally line up with the report.

Lakin: The share of efficient furnaces being sold in the market is fairly high even with the tax credit having gone away.

Holly: The percentage is still high. The number of highly efficient furnaces has dropped, perhaps because customers are not replacing units as quickly, or are replacing them with something else. It's worth noting.

Fred Gordon: We had market share in the 60-70 percent range for three years and had signs of anchoring at that level. We don't fully know what is appropriate for heat pumps, so we need to look at this some more. The question about whether heat pumps are taking furnace market share doesn't seem right for central heat pumps, because their sales volume is decreasing. It might be more interesting for ductless heat pumps, which are growing in sales. Not all ductless units are being sold in our program.. Some might be going to heat pumps, some to furnaces, we can't tell. But total volume of HVAC equipment sales has dropped precipitously.

Sarah Moore: We are seeing the same drops in air-source heat pumps, and are seeing ductless sales go up.

Juliet Johnson: When the furnace incentive was discontinued it was because market was transformed. What number made us think that?

Fred: We are still offering furnace incentives for moderate income and multifamily homes, so we are trying to target lagging market sectors there. Three years of 60-70 percent sales was an indicator, as was the fact that the majority of sales of efficient equipment didn't use our incentive. We have market stability and large market share, most purchases aren't using our incentive, and there is a federal standard requiring efficient equipment in the works. That's about as strong as the data gets for market transformation.

Holly: When we say market transformation we need to be clear about what we mean on that. What if they get a heat pump instead of the furnace? What if they don't replace with like equipment? If the majority of existing equipment in service is still inefficient, is the market really transformed? We need clarity on the definition.

Juliet: That's really a different question. Would you agree we shouldn't offer incentives if they're going to buy efficient anyway?

Holly: Yes.

Scott Inman: Is the incentive making people replace old units when they wouldn't otherwise? Does it spur action?

Fred: The general assumption is that we can't put enough cash on the table to advance retirement of equipment. One study in Terrason utility in British Columbia indicates that the typical life of furnaces is 25 years. Some furnaces might be retired five years before they would completely break down at perhaps 30 years. Clean Energy Works Oregon seems to be retiring furnaces at an average age of 20 years, which might be five years or so before the typical end of life.

Juliet Johnson: How much does an efficient furnace cost versus a standard furnace?

Fred Gordon: The last time we looked, a few years ago, about \$700 to \$900 more for a 90+ percent efficient furnace versus an 80+ percent efficient furnace. Costs vary by contractor and brand.

Break

After the break Bill Welch announced that he will be retiring at the end of the month, and as such this will be his last Conservation Advisory Council meeting.

Kim: Your presence here has been extremely helpful. You always have great questions, really know the industry and have brought a lot of value to the council. We hope another EWEB representative will join the council.

Bill Welch: We share a service territory with NW Natural, and being on the council has helped to create some great partnerships even though EWEB isn't technically part of Energy Trust.

Steve Lacey: EWEB was an innovator and had some great programs before Energy Trust even existed. Thank you for being on the council. We hope to continue our relationship with EWEB.

Peter West: EWEB also runs a part of our New Homes program in Eugene.

4. Home Performance with ENERGY STAR® process evaluation

Sarah Castor, Evaluation Project Manager, presented the results of the first stand-alone process evaluation of the Home Performance with ENERGY STAR track.

S2 – Definition: Nonparticipants are customers who had a Home Performance assessment but did not go forward with a project.

S5 – There were few people who had an assessment and didn't go forward with a project, so it was hard to speak with enough customers to get a good sample of that group.

S15 – Peter: Nonparticipants never undertook any measures?

Sarah C: Not necessarily, some went on to do measures in other tracks, for example single-family rather than Home Performance. This group of customers tends to have more awareness of Energy Trust than others before being involved in the program.

S16 – The nonparticipant data is tough to interpret since there were so few.

Bill: Please clarify what nonparticipant means.

Sarah C: They did an assessment, but installed no measures. But again, 73 percent seems like a lot, but it was a small number of respondents. And you could check multiples reasons for not going forward.

S17 – Fred: The non-energy benefits were primarily comfort?

Sarah C: There were other benefits in addition to comfort, including health and safety, home resale value, helping the environment and a few others.

S18 – This slide shows only participants.

Holly: How do the incentives work?

Sarah C: They're at the individual measure level.

Holly: What makes this different?

Marshall: There is a higher standard for the full Home Performance assessment and project that the contractor has to meet.

S19 – Scott: You said 15 nonparticipants, but I see 16 here.

Sarah C: There are 16 on this slide, it may have been a multiple response question, I will check on that.

S21 – Don Jones Jr.: What was the data support for this recommendation [referencing, "Consider paying incentives to contractors rather than customers."]?

Sarah C: It was backed by Fast Feedback surveys. Customers don't like that it can take a while to receive their incentive payments, they're carrying the cost.

Sarah M: What is the alternative? The contractor takes off the incentive from the price they charge the customer, and then applies for the incentive?

Sarah C: Yes.

Sarah M: The direct payment option is very attractive to customers. Their main concern is payment lag time. Some are also wary that reimbursement won't ever

show up. Reducing lag time to increase activity might be the most effective thing we can do.

Sarah C: We have been considering this issue.

Scott: Are there tax consequences?

Sarah C: Yes, there are many considerations in paying contractors directly.

Peter: We have to watch closely to ensure the savings make it to the customer. This would change our relationship with the contractor. We would have to be willing to up the enforcement, and it becomes less efficient and more costly on the administrative side. Would like to do it, but there are issues.

Sarah M: After an assessment takes place, does the same contractor automatically do the work?

Marshall: It's set up that way, but not required. The program is designed to encourage it. If the assessment incentive is \$150, some contractors charge various amounts for the service.

Sarah M: Can you track who uses the original assessment contractor and who uses someone else?

Sarah C: We can. Most people do use the assessing contractor.

S22 – Scott: Have you compared Clean Energy Works Oregon versus non-Clean Energy Works Oregon cost per measure?

Fred: We've done some rough estimates. It seems that standard track costs are somewhat less, but we don't know if air sealing jobs are for the same sized house, and so on. We are trying to normalize the data to get better info on what this all means.

Holly: Has cost effectiveness been evaluated on Home Performance measures versus single measures?

Fred: Savings per measure are about the same as the standard single-family track, but there has been only one evaluation. We have never done impact work on Clean Energy Works Oregon's programs. That is one of many evaluations we hope to do this year.

Marshall: Customer satisfaction tends to be higher on the Home Performance track.

Kim: Don MacOdrum, do you have anything to add?

Don: The Home Performance Contractors Guild didn't necessarily see where it said that Home Performance cost more.

Sarah C: That was not assessed in the evaluation, but it is a topic that comes up frequently with Home Performance, especially with our board and Evaluation Committee.

Don MacOdrum: The recommendation to have contractors take more of a lead on marketing, a couple other recommendations, call out a role for Energy Trust to define for customers what the differences are between the Home Performance and the single measure tracks.

Sarah C: Customer engagement will be key in that effort.

Don MacOdrum: The Home Performance Contractors Guild now webcasts for all their meetings, and recordings of those are available to everyone.

5. Existing Multifamily MPower Oregon pilot

Scott Swearingen, Business Project Manager, presented on the progress toward the launch of MPower Oregon, and outlined the planned scope and role of Energy Trust in the pilot.

S5 – Stranded savings are generally multifamily savings potential that is hard to capture with traditional program offerings.

S9 – Don Jones Jr.: All the work will be done by Walsh Construction?

Scott S: Yes, but they will work with four qualified subcontractors in each category. These will be chosen to meet diversity requirements.

S10 – Don MacOdrum: There will be six to eight buildings in phase 1, and how many in subsequent phases?

Scott S: There will be roughly 15-20 in phase 3, with the difference made up in phase 2.

Scott Inman: The cost per unit seems high.

Sarah M: The \$3 million from HUD has to meet energy savings requirements?

Scott S: 20 percent or more demonstrated savings.

S12 – Don Jones Jr.: Energy Trust will be the arbiters on whether 20 percent savings is achieved?

Scott S: Yes, that will be self-evaluated.

Sarah M: Regarding projected savings, how do you break out what you expect to get from HVAC versus unit improvements like water heaters, lighting and others?

Scott S: About 20 percent is expected to come from common-area lighting, the rest will be various pieces and will be different in each building. We are still building out the data model. HVAC will likely be about one-third, and about one-third will come from air sealing. There will be a comprehensive audit done on each building that will list all possible measures. MPower will finance a small part of that list, and can circle back on further measures.

Don Jones Jr.: It will be hard to go back after you've done the top level, easy, inexpensive measures. How do you really do that next step? A plan to get that next level would be a worthy discussion to have with Network for Oregon Affordable Housing.

Steve Lacey: This project is also being done as an EEAST pilot, testing out how you go into a multifamily and commercial setting, using on-bill payment as a way to do that. There are multiple reasons for doing this.

Holly: NW Natural has concerns with phase 3. If a tenant is responsible for repaying a loan that isn't theirs, and when they fail to pay it then goes to the property manager who also doesn't own it and may not pay it. It makes NW Natural nervous. It is not an immediate concern at this point in phase 1.

Scott S: That will be addressed after phase 1 gets off the ground.

Scott I: The cost per unit is significantly higher than standard multifamily?

Scott S: We will be paying the same amount as standard multifamily.

Don Jones Jr.: Will you keep incentives the same throughout pilot?

Scott S: Incentives will change with standard incentive changes across Energy Trust programs.

We hope that the pilot brief will be released internally next week, and hope to start implementing in Quarter 3.

6. Northwest Energy Efficiency Alliance gas market transformation

Ted Light presented a brief update regarding a 2010 study on unclaimed gas savings in the commercial and industrial sectors resulting from NEEA's work.

Juliet Johnson: When is NEEA going to start looking at gas?

Scott Davidson: NEEA looked at it last year and it didn't make sense to go forward. It will be reevaluated next year.

Kim: Gas transport site savings were very real savings that occurred due to NEEA's work. It's oddly not claimable, which seems like a disconnect. Strategic Energy Management tools taught for electricity can easily be applied to gas. Nobody is really claiming the savings, but they are real.

7. Public comments

There were no public comments.

8. Meeting adjournment

Kim thanked all council members for their participation and adjourned the meeting. The next full council meeting is July 25, 2012, and will focus on mid-year updates.