Conservation Advisory Council Meeting Notes

July 23, 2014

Attending from the council:
Garret Harris, Portland General Electric
Holly Meyer, NW Natural
Warren Cook, Oregon Department of Energy
Jamie McGovern for Jeff Bissonnette, Citizens Utility Board
Juliet Johnson, Oregon Public Utility Commission (phone)
Stan Price, Northwest Energy Efficiency Council
Scott Inman, Oregon Remodelers Association
Wendy Gerlitz, Northwest Energy Coalition
Don MacOdrum, HP Guild
Karen Horkitz, Northwest Energy Efficiency Alliance
Don Jones, Jr., Pacific Power

Attending from Energy Trust:
Kim Crossman
Debbie Goldberg-Menashe
Paul Sklar
Tom Beverly
Amber Cole
Debbie Goldberg-Menashe
Elaine Prause
Fred Gordon
Oliver Kesting
Marshall Johnson
John Volkman
Adam Bartini
Spencer Moersfelder
Diane Ferington

Others attending:
Scott Davidson, Clean Energy Works
Christina Cabrales, CSG
Samantha Taylor, CSG
Alan Meyer, Energy Trust board
Lonny Peet, Nexant
Becky Walker, PECI
William Ranes, CLEAResult
Cameron Gallagher, Nexant
Mark Kendall, Energy Trust board
Andrew Morphis, CLEAResult
Sheryl Bunn, CLEAResult
Bob Stull, PECI

1. Welcome and introductions

Kim Crossman convened the meeting at 12:10 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. Dashboards are included in the CAC meeting packet.

2. Old business

Kim Crossman: June notes went out with the CAC packets. There were no additional questions or comments.

The large customer funding update is still listed under old business. We had a presentation about it at the April CAC meeting. Since then, we received formal results from 2013. Despite all of our guesses, we didn't cross the established baseline for spending with large customers

(defined as greater than one aMW per year). We are officially under the baseline still, in 2014. The decision has been made, based on our analysis, tools and info about how this behaves to go forward with budgets as if we won't cross the baseline. Based on where the money is spent, we are looking at changes that reduce spending and increase savings. We are determining what levers we will push when the time comes that we need to act.

Holly Meyer: The 18.4 and 18.1 on the slides are percentages of what?

Kim: They are percentages of public purpose funding spent on customers who used over one average megawatt prior to Senate Bill 838 (SB838). The baseline was set to ensure we don't overspend on the larger customers going forward after SB838. The question about whether we cross the threshold in 2014 is more open-ended than we expected. We won't know until we close out the year; and the majority of projects come in at the end of each year, so we won't know enough to make changes until late in the year.

People will have a chance to look at the data. When we cross the line, and the data becomes visible (probably by next spring), we will need to make decisions. For budget purposes, we are assuming we are not making changes in the coming year. Round one budgets assume that we don't cross the line. It's the current state of where we are. Nothing is included about cutting funding for large customers, but we are setting things up in advance if we do.

Jamie McGovern was an author of the rate case submitted by PGE, which is a policy issue, outside of our scope.

Jamie McGovern: In PGE's most recent rate case, we looked at the possibility that Energy Trust would cross the line and as a major resource for acquiring savings, we wouldn't want to lose that potential. The cap was determined based on SB838 language, with large customers not paying 1149 funds and not receiving direct benefits. If the funding toward Energy Trust is more from small customers, and they get the benefit - but nothing goes to large customers, can we achieve our energy efficiency goals? CUB wants to redirect the benefits in PGE funding toward Energy Trust. Customers who fund large parts of the budget buy a large share in the conservation system. PGE identifies conservation in their long term IRP planning. Customers who contribute less are buying into a larger share of what the larger customers are buying. Under 111D, renewables are receiving more emphasis for example, and other things are happening also. Look at CUB's testimony on page 20 on the website.

Kim: It's not long, at 14 pages, and is interesting for people who like policy.

Jamie: I'm open to comments or questions and you can reach me at Jamie@oregoncub.org.

We see a potential problem that not all energy efficiency goals can be achieved if large customers have huge savings potential but are being limited in what they can do. We see the smaller projects as possibly being less cost effective, and hampering potential savings that would benefit everyone. In 2015 and 2016 we may see higher chances of crossing the threshold, if not in 2014. It's a problem when the integrated resource plans (IRPs) go out to 2030.

Kim: There are no next steps yet, but we did see that we didn't need to do anything in our first round budget. There have been great advances because of utility data sharing and we have access to better information – and can build tools to help us.

Wendy Gerlitz: NWEC plans to provide supporting testimony for Cub in this rate case.

Juliette Johnson: People should get involved if they are interested in this. I'm glad we didn't reach the spending cap, and it looks like industrial spending may be smaller this year than last year. There may be some resistance from industrial customers during the review of the PGE rate case. The commissioners will have to decide. To what would you attribute the potential reduction in PGE savings?

Kim: We often call these industrial customers, but this group is comprised of large customers, overall. It's a lumpy portfolio: there are large whales that come in, but not every year. This year in particular, we could attribute savings to a board-approved megaproject. We received savings for a project that we paid for over the last two years, which essentially made them look like free savings, this year.

The third item is docket number UM1622, which is open. There is a link to the schedule on Fred's agenda.

Fred Gordon: The period for comment closes tomorrow, and the OPUC hearing is next Tuesday.

Wendy: I wanted to add that there is nothing to prevent you from submitting comments throughout the docket process.

3. 2015 – 2019 Strategic Plan draft (discussion)

Elaine Prause: I want to thank everyone for the input and coming early today. We are about to kick off the outreach phase with our draft strategic plan. It starts this Friday, July 25, 2014. The plan is posted on the website as well, and the deadline for comments is August 26, 2014. The draft went to our board for discussion yesterday. There were minor tweaks, but nothing that would structurally change it. You will see a few minor differences between what we discuss here and what comes out on Friday.

We came to CAC in March with issues we were wrestling with, and we took your feedback and RAC feedback. The initial draft had lots of questions and options, and was taken to the board during their June retreat. It was a productive discussion. [See slides for what changed and what priorities were set.] The board left many things up to us. They were happy with the renewable goals we brought forward. Minor tweaks resulted from the discussions.

Our overall sense for the next five years is that the remaining resource is still large, but it's harder to get. The excitement is in what's next and how to get it, instead of just getting more savings. We need to be very conscious of cost effectiveness, and this applies across the board; renewable project economics are tough too. Federal and state support we counted on in the past is no longer there. We have to be more creative.

Adapting to changes, continuous improvement in operations, and updating plans are some of the themes. We need to see how things are changing around us, also. [See plan structure slide.]

The long term goals aren't as quantitative so much as separating things into energy efficiency and renewables. Renewable goals focus on helping meet the state's goal, and energy efficiency is more about obtaining cost effective savings. There are also operational goals as part of the plan.

Stan Price: Can you provide more context for the vision and mission pieces, from the board's discussion? There is some talk of expanding the role of Energy Trust where it touches on other areas.

Elaine: We heard a lot of feedback about sticking to our core mission. We can be open to new things within our core mission and strategies. We do have a strategy of being ready and open to new things, but not about pursuing them. At the board retreat, when rereading this, the vision and mission still seemed to apply.

Alan Meyer: The board sees Energy Trust as having a clearly and narrowly defined charter. When we can expand within that defined charter we should, but we need to stay within it.

Elaine: We have five year goals and annual budget goals, but this plan helps push us to think further out. Especially on the energy efficiency side, there are things we can do now to increase acquisition in the future. For operations, every step of the way is about supporting these other goals. For example: what do we need to do in information technology and planning to support the programs?

Energy efficiency goals propose 240 aMW and 24 million additional therm savings. We started with the standard tools of the 20 year resource assessment, which provides what will be available, and added layers to that. These are things like emerging technologies that might not be available today; but we think are likely to come in over the next five years. On the electric side, there are large opportunities like large data centers and combined heat and power projects which are not necessarily in our resource assessment. They aren't characterized in our outreach version of the plan.

The gas cost effectiveness docket is also in the works and we don't yet know the outcomes. It could substantially change our gas program goals and how we run gas programs.

Scott Inman: What is the percentage decrease in savings over the next five years vs. the last five years?

Elaine: For gas over the past five years we achieved [ ].

Scott: So it's about five to ten percent less?

Elaine: We're not growing but it's not a sharp decline.

Kim: This is really intro and a chance to get early questions out. There will be comment periods along the way.

Holly Meyer: Both gas and electric have declined a little in numerical savings and percentages, but they are trending at the same rates. In the last five years the growth rates have been parallel, which I find interesting. Some of it may be from interrelationships between gas and electric programs.

Kim: This is an interesting topic and we were approached by ACEEE about doing a paper on the merits of running combined gas and electric programs.

Jamie McGovern: Historically have your goals underestimated what actually happened?

Elaine: For the last five year plan we were slightly above the target. We were at about 102 percent of electric goals and exceeded gas goals by about 14 percent. They vary over the years.

The four top strategies are: continuously improve programs to meet customer needs, manage total cost of efficiency (how we operate and keep our costs reasonable and those of contractors working with us, as well as how are we effecting the overall cost of energy efficiency); replenish the portfolio with new resources (working with NEEA, for example); and expand customer participation (repeat customers are great, but there are others we haven't worked with – so how do we identify and reach them).

Juliette Johnson: The OPUC is very happy that the group's input was incorporated. I had wondered if things related to climate change would creep back in. The plan is aspirational but not over the top, and is well-balanced. The ways you achieve those goals will show up in the annual budgets. Overall I'm pleased with the draft.

Stan Price: Do you keep data on repeat customers that would show what percentage have already participated?

Kim: A lot of that analysis happens in the sectors. It's tied to the internal IT projects over the last couple of years. Historically, it has been hard to get that information, but we can now get at the data because of the new CRM and tracking projects going on. However, we don't know what we don't know. We know a lot about repeat customers but not the ones we haven't yet reached.

Stan: For me, that would be an interesting metric, and it would be great to provide to the group. Percentages and geographic dispersions would be helpful.

Amber Cole: In our quarterly reports to OPUC we added a table that shows geographic data for each quarter, so we are just on the cusp of doing this. It's a good suggestion.

Holly Meyer: It seems comprehensive. You are looking at making programs the best they can be; how to acquire and serve more customers; working with other organizations like NEEA and making operations as efficient as possible. I'm happy with it.

Elaine: Development of markets and generation goals are the two pieces for renewables. Our above market cost share is increasing so money isn't going as far. The four renewable strategies include a focus on markets with multiple benefits. The board said this applied to energy efficiency, also, so we will pull it out and put it into the cross-cutting strategies.

Effective partnerships, efficiency support, and being ready for changes, are the cross-cutting goals. We need to be strategic about setting up partnerships. People we collaborate with need to provide resources that help us meet our goals. We need to be efficient with our support resources. We need to continue doing what we do well and be ready for new items.

Kim: Are the cross cutting strategies hitting the mark? They include how we work with CAC member organizations, also.

Elaine: The draft has a lot more detail than the slides.

Juliette: I like the part about being ready for changes. Can you summarize what that looks like operationally? You need to have costs allocated to efforts. Partnerships are good when they are effective, and being ready when those come up is helpful. Cost accounting should be set up for

those opportunities. I have some thoughts about what it would look like in practice, but what does it look like to you?

Elaine: It's also culturally, like someone in finance deciding how to set up those buckets, but also looking at how we prioritize our work.

Juliette: Noting the geographic areas where projects are happening and working in those areas. Having mindset of what are those synergistic opportunities out there.

Elaine: RAC had idea, "You collect the data, but would you be able to share it?"

Kim: Bumps against policy right away.

Elaine: Operations side is all about how we set up for this internally. We have a management review underway, concurrent with strategic plan. A third party does this and a lot of good ideas come out of it.

August 26 is the comment deadline, and we plan to come back in September with what we heard. After that, we will go to the board, hoping for October 1 approval to inform our budget.

Amber: There's a comment form on the website with a series of questions we would like you to answer. You can email additional, written comments to any of us, and they can be attached to the comment form.

Kim: This is only an initial draft. What struck me is the significant shift from the initial conversation to where we are now. Does this incorporate the group's feedback? Is there anything missing?

Holly: What about building Oregon's leadership into the plan, and using what Energy Trust has learned to inform other states? People would know they can look to us as a national leader.

Kim: Is there an upside to Oregon doing that?

Holly: This is more about raising all the boats nationally. However, it's also our responsibility as a leader to mentor and teach others.

Jamie McGovern: If other states start adopting what we've learned, there are economies of scale that help us as well.

Warren Cook: That's part of our responsibility as ACEEE's fourth most energy efficient state in the nation. I like to see this as benchmarking. We can see who is doing things better or way worse. This is the event where we're supposed to be on the giving side. It's expensive, but it's part of our responsibility.

Fred Gordon: The feedback so far has been that we should only do this type of work when it will somehow directly benefit our goals. We do lots of networking all over the country and world. When we are asked for help with something that will take more than about four hours of staff time, we've been told we shouldn't. We engage in a deliberate way but as a nonprofit we have to ration our resources.

Wendy Gerlitz: I've been engaged in BPA's energy efficiency discussions, and am hearing that the state goals are set on an aggressive level, but there are concerns that, while Energy Trust

does a good job, the public utilities don't have the same great savings rates. The statewide averages look a little dicey in Oregon. It may be good to look at how you help other entities in Oregon. How can you expand in the rest of the state to help?

Juliette Johnson: I like what everyone is saying. Renewables include goals for reducing barriers to development, which is innovative, and it would be good to share those case studies. I appreciate Fred's comments. I think Energy Trust can provide a lot of insight, but staff may not necessarily be well used by writing white papers. Strategic partners are a great way to help us get information out through the right channels.

Kim: As someone who spends a lot of time on this type of work, I can say that we've been extensively researched. I might do one day's worth of work to gather some information, but others have often done two months' worth of work to write their papers. I agree that staff time is a precious thing.

4. Q2 Dashboards (information)

Kim Crossman: Our Q2 dashboard for all sectors is included in the CAC packet and slides. In summary, it looks fantastic for this time of year. We are close to our goals in PGE and Pacific Power territory, and are at (or slightly exceeding them) in NW Natural territory. We are exceeding them in Cascade Natural Gas territory. The CAC packets include the dashboards and supporting notes. The individual sector dashboards will be covered as we do our budget concept presentations. Looking at the dashboards is the secret to our success, and we'll get into the details in a few minutes.

5. 2015 Budget concepts: industry & ag sector (discussion)

Kim Crossman: Energy Trust serves customers of four utilities, but we really treat these as five territories when we include NW Natural. We are coming up short in Cascade Natural Gas, essentially from one project. In their territory we've had very different goals each year. We've had windfalls for a couple of years. We set goals according to those years and fell very short. Our savings narrow down to four or five projects, so one project can dramatically impact us. If we get more projects counting toward a small goal, things can change very quickly. We are now providing 20 percent bonuses, and 10 percent bonuses next year, to keep building a pipeline. The bonus led to the new project that came in last week. This is the time of year when we consider what levers we can pull to bring in more projects. Industrial looks at these ideas in April or May because of the long lead times. We don't see a need for bonuses outside of Cascade Natural Gas territory. We discussed with the PDCs and collectively believe that we don't need bonuses through the end of 2014 in other areas. We feel like we have a good chance to reach goals.

We also sit down as sector leads and discuss our goals, progress and plans.

Mark Kendall: About how many customers do you historically have participating in Cascade Natural Gas territory each year?

Kim: Three or four. That's part of the problem. It's not unusual for two-thirds of the savings to come from one customer's project. Most large customers in Cascade territory are transport. For some customers, the gas load is a tiny portion of their energy usage – like only the office at an industrial facility.

Warren Cook: You're doing great in terms of market share. You can't get more than all of the customers.

Kim: The chart on page three is the best representation of where our savings come from. We have diversified our sources of savings, but they do cluster into a couple of areas. SEM and custom incentives are one area, together. Trade ally tracks like Streamlined (small) Industrial are another. We can get savings, but they are based more on volume than large projects with big savings. We made a change to our delivery strategy this year, and there should be a significant change in what we see coming in. PDCs were given the budget to point out all the things customers can do, instead of just focusing on custom projects. There were good reasons for not including prescriptive measures before, but to the customers there is just a single production efficiency program, now. Customers will no longer hear that they are too small to receive an audit – a change from previous years.

Adam Bartini did a lot of work to enable PDCs to offer more. These are multi-year initiatives, so we'll see some savings this year and more next year. Industrial uses a high-touch model by necessity, based on how the market operates.

We still need to better arm the PDCs to offer more. They need things like a tablet-based scoping tool that doesn't require a custom engineer for each site visit. The gold standard would be to give the customer a report by the end of the meeting. It's part of our continuous process improvements – reducing the number of touches to get to this kind of a result. Not having a PMC is an interesting angle for us. PMC-managed programs can sometimes bring ready-made-tools with them. Industrial is low-tech: we rely on the human interface.

Holly Meyer: What do you have instead of a PMC?

Kim: We have our internal staff. This only applies to Industry and Agriculture. We haven't had a PMC since 2006. We have to do all of the administrative work done by PMCs in other programs. We also have program delivery contractors (PDCs) who deliver the program we provide to customers, or trade allies in the case of Streamlined Industrial. We have extra challenges that relate to capacity constraints. A PDC does less of the administrative work and more of the market work.

Karen Horkitz: Has Energy Trust gone back and looked at the reasons for bringing Production Efficiency in house and done an evaluation of the benefits of doing it that way? Might it be reconsidered at some point?

Kim: It works in this form. What we don't have is a lot of bells and whistles. We are building some of them slowly, but a PMC does it more quickly.

Alan Meyer: I was on the board when we made this decision. We looked at it in this way: when you run a business that has a small number of large customers, you sell directly to them. We started with a distributor business model for all programs, including this one. We found that the customers could be treated in a way that better met their needs by bringing it in house. On flip-side, you wouldn't want to do the same with residential customers – there are too many.

Karen: Are you happy with the performance?

Alan: I think we made the right decision.

Don Jones: Pacific Power does it the same way in other states where we deliver these programs. We segment things similarly to Energy Trust, and with larger customers we use the direct model because basically everything is custom. It's not done on a huge mass market scale.

Mark: Energy Trust is undergoing the regular, five year management review and the contractor is looking at value and performance by utility and market sector. They are asking whether we are performing within expectations of the OPUC and prudent business practices. The findings will be out at the end of the summer and will be integrated into the strategic plan.

Kim: We won an exemplary program award from ACEEE last year, which is very telling. After we took things in house there were fewer layers and more ability to quickly innovate, make changes and run pilots. Going forward, the challenge is a need to invest in things PMCs would already have. Those investments will show up in the budget without savings attached to them, but the savings are there; just two to five years out. The tools need to integrate with in-house systems. We haven't built it out because of the technical skills and resources required.

Mark: Under the 2013 recap, have we seen a rebound in lighting this year with the emergence of LEDs?

Kim: This year we raised our custom incentive for lighting. By itself it had a big effect along with the changes in LEDs. The speed of uptake on LEDs is surprising: 54 percent of industrial lighting savings came from LEDs. It was zero two years ago. It was very big in terms of a technology taking off – probably the fastest change I've seen in this field.

Don Jones: We're seeing it also, and we're working through the studies. It's amazing to see it.

Kim: We raised the lighting incentive because it needed to be equivalent to other custom savings, and it opened the door for LEDs to come flooding in.

We are also very bullish about strategic energy management (SEM). We have discussed it a lot at CAC meetings. We are building out our toolkit and it will allow us to hire more contractors to deliver SEM. We received 11 participants in our outreach to southern Oregon. We are recruiting in central Oregon now. We didn't expect this kind of uptake in areas that don't have a lot of exposure to SEM.

Next year we'll have our own SEM curriculum based on what we've learned over the last five years. It will be our own and we can hire more implementation contractors to deliver it. We would like to reach 300 to 500 cohorts in the next five years. You can take a look at our video case studies about Kettle Foods and Purdy Painting Products on the web site. We'll run at least 30 to 50 customers through our program next year. It's a big, and constantly developing program for us. You'll hear more about this SEM trajectory in the next five year plan.

Garrett Harris: How small can SEM be scaled down?

Kim: We can get it down to the level of customers who spend about $50,000 per year for energy. That's a combination of gas and electric expenditures. There are technical challenges in building the gas models based on the data we have. That level of energy use is one-tenth of what previous minimum. We may not be ready to go below $50,000, although we will help smaller customers who are desperate to do great things. It involves a lot of staff time, but the customers love it because the training needs are such a pain point for them. Business is

booming, but obtaining and keeping people is a problem for many businesses. This is free training, which is why it has taken off.

Holly: You were focusing on custom for a long time. Is this going to cost a lot more? What's the driver for this and what's the downside?

Kim: Under SB 838 there are actual limitations on what we can spend on large customers. Instead of counting on policy fixes, this gives us flexibility to better serve smaller customers and get savings in the long term. They will very likely cost more than large customers, but as a program our levelized costs are low, so there is room to spend more. That's unusual among other programs.

Holly: It costs more but is under the cap. Does it allow Energy Trust's overall energy efficiency costs to be cheaper?

Kim: I don't know yet. These may be the same as other savings, in terms of cost. It's hard to say. I can say that if we see anything showing up as a cost effectiveness problem, we'll dial it back. We have an advantage of being able to dial things back as needed. SEM and other O&M programs yielded surprising savings over the last several years with only small cost increases.

Scott Inman: Do these smaller projects help you reach goals and impact the spending cap for large customers?

Kim: It doesn't help us move the large customer cap, after doing the math.

Mark: Did you hear anything about the growth of industrial businesses at the recent CEO workshop?

Kim: They made it very clear that manufacturing in the Portland area is booming, but that doesn't extend to other areas. They are worried about staffing.

Mark: Are we seeing three-shift energy saving opportunities versus the reduction to two shifts a few years ago?

Kim: What's different here is that changes due to the recession were highly visible everywhere. As things rebound, it has happened slowly and hasn't been as visible. Investments in Portland seem to be growing. Our markets are considered to be fantastic. Some international companies are coming in. There is more potential if manufacturing is booming. When they were cutting back, we got unexpected savings because they kept their staff busy on O&M. Now that they're booming, the question becomes: Will they have time to work on these things? That's always the push-pull of our industry.

6. 2015 Budget concepts: commercial sector (discussion)

Oliver Kesting: The commercial sector covers Existing Buildings, New Buildings and commercial SEM. SEM is lagging in our sector but we do see a lot of it in the pipeline. Commercial is on track to exceed goals in Cascade Natural Gas, approach the goal in NW Natural. Existing Buildings is behind in gas savings, but New Buildings is ahead. Incentive spending is running lower than budgeted for equivalent savings. Existing Buildings and Multifamily are planning an increase to the base custom gas incentives. We'll bring them in line with industrial's $2.00 per therm. There will also be a short term increase in the custom cap to 60 percent of eligible costs for most of the remainder of this year. Existing Buildings and Multifamily launched more

prescriptive measures. There are enrollment bonuses for Multifamily but we are having a hard time getting attention in new construction. New Buildings is exploring an increase in lighting incentives. We pay between 17 and 30 cents per kWh for major renovations, and want to raise the starting point for lighting to 25 cents with a 50 percent cap on eligible costs.

Interest and activity in New Buildings is at an all-time high across all territories, including Cascade Natural Gas in central Oregon. We launched networking and lunch-and-learn events

Mark Kendall: What market share does that represent in terms of interested projects?

Oliver: We're getting the majority of square footage in the new construction market.

Becky: It's hard for us to figure from year to year, but we are examining the exact share.

Mark: It's also good to know if we are growing our share.

Oliver: Data centers are hard to predict. In PGE, we have one data center project that shifted to 2016, which impacts savings. Faucet aerators and showerheads are the majority of Multifamily savings. We are going to distributors for washers and fridges to buy down costs, and we expect to see more of them in the future.

In Existing Buildings we are continuing to work with ODOE on schools, and expect a lot of activity this summer in school construction.

The budget concepts line up with the overall strategic plan. [See the slides.] 17 percent of gas savings come from SEM. It's a large share and we expect it to continue in both gas and electric. In the trends you'll see a dip in gas savings in Existing Buildings. We are working to mitigate it with incentive changes. There are updates to code, and federal lighting standards have ratcheted up the baselines, making it harder to get savings. LEDs are more cost effective and O&M is gaining momentum, but there are challenges in cost effectiveness. The new version of the BETC program offers some limited opportunities to work with ODOE. Large customers are interested but small to mid-size customers need more nudging. SEM is working for larger customers. LED lamp prices are dropping and they are being rolled into prescriptive measures as we can. Street lights are an area of focus with municipalities.

We launched a pilot through LED distributors in 2013. It was successful and will continue. We continue to focus on comprehensive lighting. We launched prescriptive bonuses for cooler doors package terminal heat pumps, boilers with steam traps and food service equipment in 2014. The SEM curriculum will be standardized and we are contracting for new SEM managers. We are working on streamlined lighting installation for small customers who have T12s in their storefronts. It will include direct install at low cost to customers. On the pay for performance pilot we are negotiating now.

On the New Buildings side, there are several strong sectors. Packaged incentives make things easier for customers. We are working with NEEA on code compliance and market transformation to design to code. New Buildings is offering comprehensive lighting design, Solar ready incentives and technical support for customers trying to reach net zero.

Multifamily is faced with low vacancy rates, which is great for new buildings but tough for comprehensive retrofits because units are occupied. We redesigned the custom track by streamlining forms to make it easy and offering instant savings measures. Savings from weatherization and windows are challenging with the tax credit changes.

Scott Inman: The state program actually has substantial weatherization opportunities. However anything outside of the custom track is out of the reach of everyone. It's really more for HVAC systems. It seems like there's an opportunity to coordinate with ODOE to make it more weatherization-centric. Right now it's oriented toward systems. It's tough to do the work to qualify projects. The money is there, but no one can take advantage of it. Is anything being done to streamline the process? The Small Premium Project program is fine, but the larger weatherization projects are difficult. SPP is straightforward and easy. Competitive bid processes are not working well for weatherization.

Warren Cook: This would be a good time to come ask that question again. Gambling for a potential tax credit is a problem and linkage with actual incentives is better.

Kim Crossman: There are lots of challenges with competitive bids in industrial, too. Oliver is our Oregon Department of Energy (ODOE) coordination lead, so this is a good time to mention those things.

Oliver: There are also pilots for memory care facilities and others. We are focusing on broadening ways to serve underserved customers, hassle free installations, and more, in 2015. We are looking at how we can bring SEM to smaller customers. We ran a pilot last year for small commercial SEM, but had some challenges. Weather normalization and the like cause problems. We have a regional outreach strategy for rural areas, midstream buy-downs and targeting of O&M incentives. We've done a lot on developing the business case for energy efficiency and we will continue on that path. We will coordinate with NEEA and ODOE on that. We are also focusing on continuous improvements and expanding services in geographic areas. We are utilizing data for targeted marketing and helping customers find opportunities at their own sites. Incentive packages will make it easier to capture all the opportunities. The risks include greater than one aMW, some hospitals, universities, and the like. Avoided cost reductions have reduced cost effectiveness.

Program transitions are also underway. In Multifamily, we will rebid the PMC contract, and are bringing on new SEM providers. HB 2801 is in here also, but looks like it may be off the table. Cost effectiveness at a whole building level could cause cost effectiveness problems at the program level. It's probably off the table at this point. Project completion timing from year to year also remains a challenge.

Scott Inman: There is potentially a new PMC?

Oliver: We transitioned Existing Buildings to ICF but Lockheed Martin has done Multifamily for five years.

Mark: The SEM transition includes a plan for cohorts. How are you smoothing that with training?

Oliver: We have someone working directly on consistency there.

Kim: It looks like the vast majority of this is a continuation of what you do now.

Oliver: That's true.

Mark: We talked about streamlined direct delivery for small customers. What does that look like?

Oliver: We experimented last year. We thought we could do prescriptive O&M with certain customer types – like giving them the top 10 things they could do, with savings attached. We asked what the new contractors would do for smaller customers. Some are thinking of a prescriptive approach while others are into streamlined regression analysis. ICF is looking at direct installation of T12 to T8 lighting. They will pay up to 80 percent of the cost, with the customer paying the remainder. We will target communities and tell them on the spot how much it will cost for replacement, and trucks will be ready in the community. As part of the RFP process, we are asking bidders to bring a financing strategy.

Mark: Are they looking at a range of options going all the way to LED?

Oliver: It will be very streamlined at this point, rather than several options.

Kim: We just launched a direct install for compressed air leakage reduction in industrial. We are going to pay trade allies on a per cfm reduction basis. They will make just enough to do the work, but it opens the doors for them to look at other things. For us, it's an intro to small industries we haven't touched before.

In previous years we haven't gotten a lot of feedback on budget concepts. I want everyone to know that it's much less of a formal process than the five year plan. Don't hesitate to give us comments and ideas. Sometime in the next couple of weeks we'll start plugging numbers in, so this is the best time to comment.

7. 2015 Budget concepts: residential sector (discussion)

Diane Ferington: In residential, we are on track to achieve our savings. There was an action plan for Existing Homes this year that helped put it ahead of its timing curve. With Cascade Natural Gas we are over 50 percent of the achievement for Existing Homes. We have reached 123 percent of the goal for LEDs. Other products aren't moving as quickly. The products program is watching this carefully. There is extra funding in Existing Homes due to inexpensive savings from kits.

The concepts are for 2015. I'm covering high level themes, but the document has more detail, and we may have time for dialog. The key aspects include empowering contractors to serve customers. We want to get people to go directly to contractors with their interests. The online trade ally portal is launching today and provides the ability to see projects and their status. We are looking at upstream and midstream strategies for spiffs and buy-downs. We plan to expand the adoption of EPS, like adding it for small multifamily and manufactured homes. HB 2801 compliance is a theme. We're doing more and more targeted marketing with usage data and ideas like the food bank donation option for incentives. We always use IT capabilities to assist.

We'll use bonuses as in the past, but specifically to signal to the market where we need measures to go to meet requirements. New gas measures, lending ally development, and things like emergency water heater replacement will be included. It may lead to more dialog with utilities. We want to balance dependence on instant savings measures with core measures. We learned last year that kits were too much of our portfolio, and we need to shift toward core measures. That will take time.

Mark Kendall: With EPS for New and Existing Homes, are we making meaningful progress with MLS?

Diane: The focus on real estate professionals is strong in 2015. New Homes will have a $25 spiff to list EPS information in the RMLS and case studies featuring builders that are strong in that market. RMLS doesn't list EPS information as often as it should.

Mark: They seem reticent to add it.

Warren Cook: The space has been available in RMLS since 2008.

Diane: We are working on ways to make it easier to upload the information to RMLS.

Don MacOdrum: This is a good time to mention that this year's Home Performance Conference will focus on home valuation with appraisers and real estate professionals, and we are also feeling like there was some success in HB 2801 rule-making. EPS scores being in compliance with ODOE rules will give most of the critical info on page one. Not all Energy Trust info is there, but we are working in that direction. One question is: What would be involved in getting this into tax assessment records, since they populate the MLS? We are working with counties on it. There are discussions with many of our stakeholders, like Energy Trust, whether you create a challenge in terms of tax assessments if you do end up having these scores in the tax records – so we are looking for a way to create a carve-out for energy efficiency. Not every tax assessor in every county will agree on these things.

Holly Meyer: I was part of the 2801 meetings. From a gas company perspective, it was going okay, so I stepped back because it didn't seem like a good use of our time. It looked like you were moving to one tool that would be consistent. Right now there are still three main scores that don't allow for apples-to-apples comparisons. My excitement took a dive because of that. Without agreeing on one score, I don't know how it educates and moves the market.

Diane: There was commentary around the need for one score, but the natural market will determine that. There isn't a dominant driver like there is for EPS. Washington is looking at EPS also.

Holly: Will we reevaluate at some point and move to one score?

Diane:

Wendy Gerlitz: I was in the meetings also, and I think it was premature to move to one score. It was too early to get Oregon to adopt one score. Maybe in a couple of years we will have experience with enough scores to adopt one scoring tool.

Mark: It's critical for gaining adoption.

Wendy: It also includes the PUDs and Co-ops, and they aren't all ready.

Diane: It includes CEWO, so that will be a lot of homes. We are shooting for 27 percent market share based on new home permits.

Don MacOdrum: The other scores can atrophy away if EPS becomes the dominant one. The bill also definitely made the scope statewide. Energy Trust, Earth Advantage and Cake can help the rest of the state establish scores. It can also allows non Home Performance contractors to score homes. It's still a contractor class with the CCB and inspectors and real estate professionals can provide it, also. Energy Trust and CEWO can possibly break the boundaries.

Mark: This is critical to transforming the Existing Building market's knowledge. Back in 1979 Super Good Cents had a vision of scoring and rating new homes to a standard. We've seen very little progress since then.

Don Jones: We did learn a lot from that effort.

Warren Cook: Energy features and valuation standards need to be established. The next step is a stakeholder panel to decide where we will go with this. We may not be able to train a homeowner to recognize a good number if they are only interested in dollars. Something like a nutritional label seems to be where we galvanized. There is a tremendous amount of momentum we shouldn't stand in front of.

Diane: In 2015, one of our biggest challenges will be responses to the avoided gas cost docket. We are going into budgeting with that unknown, but we will bring more info here as we learn more.

Mark: What are the new gas strategies?

Marshall: We have a pilot to test inclusion of prescriptive air sealing and we are 10 percent into it. A second effort will be testing the ability for smart thermostats to reduce gas consumption based on new products.

Mark: Is this in addition to night setbacks? Is it more about the memorized settings?

Marshall: There are a few ways it can sense whether or not people are home. We think people are buying smart thermostats for a reason, and we want to prove what it is. Puget Sound Energy is working on a measure for it, and we'll learn from them. We are supporting NEEA's conversations with gas companies and how NEEA can play a role. We are also looking at heat pump water heaters for gas and combination heating and water heating gas systems.

Fred Gordon: Conversations are being pursued. There is a concept of a gas absorption heat pump water heater with a field test. Do they want to make it a regional initiative? We don't know. We are looking to expand hearths, and the question of would you want to add gas adjunct to commercial rooftops and dryers?

Mark: Have we completed the war on pilot lights?

Marshall: We'll discuss that in the next section.

Diane: Another aspect is that we'll put out an RFP for behavioral approaches. We'll see what we get back and determine what we'll do in 2015. OPower will finish up next year, and will be evaluated.

Kim Crossman: We'll come back to the CAC in September with our budget, which should be familiar based on this discussion.

8. Measure review: hearths (discussion)

Marshall: This is traditionally about fireplaces, but other technologies can qualify. The benefit cost ratio is an extension of what we've seen so far. The current offer is two tiers of efficient fireplaces. Tier one is 65 – 69.9 percent fireplace efficiency (FE – which is not the same as annual fuel utilization efficiency, or AFUE). With NW Natural, we recognized there was a market

of products with efficiency that could be improved. The Canadian P4 model is not as well-known as the AFUE standard used for furnaces. We also paid extra incentives for an IP ignition system instead of a standing pilot. About 81 percent of the models had a standing pilot light. Efficiency savings result from both the ignition and the fireplace itself. Customers see this as one pathway for savings.

Tier one has been fairly static, but tier two has grown over the past four years. New products are in the more efficient category. The tier one products probably haven't innovated much, but the tier two are newer.

We've learned from a market survey of vendors who sell these products, a metering study to determine how frequently people use the fireplaces compared to our 2009 assumptions, and a survey of distributors to understand how they see the product and how they perceive our role in promoting it.

Paul Sklar: Those in the 65 to 69 FE tier were not a large part of the market, and one could say that we've done a lot of work in this tier but are not necessarily driving that one; but have room to grow in the 70+ area.

Holly Meyer: Moving the non-participants wouldn't help then – they're free riders. You have more room to grab in the 65 to 69 FE area?

Marshall: It doesn't appear there is a large market in the 70+ range and we're trending toward promoting the most efficient ones.

Kim Crossman: We would be adding to the overall, not taking up more of the non-participants.

Karen Horkitz: Is that the number of fireplaces installed in 2013?

Paul: Yes, this is in 2013. Sold and installed are very close.

Marshall: So this is an apples-to-apples comparison.

Fred Gordon: Our market theory based on the last study is that we are going with high end hearths. Customers don't turn them on much, and we don't want them to buy a high end hearth they don't use. Log sets are inefficient and we don't want to bring people up for something they don't use to heat much. Decorative hearths are just that – good looking, but not as much for heating. We think this is mostly about a core market, but vendors sell more than one thing, so it's not that simple.

Holly: The contractors are already your bigger, more advanced ones. The smaller guys are less likely to sell the high efficiency ones, so they aren't in this?

Marshall: It's an indication of the market with a prominent segment of the market that carries the higher efficiency ones. There are a few lagging behind that are less sophisticated and don't carry them.

Holly: I think what you are saying makes sense. Are there a bunch of low-efficiency ones that could be brought up to higher efficiency? Maybe you don't drop the bottom tier?

Fred: When we presented this, we identified five to seven studies we could do. We basically painted a tunnel of knowledge through the middle of the universe of hearths. This was to give us

a baseline and tell us if there were enough load hours to make it worthwhile. There are more opportunities now that this is done.

Mark: This is probably the best survey of this type in the Northwestern US.

Fred: We are miles ahead of anyone south of Canada.

Kim Crossman: The brown portion of the graph shows a large market and people aren't making that transition from low to high.

Fred: We studied what we wanted to study, but there are other hearth markets to look at.

Wendy Gerlitz: Could you give some context for the proportions of ones receiving incentives vs. ones not receiving incentives?

Marshall: Our influence has been about 1300 out of 7000 hearths. The gas furnace market share was at about 65 percent when we pulled out. Everyone rallied around this condensing technology that we supported. For hearths, this is the ceiling of what's available, it appears, but not the best that can be done.

We assumed in 2009 that the average unit was about 62 FE. Based on these results, we think the common FE is 66.8. There has been a general increase, we think.

Garrett Harris: How many were new vs. replacements out of the 1300 last year?

Paul: We can get the number to you.

Fred: Our premise was that we weren't putting enough money on the table to influence buying a hearth or not. A lot were replacing wood or oil, or adding a gas hearth when they had a gas furnace.

Paul: We used top selling brand data from participating distributors. We want to have higher standards for the new ones.

Warren Cook: Are these input or delivered capacities shown in the graphs?

Paul: It's input capacity.

We originally assumed 20 hours per week, when looking at the metering and hours of use information, but they came in at more like 15 hours. They were 19.9 therms for tier one and 31.6 for tier two, excluding the pilot lights. Ignition system savings are on par with efficiency savings, if not more.

Kim Crossman: Is it accurate to say that when your operation hours went down your ignition pilot savings go up?

Paul: There is some offset.

Marshall: The net to gross adjustment was 19 percent for IP pilots, and are now at 39.7 percent; especially at the higher efficiency tier.

Holly: The most efficient ones have the smallest range. That's strange.

Paul: [ ]

Mark: You can't get one for less than $3,000: that's the catch.

Marshall: Aesthetics play a big role. It's difficult to figure efficiency costs vs. total costs. We don't see a single average incremental cost at this point. The 75+ tier does seem to have it, and we do seem to influence that market.

Paul: We did take the averages in each group, but there is some degree of uncertainty.

Wendy: Are they entirely different structures of products? This may be something where you want to influence the manufacturers more than the customers. How difficult is it to put the same equipment into the same outward looks?

Paul: We did a distributor survey to pursue that angle. There are some features that influence looks, like how they are vented, for example.

Wendy: What's the right strategy to have maximum input? If the end consumer is using many different factors to decide, are there ways to influence what's available to buy?

Marshall: We've established relationships with retailers to get the message out to customers. We moved to the vendors who pushed the product. We have 680,000 gas customers. We're a small market to get that attention, so we need to aggregate resources with other parties to make it work.

Wendy: This just makes it look like it will be very complicated to influence.

Warren: It looks like washers and TVs, again. Customers look at other factors than energy efficiency.

Karen Horkitz: Standards will be the key.

Paul: They do appear to be cost effective at these incentive levels.

Karen: Was there an evaluation of this? What did you conclude about free-ridership? When looking at the program did you draw a conclusion about your influence?

Marshall: From fast feedback surveys about 45 percent of customers seemed to be free riders. There was some noise in the survey since NW Natural promotes their own brands, so it's outside Energy Trust. 45 percent is a big number.

Fred: We have an open question about free riders. We have influenced the market very quickly. When we picked up the spec, they retooled their line around our spec and credited us for that. We did a study years ago, but not the framework around it was market transformation. The distributors aren't well trained in this. We may not be able to tell what it means, and we are digging deeper.

Holly: Who rebuilt to your spec?

Marshall: A distributor who claims to have 5 percent of the Oregon market.

Karen: Is all this research available on the web?

Kim: We can get this for you, and all of the information will eventually be available.

Marshall: We intend to claim pilot ignition savings in 2015 and it looks like we'll continue to promote them in the tier we're moving away from. We also plan to claim savings from the distributor who said we had an influence. We'll use data from them.

Going forward, we are forecasting a small number of projects next year. We are trying to determine the best way to do this. We are working to determine if it fits within the NEEA framework.

We are responding to information and the market is moving fast. We'll do a bonus for the more efficient technologies. It's more of a stocking incentive for 75+ FE products. We'll add a new higher tier next year. By the end of the hearth season we hope to see more products available in the market and we will encourage those. We don't know what the incentive looks like yet. We will discontinue the lower efficiency incentive.

Holly: I thought you were keeping the lower tier to keep people from putting in standing pilot lights.

Marshall: We are looking to maintain an influence on preventing standing pilot lights from going in, but won't promote the lower efficiency tier. We may promote models that don't have standing pilot lights. We may encourage IP installs in all units.

Don: It's a module that can be changed out.

Marshall: We blended them together so the consumer doesn't see the difference.

Mark: Do we have data on the models with both types of IP?

Marshall: [ ]

Warren: It used to be $110 dollars for the ignition module. But now there's a remote so that's the cost. It's interesting to get to a measure with an incremental cost unrelated to the savings. It exists, but we can't tease it out. Thanks to this research, we'll also look at a 2015 measure starting at 70 FE, and probably two tiers, also.

Marshall: It's great to have ODOE's participation and support to help bolster our market transformation.

Warren: You should be able to take credit for everything above 70, because they just didn't exist before you entered the market.

Scott Davidson: There's a big push to reduce wood smoke. Is there an opportunity to capture that with DEQ?

Marshall: We've tracked on those initiatives and we are following the RTF's lead, but have a hard time breaking it down to the right level.

Paul: Some of these did replace wood fireplaces. In those cases, the savings we looked at were the fireplace they would have bought versus the more efficient.

Scott Davidson: There's a perfect opportunity to capitalize on other market requirements that the efficiency dollars can help achieve other societal benefits.

Mark: These are just UL and not EPA listed?

Paul: They are UL.

Kim: These are a great example of societal benefits that lend it to working with others.

Fred: With ductless heat pumps we did work with the state program on conversions. The way we are guided policy wise is not our objective. There may be funding for fuel conversions under the gas carbon bill, there's another source of funding and mission. We may work with them, but our money is for this mission. We can work with ones who help us do our job too. We are open to both ideas. The guidance isn't that, so far.

Scott Davidson: Having a boundary that's permeable that allows you to leverage other opportunities isn't there.

Fred: You've stated it very well.

Mark: Certain air sheds have bounties on non EPA rated stoves. I don't know how you manage that collaboration on incentives. Maybe we do negotiate how the incentives stack on.

Warren: It's one of those market expansions where you need to manage attainment.

9. Public comment

Scott Davidson: There was a decision in Salem on 1696 electric cost exceptions. That docket has been quieter than 1622 gas. What are the thoughts on that?

Fred Gordon: I assume there will be a published decision. Elaine did a great memo explaining UM551 market transformation. Largely, the OPUC agreed. Insulation measures were moved to the gas docket to figure out at once. They decided not to give exceptions for 1 hp motors, one irrigation measure, and a few small things. There is a question of timing of some upgrades to screening tools. Solar Water Heating came up and they refused the electric exception. I'm assuming gas will be the same. They didn't see enough value for the money. Our next conversation will be with Juliette on transition. We think pools are cost effective along with some commercial. We don't think it's all solar water heat. It's not a high volume measure.

Scott: The one thing about pushing the insulation discussion to the same time means what?

Fred: They see them as one set of decisions, and same with multifamily vs. single family. They figure it's the same issue; so what do we want to do?

Elaine: For Multifamily it's ceiling and floor insulation.

Don MacOdrum: I heard the commissioners' questions. Was there anything in their questions and comments that seemed especially germane to 1622?

Fred: I don't know if I can give you a knowledgeable answer to that one.

Juliette: They are opposed to things with low TRC ratios. That seemed very clear from the meeting yesterday. When staff proposed the idea of combining insulation, the conclusion was that any discussion on insulation and the core program were similar to each other. Not the same, but similar.

Fred: Commissioner Savage, in particular, wanted our info on unit cost and savings on these things to understand if we're asking people to do things with long payback.

Don M: Commissioner Savage questioned free ridership, lost opportunities, low BCRs and the money being spent elsewhere. Those were the high level things I noticed.

10. Meeting adjournment

Kim: We have a meeting September 3, and the question of what we have for next time will come up. We may not need a meeting if nothing else comes up. I will notify everyone. Keep in touch with us if you have feedback. There is room on some of our agendas to add your ideas beyond our core business at these meetings.

The meeting adjourned at . **The next scheduled meeting of the Conservation Advisory Council will be on September 3, 2014**