Conservation Advisory Council Meeting Notes

July 23, 2014

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

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

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

2. Old business

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

> Kim provided an update on large customer funding constraints, summarizing a presentation from the April Conservation Advisory Council meeting. Under SB 838 legislation, large customers greater than <1 aMW per year, do not contribute to SB 838 and are not intended to benefit from this additional efficiency funding. The methodology

used to comply with this provision of the legislation was to develop the baseline portion of public purpose SB 1149 spending on incentives to these customers pre-SB 838, and keep the average portion of SB 1149 funds spent on incentives after SB 838 below the baseline percentage. When spending exceeded this baseline, we would act to reduce funding to large customers and bring average spending back under the baseline percentage within a few years. Our expectation was that we would cross this line in PGE territory once we analyzed 2013's spending.

Results from 2013 show that we spent 18.1 percent of public purpose funding on <1 aMW customers, which is under the established baseline of 18.4 percent in PGE.

We decided to build 2014 goals and budgets without planning spending on large customers, in accordance with our agreements that we wait to act until we cross that baseline. Our analysis shows that spending on large customers in 2014 may be lower than it was in 2011-2013 and we may not cross the baseline at the end of 2014. We are looking at program design changes that reduce spending on large customers, and are trying to minimize the impact of these actions on savings.

We won't have new data on this until we close 2014 in spring of 2015. If we cross the line in 2014, we will need to make decisions about what we do to cut funding, and will as Conservation Advisory Council for input. Round one 2015 budgets assume that we don't cross the line,.

Jamie McGovern was an author of Citizens' Utility Board, CUB, comments regarding this large customer funding constraint, which were submitted as part of a PGE rate case. These comments address policy and rate issues underlying the constraint.

Jamie McGovern: In PGE's most recent rate case, we looked at the possibility that Energy Trust would cross the large customer funding cap, and we wouldn't want to lose the potential for large savings large customers provide. The cap was determined based on SB 838 language, with large customers not paying 1149 funds and not receiving direct benefits. Look at CUB's testimony on page 20 on the website. I'm open to comments or questions and you can reach me at Jamie@oregoncub.org.

Not all energy-efficiency goals can be achieved if large customers with huge savings potential are limited. We see smaller projects as possibly less cost-effective, and this limitation may hamper potential savings that would benefit everyone. In 2015 and 2016, we may see higher chances of crossing the threshold. It's a problem when the Integrated Resource Plans, IRPs, go out to 2030.

Kim: We will not need to act in our first round 2015 budget. We will continue to pay close attention.

Wendy Gerlitz: Northwest Energy Coalition plans to provide supporting testimony for CUB in this rate case.

Juliet Johnson: 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 spending on these customers?

Kim: On a side note, I want to remind everyone that large customers are all types of customers, including colleges, hospitals and other institutions, and large industries.

The third item is docket number UM 1622, which is open. The period for comment closes tomorrow, and the OPUC hearing is next Tuesday. Conservation Advisory Council members can submit comments throughout the docket process.

3. 2015-2019 Strategic Plan draft (discussion)

Elaine Prause presentated on the draft 2015-2010 Strategic Plan. The plan will be posted on Energy Trust's website and emailed to all advisory council members on Friday, July 25. Public comments will be accepted through August 26. The initial draft incorporated feedback from the Conservation Advisory Council in March, and the board provided guidance at a strategic workshop in June.

We expect that substantial efficiency resource is available, but there are several challenges. 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.

Themes in the strategic plan include adapting to change, continuous improvement in operations and updating approaches to meet customer needs. The long-term renewable goal aims to help meet the state's goal of providing 8 percent of retail sales by 2025 with renewable systems smaller than 20 MW. The energy-efficiency goals are about obtaining all cost-effective, achievable savings. The plan also includes operational goals.

Stan Price: Can you provide more context on the board's discussion of vision and mission?

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.

Alan Meyer: The board sees Energy Trust as having a clearly and narrowly defined charter. We need to stay within it.

Elaine: We have five-year goals and annual budget goals, and this plan helps us think further out. Especially on the energy-efficiency side, there are things we can do now to increase the cost-effective resource in the future. Operations goals are about supporting these other goals.

Energy efficiency goals are 240 aMW and 24 million therms. We started with the 20-year resource assessment. The additional resource is from emerging technologies likely to come available in the next five years. On the electric side, there are additional large opportunities like large data centers and combined heat and power projects that 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. It could change how we deliver gas residential programs

Scott Inman: How do these goals compare to the Strategic Plan goals of the last five years?

Elaine: Over the past five years, we achieved about 26 million therms and 270 aMW, assuming we meet our 2014 goals. We're not growing but it's not a sharp decline.

Holly Meyer: Both gas and electric have declined at the same rates. In the last five years, the growth rates have been parallel. Some of it may be from interrelationships between gas and electric programs.

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

Elaine: For the last five year plan, we slightly exceeded targets, achieving about 102 percent of electric goals and exceeding gas goals by about 14 percent.

> The four top strategies in the draft 2015-2019 Strategic Plan are to continuously improve programs to meet customer needs, manage total cost of efficiency, replenish the portfolio with new resources and expand customer participation.

Juliet: The plan is aspirational but well-balanced. The ways you achieve those goals will show up in annual budgets. I'm pleased with the draft.

Stan Price: What percentage of customers are repeat customers? 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.

Holly: The strategic plan seems comprehensive. You are looking to optimize programs serve more customers, work with other organizations like NEEA and make operations as efficient as possible. I'm happy with it.

Elaine: Renewable generation goals include generation and development of markets. 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 advised this approach be applied to energy efficiency as well, so we will add it to the cross-cutting strategies.

> Effective partnerships, efficient operations and being ready for changes are cross-cutting goals. We need to be strategic about setting up relationships with organizations that 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 opportunities.

Juliet: I like the part about being ready for changes. Can you summarize what that looks like operationally? Cost accounting should be set up for those opportunities.

Elaine: Operations goals address how we set up for this internally. We have a management review underway, concurrent with strategic plan development.

> August 26 is the comment deadline for the draft 2015-2019 Strategic Plan. 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. We plan to come back to Conservation Advisory Council in September with feedback received. After that, we will go to the board in October 1 for approval to inform our budget.

Holly: What about building Oregon's leadership into the plan, and using what Energy Trust has learned to inform other states? This is more about raising all the boats nationally. It's also our responsibility as a leader to mentor and teach others.

Jamie: 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 the fourth most energy-efficient state in the nation, according to American Council for an Energy-Efficient Economy. I encourage you to continue to pursue benchmarking.

Fred Gordon: We have received feedback that we should only do this type of work when it will directly benefit our goals. We do lots of networking all over the country and world. We engage in a deliberate way, but as a nonprofit we have to ration our resources.

Wendy: I've been engaged in energy-efficiency discussions related to the Environmental Protection Agency's 111d. I hear that the state goals are set on an aggressive level, but there are concerns that the public utilities don't have the same great savings rates as Energy Trust. It may be good to look at how you help other entities in Oregon. How can you support and help the rest of the state?

Juliet: The strategic plan includes innovative goals for reducing barriers to renewable energy development, 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 this may not be the best use of staff time. Strategic partners are a great way to help us get information out through the right channels.

Kim: Energy Trust has been researched by national nonprofits that seek to spread best practices. I might do one day's worth of work to gather some information, but the nonprofit then does a month's worth of work to write their papers. This seems like a good way to get our info out to peers in other states or organizations.

4. Q2 dashboards (information)

Kim: Energy Trust Q2 2014 dashboards indicate savings and progress to goals through Q2. We are close to our goals in PGE and Pacific Power territory, and are meeting goals in NW Natural territory. We are exceeding goals in Cascade Natural Gas territory.

5. 2014 year-to-date savings and 2015 budget concepts: industry & ag sector (discussion)

Kim presented on the sector's activity and savings in Q2. The industrial sector is coming up short in Cascade Natural Gas territory. Savings to date in Cascade Natural Gas territory are from one project. Our savings in this territory come from only four or five projects, so one project can dramatically impact us. We are now providing 20 percent bonuses in Cascade Natural Gas territory to help us reach goal in 2014 keep building a pipeline. The bonus led to a new project that came in last week. As of the end of Q2 2014, we don't see a need for bonuses outside of Cascade Natural Gas territory.

Mark Kendall: How many customers participate in Cascade Natural Gas territory each year?

Kim: Three or four. It's not unusual for two-thirds of the savings to come from one customer's project. Most industrial customers in Cascade territory are transport. For some customers, the eligible gas load is a tiny portion of their energy.

Kim: Strategic Energy Management, SEM, and custom projects are part of the custom track. The streamlined track provides savings for simpler measures delivered through trade allies, and result in a high volume of smaller projects. We made a change to our delivery strategy this year, and Program Delivery Contractors, PDCs, now have budget to promote all possible upgrades instead of just custom projects. Custom PDCs now serve all sizes of customers in their geographic territory.

> Adam Bartini, program manager for the streamlined track, did a lot of work to enable PDCs to promote streamlined measures, including creating detailed scoping templates. These types of delivery design changes are multi-year initiatives, so we'll see some savings this year and more next year. We still need to better arm the PDCs to offer more, and this will be reflected in the 2015 budget. They need things like a tablet-based scoping tool to give the customer a report by the end of a meeting. It's part of our continuous process improvements.
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> In terms of building tools and other infrastructure of the program, not having a Program Management Contractor, PMC, is a challenge. PMCs are large organizations that operate in multiple utility territories, so they have robust tools. Industry and agriculture staff do all of the administrative work done by PMCs in other programs. We also have PDCs that are entirely market-facing and do not have marketing, program management or other administrative work in their scope. They deliver the program to customers or to trade allies.

Karen Horkitz: Has Energy Trust looked at the reasons for bringing Production Efficiency in house and evaluated the benefits of this strategy?

Alan Meyer: I was on the board when we made this decision. 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 Production Efficiency. We found that the customers could be treated in a way that better met their needs by bringing the program in house. That delivery model wouldn't work with residential customers because there are too many. 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.

Mark: Energy Trust is undergoing a five-year management review, and the contractor is looking at value and performance by utility and market sector. The findings will be out at the end of the summer and will be integrated into the 2015-2019 Strategic Plan.

Kim: Production Efficiency won an exemplary program award from ACEEE last year. After we took things in house, there were fewer layers of management and we were more able to innovate, make changes and run pilots. Going forward, the challenge is a need to invest in things PMCs would already have.

Mark: Have we seen a rebound in lighting this year with the emergence of LEDs?

Kim: This year, we raised our custom incentive for lighting because it needed to be equivalent to other custom savings, and it also opened the door for LEDs to come flooding in. The incentive change had a big effect on savings, along with changes in LEDs. So far this year, 54 percent of industrial lighting savings came from LEDs. In 2013, 13 percent of savings came from LEDs. In 2012, zero savings were from LEDs. This is probably the fastest change I've seen in this field.

> We are building out a toolkit of standardized SEM curriculum and tools, which will allow us to hire more contractors to deliver SEM. We have 11 participants committed for our first cohort in Southern Oregon and 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.
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> We provided SEM training to more than 100 companies in our first five years, and would like to bring this to scale now, reaching an additional 200-300 customers in the next five years. We'll run at least 30 to 50 customers through our program next year. You'll hear more about SEM in the next five-year strategic plan. You can see our video case studies about Kettle Foods and Purdy painting products on the website.

Garrett Harris: How small can SEM be scaled down?

Kim: After running the Core pilot, we scale SEM down to customers who spend about $50,000 per year on gas and electric combined. The SEM commitment involves a lot of staff time for customers, but they love it because training needs are such a pain point for them. This is free training, which is why it has taken off.

Holly: You were focusing on larger customers for a long time. Is this plan to serve smaller industries going to cost a lot more? What's the driver and what's the downside?

Kim: Under SB 838, there are limitations on what we can spend on large customers. Working now to better serve small customers gives us flexibility to diversify savings in the long run. Savings from small customers will likely cost more than savings from large customers, but there is room to spend more as Production Efficiency's levelized costs are fairly low.

Holly: It costs more but is under the incentive cap for <1 aMW customers. Does it allow Energy Trust's overall energy-efficiency costs to be cheaper?

Kim: We don't know yet. If we see anything showing up as a cost-effectiveness problem, we'll dial it back. SEM and other operations and maintenance programs yielded surprising savings in the last several years with only small cost increases.

Scott: 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 spending cap.

> What's different here is that changes due to the recession happened in a short timeframe. As companies rebound, change has happened slowly and hasn't been as visible. Investments in Portland seem to be growing. Some international companies are coming in. There is more savings potential if manufacturing is booming. When they were cutting back, we got unexpected savings because they kept their staff busy on operations and maintenance. Now that business is booming, will customers they have time to work on energy efficiency?

6. Q2 2014 dashboard and 2015 budget concepts: commercial sector (discussion)

Oliver Kesting: Oliver presented on the commercial sector's activity and savings in Q2. The commercial sector includes Existing Buildings, New Buildings, multifamily and commercial SEM.

> The sector is behind historic accomplishments for electric savings. Commercial SEM is lagging due to the timing of projects, and we expect SEM to come in ahead of goals by year-end. The sector is on track to exceed goals in Cascade Natural Gas territory and approach the goal in NW Natural. Existing Buildings is behind in gas savings, but New Buildings and multifamily are ahead in gas savings. Incentive spending is running lower than budgeted for equivalent savings.
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> To help meet goals in 2014, Existing Buildings and multifamily are planning an increase to the base custom gas incentives. Existing Buildings and multifamily also launched prescriptive bonuses. New Buildings launched enrollment bonuses for new multifamily projects to help get attention of multifamily projects early in the design process. New Buildings is also exploring an increase in lighting incentives.
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> Interest and activity in New Buildings is at an all-time high, with 152 enrollments across all territories in Q2.

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

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

Becky Walker, PECI: We are determining the exact share.

Oliver: Data centers are hard to predict. In PGE territory, we have one data center project that shifted to 2016, which impacts savings. Faucet aerators and showerheads are the majority of multifamily savings. We have streamlined the enrollment process for mid-stream buy-downs for clothes washers, refrigerators and water heaters, and we expect to see more distributors enroll in the future.

> In Existing Buildings, we continue to work with Oregon Department of Energy on schools, and expect of a lot of school construction this summer.
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> Oliver presented on the 2015 budget concepts for the commercial sector. The budget concepts line up with the overall strategic plan, with 17 percent of gas savings from SEM. We are working to mitigate a dip in gas savings in Existing Buildings with incentive changes.
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> As far as the overall state of the market, updates to code and federal lighting standards have ratcheted up the baselines, making it harder to get savings. New measures and approaches like LEDs are becoming more cost-effective, and operations and maintenance is gaining momentum. There are cost-effectiveness challenges given the new avoided costs, and that will limit how much support we can provide for some measures. The State Energy Incentives Program, the revised Business Energy Tax Credits, offers some limited opportunities to work with the Oregon Department of Energy.

In the Existing Buildings program, large customers consistently use our programs, but small to mid-size customers need more nudging. SEM is working for larger customers. LED lamp prices are dropping, and we are rolling them into prescriptive measures. Street lights are an area of focus with municipalities.

We launched a pilot through LED distributors in 2013, which was successful and will continue. We continue to focus on comprehensive lighting. We launched prescriptive bonuses for cooler doors, packaged terminal heat pumps, boilers with steam traps and foodservice 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, including direct installation at a low cost to customers. On the Pay for Performance pilot, we are negotiating contracts now.

On the New Buildings side, there are several strong areas. Packaged incentives through Market Solutions make things easier for smaller customers. We are working with NEEA on code compliance and market transformation. New Buildings is supporting 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 building construction but tough for comprehensive retrofits because units are occupied. We redesigned the custom track by streamlining forms. We continue to offer instant savings measures, and expect to provide services to more than 20,000 dwelling units in 2014. Savings from weatherization and windows are challenging due to tax credit changes, but we will continue to support these measures through engagement and assistance to the trade allies.

Scott: The state program actually has substantial weatherization opportunities. 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 straightforward and easy, but the larger weatherization projects are difficult. Competitive bid processes are not working well for weatherization.

Warren: Linkage with actual incentives is better than gambling for a potential tax credit.

Kim: There are lots of challenges with competitive incentive design in industrial, too.

Oliver: Multifamily is also running several pilots including, memory care and MPower.

For 2015, we are focusing on serving underserved customers. We are looking at how we can bring SEM to smaller customers. We have a regional outreach strategy for rural areas, midstream buy-downs and targeting of operations and maintenance incentives. We've done a lot on developing the business case for energy efficiency and we will continue on that path. We are also focusing on continuous improvements and expanding services in geographic areas. We are exploring using data for targeted marketing and helping customers find opportunities. Incentive packages will make it easier to capture all the opportunities.

The risks for 2015 include the funding for <1 aMW sites, which would impact hospitals, universities and similar large customers. Avoided cost reductions have reduced cost-effectiveness.

In multifamily, we will rebid the PMC contract, and are bringing on new SEM providers. HB 2801 could create program design challenges if there are rules created regarding treatment of cost-effectiveness at a whole building level.

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

Oliver: In the SEM bid process, we asked what the new contractors would do for smaller customers. Some are taking a prescriptive approach while others are exploring streamlined regression analysis. For retrofits, the multifamily PMC, ICF, is working on direct installation of T12 to T8 lighting. We 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 this RFP process, we are asking bidders to propose 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. Oliver requested comments and ideas on 2015 budget comments from Conservation Advisory Council members in the next few weeks.

7. Q2 2014 dashboard and 2015 budget concepts: residential sector (discussion)

Diane Ferington: Diane presented on residential sector savings and activity in Q2 2014. The residential sector is on track to achieve savings goals in 2014. In Cascade Natural Gas territory, we have achieved more than 50 percent of our annual goal for Existing Homes. We have reached 123 percent of the goal for LEDs as well. Other products are moving slower than anticipated, so there’s room for more LEDs.

Diane presented on residential sector budget concepts for 2015. Key aspects include empowering contractors to serve customers. The online trade ally portal is launching and provides the ability to see projects and their status. We are looking at upstream and midstream strategies to focus on moving core products and water heaters. We plan to expand the adoption of EPS, including adding it for small multifamily and manufactured homes. HB 2801 compliance is a theme. We’re doing more targeted marketing.

We’ll use bonuses as in the past. New gas measures, lending ally development and emergency water heater replacement will be included. The desire to look at other approaches with voluntary on-bill to support specific measures will require more dialog with utilities. We want to balance dependence on instant savings measures with core measures.

Mark Kendall: Are we making meaningful progress with RMLS?

Diane: The focus on real estate professionals is strong in 2015. New Homes will have a $25 spiff for listing EPS information in RMLS. Real estate agents don’t upload EPS information to RMLS as often as they should.

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. What would be involved in getting EPS into tax assessment records, since they populate RMLS?

Holly: I was part of the SB 2801 meetings. From a gas company perspective, 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. 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. That's the purview of the Oregon Department of Energy, which currently approves three systems for use. The market will decide which scores get traction.

Wendy: I was in the meetings, 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.

Wendy: It also includes the public utility districts and co-ops, and they aren't all ready.

Diane: Clean Energy Works is delivering EPS in volume for existing homes. Clean Energy Works also delivers EPS scores in Oregon outside of Energy Trust territory so that will be a lot of homes. In 2015, we are shooting for 27 percent market share based on new home permits for EPS, and Clean Energy Works will score more than 5,000 homes in 2014 with preliminary scores.

Don: Energy Trust, Earth Advantage and Cake Systems can help the rest of the state establish scores. It can also allow non-Home Performance contractors to score homes. Energy Trust and Clean Energy Works can possibly break the boundaries.

Mark: This is critical to transforming the Existing Homes market.

Warren: Energy features and valuation standards need to be established. The next step is for a stakeholder panel to determine direction. We may not be able to train a homeowner to recognize a good number if they are only interested in dollars. There is a tremendous amount of momentum we shouldn't stand in front of.

Diane: In 2015, one of our biggest challenges will be responding to the avoided gas cost docket. We are going into budgeting with that unknown factor, but we will bring more information 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 about 10 percent toward our target quota. A second effort will be to test the ability of smart thermostats to reduce gas consumption. Puget Sound Energy is working on a measure for smart thermostats, 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: NEEA is conducting a field test on a gas absorption heat pump water heater. If it's successful, would the region's gas program funders want to make it a regional initiative? We are looking to expand hearths and exploring adding gas adjunct to NEEA's electric efforts for commercial rooftops and dryers?

Diane: We'll put out a request for proposals for behavioral approaches. The Pacific Power high user OPower effort will finish up August of next year, and will be evaluated.

8. Measure review: hearths (discussion)

Marshall Johnson presented the results of two recent market studies and a metering study and proposed changes to residential direct vent fireplaces for 2015.

> The current hearth offering includes two tiers of efficient fireplaces. Tier one is 65 to 69.9 percent fireplace efficiency, FE, which is not the same as annual fuel utilization efficiency, or AFUE. Tier two is for hearths with 7.0 FE or greater. 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. Tier two products have grown over the past four years.
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> We surveyed vendors and distributors and conducted a metering study to determine how frequently people use the fireplaces compared to our 2009 assumptions.

Paul Sklar: Hearths in the 65 to 69 FE tier were not a large part of the market, but have room to grow in the 70+ area.

Holly: 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.

Fred: We are trying to find people who are planning to buy relatively high-quality, high-cost hearths for heating, and persuade them to buy efficient hearths. We don't want to sell much more expensive equipment unless the consumer heats for many hours of the year. So far our work has been about a core market that buys a certain type of hearth, but vendors sell multiple options so it's not that simple. We also don't know much about hearths in new home construction.

Holly: Energy Trust surveyed the larger trade allies, so the study may not represent the entire market.

Marshall: It's an indication of a prominent segment of the market that carries higher-efficiency hearths.

Holly: Are there low-efficiency hearths that could be brought up to higher efficiency? Maybe you don't drop the bottom tier?

Fred: When we presented this to Northwest Natural, we identified five to seven potential studies on different portions of this complex market. This was to give us a baseline and tell us if there were enough load hours to make it worthwhile. There are more opportunities to explore for related markets now that this is done.

Marshall: Our influence has been about 1,300 out of 7,000 hearths. The gas furnace market share was at about 65 percent when we pulled out. Everyone rallied around this condensing technology. For hearths, it appears there is still a fair amount of room for us to continue to influence the market. We assumed in 2009 that the average unit was about 62 FE. Based on these results, we think the average FE is 66.8. There has been a general increase, we think.

Garrett: How many of these 1,300 hearths were new rather than replacements?

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 brand data from participating distributors to determine the baseline efficiency. We want to have a higher efficiency requirement for the top tier.

Paul: We originally assumed hearths would be used 20 hours per week, but they came in at more like 15 hours. The thermal efficiency savings were 19.9 therms for tier one models and 31.6 for tier two models, excluding pilot lights. Ignition system savings are on par with efficiency savings, if not more.

Marshall: The net to gross adjustment was 19 percent for IP pilots, and are now at 31 percent; especially at the higher efficiency tier.

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 separate efficiency costs from total costs. We don't see a single average incremental cost at this point. The 75+ tier does seem to have a narrower range, and we do seem to influence that market.

Wendy: This may be something where you want to influence the manufacturers more than the customers.

Paul: We did a distributor survey to pursue that angle. The aesthetic features appear to be independent of the efficiency ratings.

Wendy: 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 are now working with vendors. We have 680,000 gas customers. We're a small market to get a manufacturer's attention, so we need to aggregate resources with other parties to make it work.

Warren: This is similar to washers and TVs. Customers look at other factors than energy efficiency.

Karen: 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 under their brand, so it may be outside Energy Trust recognition. 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, one manufacturer retooled their line around our spec and credited us for that. We did a study years ago, but did not build a full framework to analyze market transformation. The distributors aren't well trained in talking about efficient markets, so their answers are limited. We may not be able to tell exactly what happened but we are digging deeper to find out.

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

> Going forward, we are forecasting a small number of projects in the new tier 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.
>
> We don't know what the new incentive looks like yet. We will discontinue the lower 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, but won't promote the lower efficiency tier. We may promote models that don't have standing pilot lights. We may encourage IP installations in all units. We blended the IPI and thermal efficiency savings together so the consumer doesn't see the difference.

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 Oregon Department of Energy's participation and support to help bolster our market transformation case.

Warren: You should be able to take credit for everything above 70, because they those models 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 Department of Environmental Quality?

Paul: Some of these hearths 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. This relates to your earlier presentation on the strategic plan and role of leveraging resources.

Mark: These are just UL and not Environmental Protection agency listed?

Paul: They are UL.

Fred: With ductless heat pumps, we worked with the state program on conversions. However, fuel conversion is not our objective.

Scott Davidson: Having a boundary that's permeable that allows you to leverage other opportunities.

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: I assume there will be a published decision. Elaine wrote a great memo proposing exceptions for electric measures. For most measures, the OPUC agreed. Insulation measures were moved to the gas docket to figure out at once. They decided not to give exceptions for one heat pump measure and one irrigation measure. They agreed with us about 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.

> Our next conversation will be with Juliet about measures that are not cost-effective and were not granted an exception. We think solar pool heaters are cost effective.

Don MacOdrum: Was there anything in commissioners' questions and comments that seemed especially germane to 1622?

Juliet: They are opposed to things with low total resource cost ratios.

Fred: Commissioner Savage wanted information on unit cost and savings to understand payback.

Don McOdrum: Commissioner Savage questioned free ridership, lost opportunities, low benefit/cost ratios and the money being spent elsewhere.

10. Meeting adjournment

The meeting adjourned at 4:30 p.m. The next Conservation Advisory Council meeting is scheduled on September 3, 2014.