Conservation Advisory Council Meeting Notes

November 20, 2015

Attending from the council:
Charlie Grist, Northwest Power and Conservation Council
Julia Harper, Northwest Energy Efficiency Alliance
Garrett Harris, Portland General Electric
Don Jones, Jr., Pacific Power
Roger Kainu (for Warren Cook), Oregon Department of Energy
Don MacOdrum, Home Performance Guild of Oregon
Holly Meyer, NW Natural
Scott Inman, Oregon Remodelers Association
Elaine Prause, Oregon Public Utility Commission
Tyler Pepple, ICNU
Andria Jacob, City of Portland

Attending from Energy Trust:
Oliver Kesting
Mike Bailey
Amber Cole
Kim Crossman
Peter West
Sue Fletcher
Fred Gordon
Marshall Johnson
Steve Lacey
Thad Roth
Kate Scott
Katie Wallace
Mark Wyman
Ted Light
Susan Jamison
Tom Beverly
Paul Sklar

Others attending:
Jeremy Anderson, WISE
Dave Backen, Evergreen Consulting
Ryan Bracken, NW Natural
Mike Christianson, Energy 350
Scott Davidson, Enhabit
Danny Defeniks, Discount Windows
Mark Duty, Rogers Machinery
Bill Henry, EQL Energy
John Frankel, NW Natural
Sara Fredrickson, CLEAResult
Gail Hammer, NW Natural
Mitt Jones, member of the public
Keith Kueny, CAPO
Brian Lynch, AESC
Mary Mann, Goose Hollow Windows
Alan Meyer, Energy Trust board
Whitney Rideout, Evergreen Consulting
John Molnar, Rogers Machinery
Jerry Page, Total Comfort
Tracy Scott, Lockheed Martin
Becky Walker, CLEAResult

1. Welcome and introductions

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

2. Old business

The council approved the October meeting notes without comments or changes.

3. 2016 residential incentive adjustments, round 2

Marshall: We presented planned residential changes last time and there were two areas where that needed further explanation.

> We don't plan to make changes to EPS™ for new construction. It's a custom approach for providing energy savings in new homes. In 2017 there may be new construction changes. In Existing Homes we plan to discontinue the EPS incentive for Home Performance contractors. We introduced the strategy last year at about this time. It replaced the Home Performance with ENERGY STAR incentive and was used as a transition. We worked with stakeholders and used the Conservation Advisory Council advice to create this incentive. Year to date, we've had approximately 380 EPS incentives redeemed with 220 coming from one contractor, 110 from another volume contractor who isn't actively sending closed projects to us, and a handful of contractors who make up the difference.
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> We want to expand into aligning EPS beyond retrofits and look to align EPS generation with real-estate transactions. We plan to increase consumer awareness and demand, and consider ways to influence the long-term goals around EPS. We clarified this with stakeholders, like Don MacOdrum with the Home Performance Guild of Oregon, and will come back to the Conservation Advisory Council with a more clearly defined strategy in 2016. We want to align incentive dollars with the right strategy and real estate actors may be the best group for this.

Holly Meyer: Will the program stay the same while you evaluate? Or are you ending it and evaluating?

Marshall: We integrated Cake Systems with the Energy Trust databases and Cake is also connected with Enhabit. Essentially, we'll remove the incentive to the contractor and realign our EPS investments to better connect promotion and awareness-building with infrastructure. We will continue to support it through business development resources but we aren't putting an individual incentive on the transaction.

> We have had a chance since the last Conservation Advisory Council meeting to learn that there are other Home Performance contractors using it to drive audits, but we want to decouple it from audits. We see there's some continued plans in driving audits instead of EPS scores. We want to align EPS with installed measures and real-estate transactions. The focus will be on the real estate industry: that will have a bigger impact.

Don MacOdrum: It's clear that the incentive was meant to be transitional from the Home Performance assessment incentive. There are a lot of stakeholders that would like it to stick around, and many were gearing up to provide many of these assessments and incentives in 2016, which shows a lot of interest. It's a signal that there are many who see it as a value in the market. EPS was an evolution of the Home Performance assessment. They were still doing it with half an incentive and will be able to adapt further.

Don Jones: With support in terms of coop marketing and the like.

Don MacOdrum: There is a lot of discussion nationally about getting energy efficiency information into transactional groups. There's a Core Logic effort in combination with Property Assessed Clean Energy, PACE, with liens on homes being transferred and data included in the PACE database could really inform things. EPS has a future, but the Home Performance Guild and many others will work with Energy Trust on EPS and other residential energy ratings. Energy Trust is very open about this and thinking of the goals and things to support it. I have a better understanding of the plan now.

Scott Inman: There's a possible tie-in with home inspections as part of the real estate process. It could be upgraded to EPS also. Is that still part of it?

Marshall: We do think home inspectors would be a good delivery mechanism.

Don M: HB 2801 created a Home Performance assessor designation at the Construction Contractors' Board of Oregon. An outcome could be outreach to those inspectors. It's part of the bigger strategy.

Julia Harper: For the next step Home program will be doing more outreach to realtors.

Jerry Page: From day-to-day we get many phone calls because inspectors have identified insulation issues. If you put your energy in that direction you'll get a large return.

Holly: Do you mean insulation that's installed wrong?
Jerry: There are many issues, such as not enough insulation. I am astonished at the level of inspection these days. They go over it thoroughly. Their good job is driving a lot of business.

Marshall: There have been many dollars on the table to drive heat pump water heaters over the last couple of years. There are more available products on the market as a result. There are two tier 2 models in the market. We now think we can decouple our strategy and look at retail products promotions and distributors. The intent behind our reduced incentive is not to over incentivize something and make adjustments so the market and supply chain accept the changes.

> We'll encourage distributors to stock product with incentives. A new federal baseline went into effect this year, also. All water heaters have to be 0.95 EF if less than 55 gallons. They have to be 2.0 EF at greater than 55 gallons. We can no longer offer incentives when the federal standards encourage the actions. (See slides)
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> Heat pump water heaters inside the conditioned space have an interactive effect on heating. There are complications with bringing outside air into homes. Holes are cut in homes to bring outside air and the market doesn't want holes in their homes. There are costs added by requiring the ducting. More retail products meet the tier 2 performance requirements to simplify it for consumers. We need to do some education about noise and comfort considerations, as they relate to installation requirements. We take a slight discount on the savings, but can scale sales and installations.
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> We have historically been sensitive to the large dollar amounts on the table for heat pump water heaters. Now that two major companies have products available, there is reason to simplify requirements in order to expand our promotion of qualifying units. We find that it's a barrier to require identification of the existing water heat source. In addition to promoting it through retail channels, we will also promote gas tank water heaters through retail. We haven't finished our gas tank analysis. Development will happen early next year. We may launch a simultaneous retail promotion.

Holly: It sounded like the $2,200 sensitivity was about the money on the electric side. Has the incentive decreased a lot after you lifted the restriction?

Marshall: NEEA promotes products that are new in the market, at one point, they were offering $,1000 per unit.

Julia: Yes, and the amount we're paying per unit is coming down.

Marshall: The Oregon Department of Energy's tax credit is shrinking by 50 percent and our incentive is dropping from $500 to $300.

Elaine Prause: You mentioned upstream incentives. Tell us more about that.
Marshall: We are wrapping up research now, but we believe we will potentially pay distributors for a limited quantity to stock qualified units. We are creating a unique group of trade allies. There are three volume trade allies now. We need to find a way to better direct leads to installers and encourage water heater installers through volume spiffs.

> We think there are about 80,000 water heater replacements in our service territories. We provided incentives for a very small number of that, just over 700 units last year. We are thinking differently, and changing requirements will be a big part of our residential strategy.

Holly: Since there's a parasitic relationship with heat pump water heaters using up space heating, is it a good idea to allow these to spit out cold air? Is it good for the homeowner to do that, regardless of downward adjustments in savings?
Marshall: We've turned homeowners away for having these in their basements and found that some customers request exceptions to get incentives for basement installations, which we've historically been prohibiting.
Charlie Grist: I have a 100-year-old house with a concrete basement. When the heat pump water heater comes on, the temperature falls a little along the floor for about 20 minutes. The floor is 55 degrees all year long. It's pulling heat out of the floor and walls. The ceiling temperature hasn't changed. That's my personal experience and it could be different elsewhere. It also acts like a dehumidifier.
Garrett Harris: I have one in my basement. It's in the laundry room and I don't notice a difference in the conditioned space; but it's a little cooler in the laundry room. I also heat with a heat pump. If the air above is being cooled it's being heated by a heat pump.
Charlie: The Regional Technical Forum is collecting data on this to analyze it. We need to be sure we're not taking away from one for the other. It's worth paying attention to.
John Frankel: We've heard anecdotal evidence of these installed in semi-finished basements. Without the restriction on space they will use the same space as existing water heaters. We've heard that they have no effect and that they have a big effect. We want to be sure we aren't opening up the door to install them just anywhere. We will see a reduction in the savings. On existing electric water heater restrictions it does create another avenue for fuel switching. Specific incentives were authorized in electric-only homes and the concern was about disparity between gas and electric incentives. We don't know what the total per unit incentive will be. There is still going to be disparity. Operating costs are extremely important and will allow the consumer to make an educated guess for their own home. If there is better point-of-sale information for consumers, we'll be a little more understanding of how it will benefit the consumer.

Marshall: We've talked about referencing the energy guide sticker which shows costs and usage. We do think the retailers can be trained and respond to questions based on that. We don't have a lot of space to put the information out. We recognize the awareness of operating costs and we'll educate store staff.

John: Signs will publicize $1,000 on item x and $120 on item y, and tell people to go find the operating costs on their own. We should list those at the point-of-sale and provide the best information to the consumer.

Charlie: Are you not proposing to do anything about install location?
Marshall: We're looking at education and leveraging NEEA materials.

Charlie: You are letting the market decide. When people are disappointed have you thought about the liability, in terms of program savings?
Holly: A contractor wouldn't even sell me one. I was steered to a tankless water heater. He didn't know I worked for NW Natural. It feels like we need more information. It seems a little misguided to leave it to the consumer. Customers trust you for good information. Telling them to figure it out will create a credibility and brand liability.

Don M: Our fridges are heat pumps, in a way. Conceivably it's not that much of an impact. When you are looking at building a net-zero home there are simple ways to heat the homes. It seems inconsistent that this requirement should go away. I haven't checked with my members, but in terms of not counteracting the energy savings, all three, the Oregon Department of Energy, NEEA and Energy Trust, made a determination that the differential was small?
Marshall: NEEA doesn't require it. The Regional Technical Forum doesn't require it as part of their specification. They say water heaters should have the capability of having ducting. We went the most conservative route and required ducting for interior installations.

Mark Wyman: If you go out with a design that's predicated on preexisting conditions, our current design isn't easily accessed. Do you really want full control over preexisting conditions and leave out 99 percent of the market, or do you want more influence over more people in the market? We are really struggling with that. We don't want to advocate for less than optimal installations, but we need to reach more people.

Julia: It's exacerbated by emergency replacements. People don't want to drill holes in their homes at that time.

Elaine: We're looking for the worst-case scenario. Are there plans to track where things go and evaluate them?
Marshall: We haven't fully built our plan and are really only indicating we want to make this change. A lot more needs to happen before we can do this. There's an interest in thinking this through.

Alan Meyer: One concern is convenience, comfort and savings. The heat pump water heater is going to cool the home in summer. How many are in different locations by percentage?
Marshall: Campaigns with PGE have encouraged garage installations. We are targeting those who we think are a fit for this promotion. As for the breakdown, I don't have the information but can follow up.

Alan: Could we just provide a warning about the optimal installation?
Marshall: We propose that type of education rather than creating a program requirement.

Peter West: One part is training of sales folks and another is materials. We don't think it's necessary to repeat all of what is already posted on the appliance. People should look at the cost information, and can be pointed to it. It's more than just heat pump water heaters here. We are also talking about gas water heaters in this effort. The Northwest Power and Conservation Council Sixth Power Plan pointed out the opportunities for hot water, and it is the same in the draft 7th Power Plan. The changes here are about trying to break into the opportunity, penetrating deeper than we have.

Holly: We talked about 36,000 replacements before. Is it 80,000?
Marshall: That was a gas number. That assumed 46 percent gas and it's larger than that.

Charlie: The Regional Technical Forum has a workbook on heat pump water heaters with analysis in a bunch of different combinations. The heating and cooling interactions are huge in conditioned spaces. Air conditioning interaction is modeled now and we need to revisit it. There is a big range in savings performance based on size and where you put them. You can use that to help craft what you do on education. The Regional Technical Forum doesn't dictate programs but it will tell you the specifications associated with levels of savings.

Garret: Information for participating retailers would be a big help.

Don Jones: The big thing is that this is potentially the largest one we can see in terms of impacts on heating.

Charlie: I have to turn mine off in the winter when I'm working in the basement, for example.

Marshall: We convened a regional stakeholder group around large tank incentives for units greater than 55 gallons. It has to do with the federal baseline. We committed to tier three incentives when they come to market. We are working with NEEA to encourage that to happen. The volume is rather small and doesn't warrant the work to create an exception pathway. When there is better equipment we'll get behind it. There was an understanding around our limitations and acceptance of it.

Garrett: I appreciate the stakeholder meeting. I do have concerns. The rest of the region is going with larger tanks early in market transformation. I am encouraged by the potential of tier three units. Would it apply to retail also?
Marshall: We would need to work with our Planning Group, but very likely.

Don Jones: Pacific Power dropped them out of Washington.

4. Existing Multifamily windows incentive changes
Peter West: Thank you for coming today, and for paying attention. We are doing something different than what's on the agenda. We are not proposing to change the Existing Multifamily windows incentives at this time.

> I apologize for the way this came out with little warning. It slipped through and was a mistake. We don't surprise folks in the way we surprised you and we are going to start correcting that today. This isn't our standard or our historical way of doing things. Today we'll step back. We won't make a decision on the incentive offering and will not do the presentation that was in the packet. Instead, we invite you to work with us as you have with other issues. We are here to take input and answer questions so we can start the discussion about how to address an issue with measure cost-effectiveness for windows in the Existing Multifamily program. We are required to address and resolve this issue, and we need your input. We will also bring this topic to the trade ally forums in January, and back to the Conservation Advisory Council in February or March.

Tom Beverly: The forums will be held the third week in January in Portland, Bend and Medford. They are primarily residential, but we also include Multifamily in the residential meetings.

Peter: We will spend the next 20 minutes or so taking questions and comments on the materials that were been posted so we can come to the next discussions ready to address them.

Scott Inman: Can someone define incremental costs in this case?
Paul Sklar: This is a retrofit measure so we are looking at the full cost of installation. It's not just the difference between code and the higher efficiency.

Scott: Why is it different in Multifamily from Existing Homes?
Fred Gordon: Through market research we found that we rarely got people in single-family homes to buy windows earlier than they otherwise would have without our help. However, we were able to help them buy a more efficient window. For multifamily buildings we found the opposite. In most cases we are actually influencing a retrofit and they wouldn't have replaced the window without us. Looking back at the historic record for multifamily, in years when there was no tax credit there were no installs, it required both the tax credit and incentive to persuade most owners to act.
Scott: I disagree. My company is doing two projects now with 8,000 and 11,000 square feet of windows. One will save $32,000 and one $33,000. Without question, he won't go ENERGY STAR without your incentive. These are multifamily, not single-family decision makers.
Holly Meyer: They might have gone with non-ENERGY STAR otherwise?
Scott: They wouldn't invest any more than they have to. They wouldn't invest more without the incentive. It seems odd when the motivations in Multifamily and single family are the same. These are late-sixties, single-pane aluminum windows, and late-seventies double pane windows. Neither have to be replaced. The customer is going ENERGY STAR because of the incentive.
Fred: Scott, I think the language is confusing, but we are agreeing.

Scott: When Oregon's Business Energy Tax Credit went away it dried up the market for a long time.

Jeremy Anderson: People will do what you pay them for. You are paying an incremental incentive now. At $2-$3, you are right in the middle. Why don't you take the tax credit into account on the total resource cost test, TRC?
Paul: It's still not enough to make it cost effective.
Jeremy: But counting the tax credit would get you closer. I also wonder why you are counting savings at one-fifth of the Regional Technical Forum. Are you sure your numbers are that much better than others?
Paul: I'm not aware of a difference. We can check it out.

Fred: Is this single family or Multifamily?
Jeremy: Multifamily.

Scott: There's 5.1 kWh in savings; 23 in Multifamily.

Jeremy: That lines up with what the Oregon Department of Energy uses and Environmental Protection Agency puts out.

Kim Crossman: We are trying to take your questions but not come up with answers today. There are many questions.

Jeremy: Are you sure the crisis is as big as you think it is? The numbers don't seem to jive with the marketplace. The other thing is even if we change savings numbers and costs, it still might not get where we need to go. While the numbers were pretty horrible for the TRC, this meets many of the OPUC criteria for an exception from the natural gas discussion. It's making the

case for when the numbers are close and there are a lot of other things that could factor in. The non-energy benefits are more significant than the energy benefits.

Mary Mann: I was one of the first 20 trade allies at Energy Trust. These incentives drive the market. When the economy tanked, incentives wouldn't help. I'm on the Rental Housing Association's legislative council. The high number of people and high rents are leading people to not be able to live here. In Portland, 60 percent of people are renters. They can't turn off their heating bills. If they are living without heat, it damages the buildings. We have an issue in high density areas. Landlords don't need to do anything to keep high occupancy. The buildings can basically rot and they'll still be able to keep renters in them. We need to be capitalizing on the recovered economy now that people are ready to move forward. These incentives make a huge difference on the quality they put into their projects.

> You are getting a good benefit without changing based on inflation. My manufacturers are raising their prices now, but they couldn't during the bad economy. The projects are more expensive based on that, but the incentives aren't any higher. Every property gets the tax credit. Jerry and I used the federal database which shows much higher savings than Energy Trust. I called an owner about heating bills today. She said that you will not believe the savings from switching from single-pane to multi-pane windows in these units. I would say they save several hundred dollars per year. The numbers don't equal field experience. I don't spend $200 per month to heat my house, but it's common for apartments to cost that much. That has gone on for years. If we eliminate windows we unbalance the system of air pressure in the buildings.

Danny DeFeniks: A lot of the incentive for the owners to get a better window comes from the incentives and tax credits. It's huge to the owners to make their tenants more comfortable. $200 for electricity is very common. They will certainly move to better windows for higher incentives. We shoot for 0.22 windows even though 0.30 is the level for Energy Trust incentives.

Jerry Page: There are a thousand social miles between Portland and Salem. I can't think of a project we have done where they would do it without the incentive. Our average sale takes over three years from when we approach them to when they decide to do it. Short-term change for the program is devastating. The added time to decide helps. Apartment owners in the rest of the state aren't getting huge rents. They don't have the same cash flow as Portland in other areas. Windows and weatherization aren't top priorities. They need repairs and basics. Without a large incentive you have eliminated, by far, the majority of apartment owners. The elephant in the room is the definition of cost effectiveness. In California and Washington, it's cost effective to weatherize. We should go to the legislature to change the definition. If we fixed that it would resolve lots of other issues.

Scott Davidson: As someone who spent time in front of the OPUC, this is an issue for regulators, and not something Energy Trust can act upon. It's up to us to make the coalition to act. Energy Trust can't do it.

Jerry: It's a conversation that needs to be done with a lot of different folks and needs to happen. I suggest Jeremy Anderson as a resource. He has been doing industry legislative representation through WISE. He is the person to talk to.

Elaine Prause: Thanks for stepping back from making a decision today. It makes a lot of sense. There are impressions in the room, and going through the process to explain it will be helpful. Certainly as exceptions go forward it will be on the table and receive due process.

Peter: Thanks for the comments and your calm approach to a surprise. I appreciate all that was said. Tom will bring this topic back to the trade ally forums in January, and it will come back to the Conservation Advisory Council after that. Paul will meet with Jeremy and other stakeholders to address the questions about the data and assumptions.

Oliver: Tom will collect input and be your contact for this. You can reach him at tom.beverly@energytrust.org.

5. 2016 final proposed budget and action plan

Peter West: I am covering changes to the draft budget we provided to you October 21. We've adjusted and incorporated early comments. Overall, there aren't many differences, and the few changes are relatively minor. The budget will go to the board with a seven tenths of one percent change. (See slides)

Savings do shift a little more, but not in a way to change our strategies, tactics or areas of emphasis. There is no thematic story to the changes, just an overall refinement in budgeting. As we reviewed the draft budget we identified some items that needed to be re-factored, and some new information came in, largely a plant closure, and in another case, a large project getting more firm. Finally, some expenditures and savings came forward that we realized were not included in the draft budget or needed updating based on better data, for example, from the Regional Building Stock Assessment. The largest changes to note are:

Existing Buildings program: A correction for a baseline change in lighting that did not get caught in the draft budget. The impact is to lower lighting savings by a little more than 2 percent and overall Existing Buildings savings by less than 1 percent. Costs for lighting did not change.

Production Efficiency program: The closure of SP Newsprint came after the draft budget was prepared. We had some projects in progress with them that are now on hold indefinitely for about a 1 million decrease in savings for PGE and a drop in incentives

NW Natural: On the plus side, a large potential gas project emerged as a reality for 2016 with more than 300,000 therm savings and related costs this is about 20 percent of the total increase noted earlier.

Water savings: The Planning Group revised upwards the amount of savings from water-saving devices in low-income settings. A modest, positive change we incorporated into the final proposed budget. Also, in the draft budget we had assumed the share of sales of showerheads would be 59 percent electric and 41 percent gas. In re-looking at the data we learned the information included Washington. When we looked at the Oregon only data we saw that the split should be 47 percent for electric and 53 percent for gas. This decreased savings and costs for electric and increased it for gas.

Program Management Contract re-bid: We need to re-bid either the Existing Building or Existing Homes programs in 2016 to keep in line with a regular and sane contract management cycle. We had not nailed down which program in the draft budget. It makes most sense to re-bid the Existing Buildings Program Management Contract at this point. This is the largest part of the change in costs, about one-half of the proposed, total change from the draft budget.

Manufactured Housing pilot: We had put in too low a set of numbers for the initiative in 2016, particularly in Pacific Power. The effort, while not comparatively big, was only one-half of what it should be in the draft budget. More than 65 percent of the fix is in Pacific Power, which is 7 percent of the total increase.

NEEA: The revised plan from NEEA proposes an acceleration in the launch of pilot efforts in gas, increasing the budget for NEEA by more than $300,000. The five-year cost remains the same, but the timing shifts to sooner, which is a good thing. This is about a 20 percent share of the increase noted earlier.

In sum three things make up more than 90 percent of the increase in costs.

This is the twelfth presentation of the budget. The public comment period ends at 5:00 p.m. today. The PMC rebid is the biggest news. The RFP will be in March or early April and it will be decided by the board in July.

Tyler Pepple: Do you know what the 2015 PGE budget is?
Peter: The packets have the data broken out by program and utility. There are a number of views available there.

Holly Meyer: What are the type or nature of comments you want from the Conservation Advisory Council? I'm always curious and feel we are kind of quiet. I'm never sure what you need.
Kim Crossman: At our last Conservation Advisory Council meeting you actually gave a lot of what we need. Feedback on what we're planning, initiatives and strategies are a big part of what we need. We got that at the last meeting and dialed things in through that.
Peter: We have for each program an action plan, and it's great to hear what in those plans you are most interested in hearing about and tracking.

Kim: The draft budget shows everything and our comment period closes about the time we come back with the final proposed. The ideal time is with the draft budget and earlier feedback is most helpful. This year we didn't bring budget concepts in July. Did this work or was something missed by not having concepts earlier?
Holly: Less replication is good. In the last one there were more charts and numbers. To me it's the substantive things that were more important than the numbers. It's the action plan discussion. That's where the focus should be.
Julia Harper: I thought it was fine. Future situations with giant shifts, or dramatically new and different items, should be brought earlier.
Elaine Prause: It went well the last meeting, but was a lot of information. We need to prepare ahead of time and read through things. It worked well.

6. Updates to avoided costs
Ted Light covered slides on updated avoided costs. (See slides for details)

Don MacOdrum: Is the energy expense cost to the utility?
Ted: That's what it would cost them to either build a plant or buy electricity on the open market.

Don M: Does this ultimately go into the TRC, which takes into account consumer costs?
Ted: What the utility pays on the wholesale basis isn't what the consumer pays. They're connected but there's a lag between them. These are in the numerator when we look at the benefit-cost ratio.

Don M: This seemed like a disconnect between consumer costs and utility costs to me.

Don Jones: These aren't retail rates; these are utility costs to generate energy. It depends what costs you include.

Don M: So the usefulness in Integrated Resource Plans is the avoided costs?
Don J: We are providing avoided costs to Energy Trust for their work.

Holly Meyer: Is the commodity price, part of the top one, the value of avoided energy expense?
Ted: This is more electric-oriented, but some of it does apply to gas as well.

Don J: This is an upfront payment for a stream of savings.

Charlie Grist: It's the net present value of one kWh of savings over a number of years.

Ted: There was a risk reduction value added to gas avoided costs. We have done it for the electric side for a long time and recently added it for gas.

Tyler Pepple: What risk is being reduced?
Ted: When buying efficiency you know the price right now and are locking it in. The market fluctuates and may change in the future. It's less risky to buy now. Utilities do other "hedging" so we avoid calling it a "hedge value."

Charlie: How did you come to that on the gas side?
Ryan Bracken: For NW Natural basically it's the current risk premium.
Elaine Prause: It didn't exist before, but added 3 percent to the value as we defined it.
Charlie: Is that what it would cost to hedge in?
Ryan: You can fix the price of a commodity for a long time forward. In the past we used the price forecast but there are products where you can fix the price. That price is compared to the forecasted market price.
Charlie: It's the market available long term fixed price and the price forecast. The cost of hedging and firming up the price. Someone else is taking the risk of being wrong and they are charging you for it.

Julia Harper: Why is there a big difference between large and small offices?
Ted: Smaller offices may close at a certain time, where a large office has more widely spread hours.

Don MacOdrum: Is the down good or bad?
Don J: These are benefits so down is bad.

Don M: In the other slide, avoided costs of insulation was the highest of all the measures.
Ted: That's more about measure life to make the bar higher on the slides. Value of the savings is higher for insulation than other measures on that chart because it has the longest measure life.

Scott Inman: It looks like electricity went down and gas went up.
Ted: The graph showing electric avoided costs only includes six profiles and measure life combinations out of many possible ones, but some went up and some went down.
Charlie: They are remarkably similar. These are pretty subtle.

Kim: When we first encountered this from the Planning Group, we wondered what happened to the value of energy efficiency on the third shift: outdoor lighting for example. There appears to not be a insignificant impact on industrial from this.

Scott: Have you looked back for 10 years and seen what might have changed?
Ted: We looked at how these affect our programs based on what they're doing. Gas went up and there's not much pain there with programs. On the electric side there are differences and we have worked with staff for planning next year.
Kim: It's not big enough to change projections for next year.
Fred Gordon: Our ability to make decisions depends on our ability to take things from four utilities with four models and put them into a model we can use to look things up. Ted has done a terrific job of building it.

Charlie: In the Power Council's work on the draft 7th Power Plan, one of the things we discovered was that even in a world where wholesale power prices on the spot market are very low, the avoided costs for energy efficiency aren't going down in our models. A lot of the energy efficiency we're building reduces peak period energy needs. That's why even in a low market price it makes sense to buy energy efficiency. It's really great to see. The region as a whole is short in the winter on peak in a critical water year. Planners plan for these hard times. When you do that, the signal is that you need to build capacity now. That's why we're building all this energy efficiency. Putting this spin on it really allows you to give more credit to a measure that gives savings at night, and during the winter, when you need it. There will be some shifting around in our suite of measures. It will shift investment into what provides the most value and resource to the Northwest region.

Alan Meyer: I'm surprised the fridge that is running at all hours would be lowest price.

Kim: Our three-shift measures look the worst. One shift looks great. We're currently paying the same incentive on all kWh no matter what it offsets. As a whole, these measures look worse.

Alan: If it's one shift from midnight to whenever it should be better. Uniformity of hours should be the mean.

Kim: Our one shift measures happen closest to peak.

Holly: Why wouldn't something including peak plus others save more?

Don Jones: Street lights would look worse than this for example.

Charlie: Peak in wintertime is 8 to 5. If you did this on hot July days it wouldn't look the same.

Fred: We didn't find a measure with a load shape of less value. Exterior lighting is on when it's dark. During certain times of the year, that's part of peak hours.

> [Post-meeting correction: Some of the load shapes, including 2 and 3 shift industrial load shapes, which were not part of the example data set shown to the council, had lower average value per kWh.]

Charlie: Regional usage is humpy. With an average 20,000 MW system there are hours below and above, but the peaks are created by all things being on at the same time; not the things that are off. Things stack up.

Ted: Exterior lighting comes on earlier in the dark months, which could be during peak.

Don Jones: You've got a heavy load and light load spread across different day types. It's good to think about this. Our IRP model runs on 87/60 load shapes that are modeled on how they meet capacity. You start thinking about relative value differences. This is good work.

Holly: Is this being built into the 2016 budget?
Ted: This is already been used to look at measures in 2016. All the commercial and industrial field staff will begin using these costs in the 2016 program year.

Holly: The increase in gas avoided costs didn't change what we offer. Were you disappointed?
Ted: You're correct in that the increase did not change what we can offer but may allow for small changes to incentive levels. I can't speak for the organization, but yes, I was disappointed.

Charlie: You did the peak factors on what?
Ted: We did the peaks based on what the utilities defined as their peak.

Elaine: This presentation would be good before the draft budget, if there are changes. It would help inform.

7. Public comment
There were no additional public comments.

8. Meeting adjournment
The next scheduled meeting of the Conservation Advisory Council will be on February 10, 2016, from 1:30 p.m. – 4:30 p.m.