CONSERVATION ADVISORY COUNCIL
Notes from meeting on November 28, 2012

Attending from the Council:
Scott Inman, Oregon Remodelers Association
Don Jones, Jr., Pacific Power
Don MacOdrum, Home Performance Contractors Guild of Oregon
Charlie Grist, Northwest Power and Conservation Council
Stan Price, Northwest Energy Efficiency Council
Anne Snyder-Grassman, Portland General Electric
Juliet Johnson, Oregon Public Utility Commission
Wendy Gerlitz, Northwest Energy Coalition
Holly Meyer, NW Natural
Theresa Gibney, Oregon Department of Energy
Andria Jacob, City of Portland

Attending from Energy Trust:
Peter West
Sue Meyer Sample
Oliver Kesting
Marshall Johnson
Tom Beverly
Diane Ferington
Fred Gordon
Jessica Rose
Taylor Bixby
Scott Swearingen
Lakin Garth
Ashley Jackson
Jackie Goss
Rob Del Mar

Others attending:
Jeremy Anderson, WISE
Kari Greer, Pacific Power
Kendall Youngblood, PECI
Marilyn Morfitt, NW Natural
Tim Davis, CSG
Casey Maharg, CSG
Phil Damiano, PECI
Sara Brockmeier, Fluid
Kyle Barton, CSG
Becky Walker, PECI

1. Welcome and announcements
Oliver convened the meeting with introductions and reviewed the agenda. The 2013 meeting schedule was distributed on the back of the agenda. The meeting packet with presentation materials is available on Energy Trust's website at www.energytrust.org/About/public-meetings/CACMeetings.aspx.

2. Final draft 2013 – 2014 budgets
Peter West covered budgets and themes for 2013 and 2014.

Peter: There haven't been many changes from the earlier draft, which got solid support from stakeholders. The largest change is for Pacific Power and it amounts to a 3 percent reduction, so 97 percent of this one budget is unchanged.

This round incorporates all the latest revenue forecasts from 2012. When you have lower loads, a downturn in the economy and less robust weather, you collect less. We are impacted by all of this and will face tighter revenues in 2013.

This also includes the latest rate filings for all utilities, and revenue reductions in 2013 for Pacific Power. For Cascade Natural Gas, it assumes a shift in collections, and we will use reserves to

carry that shift until about March. The budget for Cascade Natural Gas is relatively unchanged, and the utility will make up any shortfall we have over time. This also includes all the measures that received exemptions to the cost-effectiveness tests for natural gas allowed by the Oregon Public Utility Commission, OPUC.

Overall for the electric utilities, spending is down 0.8 percent, and savings are down 0.7 percent from the last draft. Overall gas spending increased 2.5 percent and savings increased 2.7 percent from the last draft.

The delta by utility is what matters. Cascade Natural Gas is very slight. Savings are up slightly as are costs. Primarily, what's going on a project in Sunriver shifted from 2012 into 2013. The therm savings and incentives also shifted. There are cheap therm savings with this project.

NW Natural has an upward revision of 135,000 therms. For all programs but Existing Buildings we originally anticipated the cost-effectiveness exception to be approved by the OPUC. The upward revision in this version results from now including the measures that received OPUC cost-effectiveness exceptions in this program. There is also a slight decrease in New Homes. We originally estimated near the top-end of the forecast for the new construction rebound. We chose to hedge that. If projects do show up, we have reserves to cover it. We didn't want to budget for it and give it back at the end of the year. It's still a substantial increase for New Homes over 2012.

(The data and one pagers are all revised and will be posted on the web after this meeting. Email Peter West at peter.west@energytrust.org if there's a table or data you need to see.)

Pacific Power is adjusted down the most. The stretch case is 15 percent greater than the Integrated Resource Plan, IRP, goal. We guarantee IRP, since utilities need to meet it. We went beyond that 15 percent for Pacific Power in the earlier draft, but it was a little bit robust. After further discussions with Pacific Power, we revised savings down. Existing Buildings and Production Efficiency are both down by 4.5 percent. We probably would have proposed this for Production Efficiency anyway. It's the opposite case from Cascade Natural Gas and Sunriver; some Production Efficiency projects will close in 2012 instead of 2013. Existing Buildings may be at risk of not having enough budget if current trends continue. As a final piece to meet the lower spending and savings target for Pacific Power, we cut back New Homes and Products for fridge recycling by 40 percent. We did this keeping in mind the initiative can be restarted quickly. We're getting newer and newer fridges for less and less savings, so cutting back sooner doesn't harm savings over time. If we're wrong about market penetration, it can be ramped up very quickly.

Costs come down $1.5 million for Pacific Power. The forecast for the rest of the year from Pacific Power indicates we'll also be down that much in revenues. Loads and sales are down. That means what we counted on carrying over as part of the percent reserves won't be there. Reserves normally would be $2.1 million, which is sufficient to cover anything that doesn't align with our progjections for program demand. We'll have only $600,000, so we'll need to manage Pacific Power tightly and address any large projects with Pacific Power if they show up. June is the interim filing time for new rates, and we can deal with it then.

Don Jones: Pacific Power did a tight forecast for 2012, and things showed up that we didn't expect. So we're committed to pursuing everything that's cost effective. Our 2013 IRP is in progress. We turned around all that's cost effective, divided by Energy Trust, and funded to the

stretch and above, but we're at the margin of the IRP. If you can't get it with the funding you've got, we'll address it then.

Juliet Johnson: The stretch is still 15 percent above IRP?
Don: Yes.

Peter: PGE has minor revisions. We are 0.6 percent up in kWh savings. We had some conservative appliance realization rates, based on what we thought the Regional Technical Forum, RTF, would do. That's a jointly supported group between the Oregon Department of Energy, Northwest Energy Efficiency Alliance, Northwest Energy Efficiency Council, Bonneville Power Administration and others. The RTF has the task of determining what savings should be, so we all have a common platform to work from for the Pacific Northwest. We jumped ahead of some things the RTF wasn't ready to act on, which brought up some savings when we revised back to our older estimates. There is also a new opportunity with PGE for LED specialty lights, and we want to experiment with them. If it works in the metro market, we'll add more retail outfits. It's a $400,000 change in total.

Theresa Gibney: Are savings estimates and realization rates the same thing?
Peter: Yes. Realization rates are the estimated savings we claim by measure. They're basically the same thing.

Peter thanked everyone for the time and input they gave on the budget.

3. Second appeal on natural gas avoided cost
Fred Gordon presented an update since the discussion at the last council meeting in October.

Fred: To recap, the residential solar water heating and weatherization exception request from the OPUC was approved. The second discussion was about all other programs from the gas side. An exception request was filed, which was largely in line with what we discussed a month ago. The status is the request has been filed, and OPUC staff will probably set up a comment period, develop a staff recommendation and forward for decision at a OPUC meeting. We're looking at the individual measures that don't pass the societal test. We'll review the measures based on the new avoided costs, and see what gas measures should be justified as market transformation. For Building Efficiency we will only review gas measures with a societal benefit/cost ratio of greater than 0.7, and we will sunset the rest as proposed.

Right now, we are running the budget as if the OPUC agrees with the request, and we will adjust if they come up with something else. So far, it sounds pretty good, but the decision makers haven't been consulted in detail.

4. Planned residential incentive changes
Marshall Johnson presented planned Existing Homes incentive changes going into effect on January 1, 2013.

Marshall: We did an overview of our plans at the last council meeting in October, and since then have taken a look at additional measures and today will clarify the previous information and look more closely at duct sealing.

We have three primary program tracks for Existing Homes: mobile homes, Home Performance and the single-family standard track. We believe that most trade ally stakeholders understood the last presentation, but others may benefit from more clarification. Mobile home duct sealing

measures will not be impacted by the changes in the single-family and Home Performance tracks. Air sealing and air leakage test incentives, which are paid directly to the contractor as a design component of the moderate-income Savings Within Reach initiative, will be maintained because as they're integrated into Savings Within Reach.

Bonus incentives will end at the end of this year. In water heating, solar water heating has changed slightly since the last presentation. We have increased the maximum incentives for Zone 1. As a reminder, Energy Trust zones are not the same as gardening climate zones. We identified a justification for the slight increase in the solar water heating incentive since last time.

Holly Meyer: I thought they decreased because they weren't passing the utility test; not because of funding?
Marshall: Our Planning Group found a justification for an incentive increase, based upon aggregating the savings per measure across a climate zone.
Fred Gordon: When the Planning Group looked more closely at savings by climate zone we found we could use fixed incentives to give a little more, based on what we saw in savings by climate zone. The Solar team wanted to make it simpler and clearer; to treat it like a commodity.

Marshall: The handout shows lower numbers than the slides, so the slides are the most up-to-date for solar water heating

Fred: Zone 1 is the Willamette Valley.

Marshall: Heat pump water heaters will be in full measure mode instead of a pilot.

Holly: Did we have a review of the pilot?
Marshall: We have been working with NEEA introduce this technology and oversee the pilot, so we didn't do our own evaluation. We have increased our confidence in the savings from this technology, based on what NEEA has learned. We've been very conservative compared to some utilities, who have treated it as a full measure. We restricted marketing and promotion as a pilot.

Holly: Will it still only be promoted to electric water heating customers?
Marshall: Yes, heat pump water heater incentives are only available when replacing an electric tank water heater.

Marshall: Advanced controls for heat pumps have been added for trained and qualified trade allies. Ductless heat pump eligibility will expand to mobile homes, and gas fireplace specifications have been expanded to include more qualifying units.

Duct sealing was covered in October, and we talked about the challenges. The group concluded it was difficult to maintain the incentive for gas. We recognized the cost of the measure makes it difficult to achieve the total resource cost test, but wanted to know if there were ways, or areas of the state, where duct sealing was viable on the electric side. Stakeholders at the last council meeting suggested we work with the Oregon Department of Energy to encourage a process to maintain the tax credit. It would be difficult for the Oregon Department of Energy to maintain it if we eliminated our incentives since the Oregon Department of Energy leverages our administrative incentive processing for qualification support.

We have a goal to complete a duct sealing pilot on the gas side to bring down the cost of installing duct sealing. The average cost for gas duct sealing is $955 and it's $1,017 for electric-

heated homes. We can allow up to $351 for gas heat and $783 for electric heat and comply with our total resource cost thresholds. On the gas side, it's a stretch to support it. We looked by county and program track on the electric side, and felt the best way to portray it was through number of electric duct sealing projects that came in below the maximum allowable amount. On the electric side, 18 percent of our projects with over 12 months of data fell within the cost ceiling. That's a very small amount of the volume for the single-family track. In the Savings Within Reach track, 39 percent came in below the allowable cost ceiling. Sixty-one percent exceeded the allowable cost.

Holly: Are Savings Within Reach projects cheaper to do, or is more cost allowable because you're claiming more savings?
Marshall: The incentive is larger, but the qualifications are not different. The prices are lower because it's less of a sales process and more of a package deal.

Marshall: For electric we would need costs to come down by 23 percent. There are markets where we hit it with Savings Within Reach, but the demographic is the one where it's most necessary to get the most dollar savings for what they are buying. It's our position to move forward with the changes to duct sealing implemented for electric, in addition to gas.

Wendy Gerlitz: When you say cost effectiveness to the customer it means something different than the societal test. Did you look at it by participant?
Fred: We look at it from a utility and societal perspective. When we first saw duct sealing problems, we saw that payback exceeded measure life. On average it looks like you can't get your money back over the life of the measure at current prices.

Juliet: Even the participants can't get their money back?
Fred: On average, that's what we saw by looking at bill savings over a single year and multiplying over the full measure life.

Wendy: The electric looks more marginal.
Fred: The analysis I described above was for gas. For electric you've got double or triple the value for rate savings.

Marshall: A blower door and duct blaster combination is set up for the tests. There isn't necessarily any savings from that part of it. We want to be careful of stopping completely, because a lot of training has gone into it; contractors have put a lot of effort and money into it. It may include multiple trips to the house, including sales appointments, project work and a test out. It appears to be an expensive approach for the savings achieved.

Scott Inman: So what is the approach for this?
Marshall: We intend to expand the duct sealing prescriptive pilot, which does not require testing to be completed along with duct repair and sealing.

Scott: All the testing before and after is what brings up the cost; not the work.

Holly: I know they are different tests, but they are done at the same time. Is there a way to give an incentive if the whole house approach is being done? More of a bonus?
Marshall: We do have the Home Performance assessment incentive.

Holly: You're not incenting for sealing the ducts, and the incentive is why customers do it. It seems like a shame not to seal the ducts only because there's no incentive. If it makes a

difference to include the incentive where they are doing other things already, it would be a shame to miss it.

Marshall: The cost for duct sealing in Home Performance was even greater than single-family and Savings Within Reach track costs. If it could be separated to bring down the cost of the measure it might make a difference. It's what we're trying to do through the pilot. We proposed a process to the OPUC to support the administration of the tax credit. They are in rule making mode, so they can't discuss it now. We will be at the rule making hearing on December 4. We will propose that contractors can self-adminsister projects into the PTCS database, and the state will pull 10 percent for us to QC. The state can use the database for forms.

Holly: Can you claim any savings from it?
Marshall: No. We have a low free ridership rate, and we believe people do it because we've incented it. We've heard that trade allies will be severely impacted without us, so working with the Oregon Department of Energy on the tax credit is one way to help.

Holly: If you are doing the 10 percent check, and there are no free riders, why not claim the savings?
Theresa Gibney: It depends on the situation, but we'll be looking at it after the rule making.
Don Jones: Attribution of savings is a big deal.
Fred: If the state is reporting it, we don't want to double count. Normally, if we think we were critical to savings happening, we claim it, and then when we report jointly with the state we remove double-counting. For this measure, it's more of a support to the industry, so whether we claim it is a complex question.

Holly: Are you both claiming it now?
Marshall: Yes, because we assumed that our incentive influenced the customer to act. We're no longer going to administer the application process and track details, so it makes it more difficult to justify it.

Holly: If it wasn't for your QC process, the Oregon Department of Energy wouldn't do it, so you do still have an impact and influence on people going forward.
Peter: You make a good point. We need to have a discussion with our Planning Group and talk about attribution and the like. It's a fair point.

Theresa: The Oregon Department of Energy can't comment outside the hearing, because this is part of the public comment period. This is the time to send those comments to the hearing, and they'll be discussed there.

5. 2012 true up results

Lakin Garth presented on the 2012 true up results, the evaluation of which is very detailed and staff intensive.

Lakin: At Energy Trust, we are often involved in large projects with one person presenting results and many others behind the scences. This involves heavy analysis and hundreds of thousands of transactions. Our IT group did an amazing job with this.

Previous true ups were done prior to the OPUC annual report due every mid-April. Last year's was in March; the annual report had those results. We completed this year's true-up in August.

The deviations are shown as before and after in these slides. They are relative to the 2011 annual report. They aren't savings in the current year, only the past year's.

True-up allows us to better integrate our evaluation results into our reporting and forecasting of savings for the programs. It's a big effort to evaluate our five major programs, but it helps us accurately reflect past results and plan for the future. We also use these results to predict how we will perform in future years.

Doing it later allows us to wait for NEEA's annual results, so we get additional time to do QC of our database. We literally have a couple hundred thousand transactions to look at each year.

True up only changes reportable savings. Changes are based on a variety of inputs like evaluation results, in the commercial and industrial sectors we are using engineering calculations, and anticipated evaluation results. 2012 will be included in the 2013 true-up. We use a savings weighted average for results of certain measures in certain programs.

There's new data on measure performance. The RTF or others may decide that our assumptions aren't correct, or we have new information we didn't before, and we can make changes based on that. For example, we had new information on compact fluorescent light bulb measures this time. We had corrections to transactional errors in our database. We also correct for spillover and free riders.

Energy Trust program offerings in NW Natural's Washington territory are unaffected by true up because of how we report to the Washington Utilities and Transportation Commission. Renewable energy is generally unaffected by true up.

As for overall results, electric savings decreased by 2.1 percent from 2002 – 2011 or about 6.4 average megawatts, and gas savings decreased by 3.9 percent or 0.9 million therms.

The slides show what we did for the budget, reported savings and trued up savings.

The largest drivers of changes are decreased savings from CFLs in the residential sector, improved NEEA savings, updated free ridership rates in Existing Buildings, improved realization rates for New Buildings, corrections to Production Efficiency free ridership estimates and lower savings from the Personal Energy Report behavior change pilot in 2011.

Charlie Grist: On the CFL side, it's important to note that usage hours changed based on a large study in California. They went down by quite a bit. Nobody up this way has done the same study. Hours didn't seem to vary based on latitude alone. Another thing that went into it was the storage factor. When we measure CFLs by sales data, they were sometimes going into the pantry. Now we've got people replacing CFLs with CFLs instead of incandescent bulbs. Over time, the amount of savings changes because of things like that.

Lakin: Kema did the study.

Charlie: NEEA is doing a data logger study in Montana, also.

Oliver: Do you know how California used this data? Did they true up their data? This is fairly unique to us to look back at our numbers for accuracy.

Fred: We are structured differently, with a board that sets five to 10 year goals. Most regulated utilities want to do the work, get out of it and be done. It's awkward for utilities to look back.

Don Jones: The savings are reflected in the reporting on loads, so the actual savings are accounted for.

Fred: True up is a very difficult process, and we do it because the board asks us to look at things cumulatively. Generally, it shows that our estimates hold up.

Don Jones: Your trade is a saved therm or kWh. Have you gone back and changed levelized costs, and does it cause your other metrics to change year to year?
Lakin: We looked a couple of years back, but the impact on levelized cost isn't that great. Each time we do a true up, the number is always kind of fluctuating; the dollars are same.

Don: Your true up could impact those things. You're not going back and adjusting those other things?
Lakin: No.
Fred: We do the analysis that people will use. That would be a lot of work and as far as I know we don't have an audience that would know what to do with those types of adjustments. Our OPUC performance metrics rely on end-of-year reporting in the annual report.

Lakin: There are lower gas weatherization savings resulting from a 2009 impact analysis on homes; it dropped by 500,000 therms. We would have dropped the 2010 and 2011 savings based on those results. We also trued up 2010 and 2011 based on our findings.

Holly: So the 500,000 is the cumulative result from three years?
Lakin: Yes.

Lakin: There were changes to free ridership numbers for Energy Saver Kits and LivingWise Kits in Existing Homes. There were lower savings from the 2011 Personal Energy Report pilot, and lower New Homes gas market transformation savings. The changes to commercial and industrial gas savings were minor, practically a rounding error. The report is posted online in our library.

Stan Price: This is an impressive amount of work. Is it true from the bullet points that absent a couple of aberations, this is a CFL issue? Most of the movement you found here came from changes to free ridership assumptions?
Lakin: A little. We have a unique process to get real time information on free ridership. Everything in this report about free riders is current.

Stan: What were the major drivers that pushed this number, whether or not free ridership was the most signigicant driver?
Lakin: CFLs were the biggest drivers. When we get an annual free ridership number they are pretty stable from one year to the next; no major changes.

Stan: Any time you make some type of savings estimate, we assume there is a confidence band associatated with it; a normal error range. Did this swing outside that range?
Fred: We've seen other utilities try to analyze efficiency forecasts with confidence bands, but haven't seen anything meaningful. One way to look at it is to look at how far off we've been annually, across all programs. For electric, the CFL adjustment is a bigger adjustment than most, one of the biggest things that has happened. Mega projects had some adjustments. The

weatherization adjustments were the biggest gas adjustment ever. Under the discipline of what we have in place for evaluation accountability, this is as much as we've changed in a year.

Charlie: Big change not driven by gas RTF or CFLs, what's underneath those?
Lakin: We had evaluations done on gas weatherization for 2007 and 2008. We had to change 2009, and savings claimed in 2010 and 2011 were a lot higher than what we found.

Lakin: Through Home Performance, savings are claimed on modeled results, and our analysis showed there wasn't a substantial difference between Home Performance and single-family on a measure by measure basis. Home Performance was claimed based on modeled savings, but there wasn't a basis for it.

Charlie: Are you using those adjustments from the impact evaluations going in?
Lakin: We are claiming the same therms per square foot whether it's Home Performance or single-family based on evaluations. We adjusted this year, and will do so going forward.

Fred: Why did this all happen now? We were getting gas weatherization savings results roughly half of what the rest of the country was telling us we should. We needed three years of statistical billing analysis before, in the face of the information from elsewhere, we had the confidence to make a radical change in the program. The cost-effectiveness issues that led to the first OPUC cost-effectiveness appeal were exacerbated by this analysis. We needed to be sure because no one else was telling us and the implications were large. We had third-party analysis, lots of review,and three years worth of data.

Holly: When Opower did the analysis for us, the numbers realized were only 70 percent of what we thought. This shows a 57 percent realization rate. This is such a dramatic difference, I wonder if there are layers below it? Is this from the original estimate, or on top of the last one?
Lakin: These are from the original estimate.
Fred: There were some data system issues, so the ramp-up got stopped. It affected the rest of the year. We accumulated less. Whatever the curve it's on, the program is delayed a couple of months and that significantly impacted savings.

Fred: I want to tell the group that Lakin is in his last couple of weeks with Energy Trust. He has done a great job presenting difficult information calmly, and boring information in an engaging way. He has done a great job for us.

6. Residential awareness survey overview
Sarah Castor presented the results of the the 2012 residential awareness survey.

Sarah: This is our fifth year of doing this study. OnTarget Research was the third-party contractor who did it this year, and it gives us insight into customer awareness, perceptions of Energy Trust and perceptions of energy efficiency overall. There were many changes to the survey this year, and we made it more actionable for communications staff and less focused on technologies.

The survey sample was 847 customers, and they had to be a customer of at least one of our four utilities. It was a representative sample of the general state population.

More surveys were done by phone than by web. We wanted more web surveys because of better visual elements and convenience, but it turned out that people preferred the phone, or didn't answer by web. We may not put as much effort into the web for future surveys. The

contractor did some weighting to be sure the results weren't overly influenced by one group or another.

Charlie Grist: It seems really high that 44 percent didn't have natural gas service.
Sarah: That's pretty typical for what we see. We made an effort to survey people outside the Portland metro area, also. We are used to homeowners with gas service because they participate with Energy Trust a lot, but many people in the state don't have it.

Sarah: Energy Trust was the most recommended source of energy-efficiency information, with 57 percent of respondents naming Energy Trust as their first choice as an information source. Sixty-one percent of the 847 respondents were aware of Energy Trust, 45 percent would recommend us as a source of information and 25 percent would recommend us first.

Awareness of Energy Trust is up by 1 percent in the Portland metro area, but there was quite a gain over last year in other areas of the state. There was an increase for most utilities but a slight drop for Cascade Natural Gas; however, the drop was not statistically significant, implying awareness is stable there.

Awareness of Energy Trust offerings was highest for appliances and fridge recycling. All residential offerings had at least 46 percent awareness.

For the full set of respondents, 35 percent reported they had received services from us, including Home Energy REviews, kits, weatherization or heating measures, appliances or fridge recycling.

Scott Inman: How does that 35 percent number match with what Energy Trust estimates it has done?
Sarah: The last time we analyzed overall participation rates a year or two ago we found about 20 percent participation among residential households over all program years. Thirty-five percent seems reasonable considering we have distributed a lot of kits since that analysis was done.

Sarah: Most respondents learned about us first from contractors, retailers and utilities if they had used our services. Those who hadn't used our services most likely learned about Energy Trust from media stories.

Out of those who were aware of us about 70 percent believed we are a credible source of information. There were similar positive numbers for the other questions about Energy Trust's reputation.

The survey was set up to be about energy efficiency; not just Energy Trust. We wanted to know how interested respondents were in energy efficiency, and compare their interest to others. People who reported using our services thought they were more interested than other people. Very few respondents said their interest in energy efficiency had decreased over the last year or two; most were more interested in energy efficiency.

"You can save energy and money" was the most popular message we explored for motivating respondents to take action to save energy. A comfortable and energy-efficient home was second most popular and a message about saving the planet was third. We do best with "save energy and money" as it resonates with both past participants and non participants.

Installing CFLs was the most common action taken in the last year to save energy in the home. Many people also replaced appliances. Conducting an energy audit of some kind and installing CFLs were the two most common actions respondents reported they planned to take in the next 12 months.

Both participants and non participants could use more rebate information and general tips on how to save energy in their home.

We got a better response from renters wanting to learn more about us than homeowners. They were comfortable getting information from us directly or from the utilities.

Don MacOdrum: Did the question about "additional ways to learn more" mention contractors as a possibility?
Sarah: No, but it's something we can add next time. Good point.

Sarah: Overall awareness has increased or remained stable for all utilities. We seem well respected by residents in all four regions. Past users of our services reported a solid understanding of our services.

Don MacOdrum: What is that based on?
Sarah: It's based on the question about awareness of services we offer.

Scott: Do you send a survey out with the incentive checks?
Sarah: We don't, but we do follow up surveys by phone.

Juliet: Is that Fast Feedback?
Sarah: Fast Feedback is one way, and standard evaluations are another.

7. New Buildings Impact Evaluation overview
Sarah Castor presented on the New Buildings Impact Evalution.

Sarah: We do impact and process evaluations separately. We look more recently at processes, and impact goes back a couple of years. These impact results are for the 2010 program year, and it's because it's new construction since buildings take a while to be completed and fully occupied after we pay the incentive.

Cadmus Group did the evalution, and also did the last couple of reports for us. They did site visits and analysis, and the work was conducted from March through August of 2012. Cadmus will do a 2011 impact analysis starting in 2013.

The sample represents 56 percent of electric and 62 percent of gas savings for the New Buildings program in 2010. They reached out to our 26 largest projects and 15 smaller ones. The evaluation has good confidence and precision levels. Thirty-nine were in the final sample. They evaluated a variety of project tracks.

Cadmus reviewed documents, project files and calculation workbooks. They also reviewed energy simulation models if the site had one. Site visits checked on operating conditions. They looked at engineering analyses, also. The engineering firms are sometimes reluctant to give up their engineering analysis. We now require them to do it if they want incentives.

Don Jones: Were these mostly on public domain software like DOE-2, eQuest, etc.? They weren't so much proprietary models as proprietary inputs?
Sarah: That's correct.

Sarah: We had realization rates of 95 percent for electric measures and 98 percent for gas measures.

Charlie Grist: Where do the evaluated savings come from? What did they do to make up that number? Input assumption verifications?
Sarah: They used full load calculations, observed conditions and verification of input assumptions.
Fred Gordon: We don't look at billing data because we have nothing previous to look at since there was no building.

Charlie: We're comparing model to model, then.

Holly Meyer: So, the realization rate is applied to savings. It verifies the deemed savings?
Sarah: The realization rate is used to true up our working savings and turn them into our reportable savings.

Holly: Lakin's numbers were for all programs, then?
Sarah: Right. This evaluation's results are part of true up, specifically for New Buildings.

Sarah: For measures in the foodservice track, all program savings estimates were found to be reasonable. In HVAC, the savings for boiler measures varied considerably based on whether the boiler usage was primary or secondary. The new demand control ventilation calculator is better at predicting savings than the one used in 2008 and 2009. Lighting had higher than assumed operating hours, resulting in higher than assumed savings.

Charlie: How did they evaluate a measure on the lighting hours? Did they do a separate interview of the operator?
Sarah: It's from interviews with the operators or building energy management system data, if available. There may have been a few lighting loggers, but not many.

Sarah: On motors, only one was in an application where the efficiency level was required by code. That was a bigger issue in past evaluation years.

Sarah: There was only one ENERGY STAR® project. Those project are being incorporated into the custom track, rather than having a separate track. LEED® projects have become a larger part of savings over the last several years. The ENERGY STAR project that was evaluated had a high realization rate. LEED projects had an average realization rate of 75 percent on the electric side and 98 percent for gas measures. This is partially due to the way LEED certification is awarded. No big themes were identified for savings variation.

(See slides for recommendations.)

Sarah: Many recommendations have already been implemented. We ended up with one project where there wasn't enough documentation on an exceptional calculation, and Cadmus recommended taking extra care to ensure documentation on future projects with exceptional calculations.

The 2010 overall realization rates were close to 100 percent, and comparable to 2009 and 2008. 2011 should confirm the adoption and success of most of the recommendations.

Charlie: You had 50 LEED measures out of 1,200 measures?
Sarah: That's correct.

Stan Price: Is that information on LEED realization rates getting back to the U.S. Green Building Council?
Fred: Not that we know of.
Charlie: That would be a helpful thing to work on.
Fred: It's still useful to them, because they're on their own improvement program.

8. New Buildings Process Evaluation 2010-2011 overview
Sarah Castor presented on the New Buildings Process Evalution.

Sarah: The contractor was PWP, Inc, and this evaluation was structured like the Path to Net Zero evaluation, occurring in stages and tracking participants as they progress through the program. We found the Path to Net Zero evaluation really helpful because it talked to people as they completed things instead of after they were finished.

Don Jones: Typically these gather free ridership information. Do you have it here?
Sarah: We will be gathering that information in this project. Fast Feedback was supposed to be the mechanism, but it wasn't working as well. So we will be doing it through these process evaluations. We should note, though, that New Buildings is a market transformation effort and free ridership is not being applied to program savings, it is only being used to track the influence of the program.

(See slides for methodology.)

Sarah: The program met and exceeded stretch goals in 2011, despite the lagging economy. Sixty percent of projects were still subject to 2007 code in 2011. There was a great fluctuation in percent of savings by measure type and building type from 2010 to 2011, due to large projects. Projects may want to do bundled measures where the individual measures don't do as much as the total package together. It may include measures that aren't cost effective, but the overall project is.

Charlie Grist: So you'll propose this later? From the council's point of view this tends to make sense. We can use these situations to carve out projects.
Fred: We've developed a program set of rules about when to bundle measures, and the reasoning for doing it. The measure may be part of a pilot test, or it may be close enough that it will be cost effective with market transformation over time, measures might be interdependent and so on. The first cost-effectiveness appeal to the OPUC included a few measures from small New Buildings projects that were close but not quite cost effective. The OPUC approved them based on having a need to do A in order to do B.

Charlie: UM551 had a series of exceptions, and that seems to be working as you follow it?
Fred: It's frustrating for the program, but we're doing bundles and it's working.
Jessica: Customers seem to like it, and we had to go through some additional approval processes but it's served the program and customers well to go through with it.

Theresa: We have the same thing with the schools program at the Oregon Department of Energy. Some things have to be done at the same time, but they are called out as different measures. It led to Secretary of State comments that not all measures passed cost-effectiveness values. Some didn't need to be broken down as they aren't separate measures. We looked at it as a bundle and it was fine per customer. We need to watch that going forward, to look like we are doing smart things with our investments.

(See slides for recommendations.)

Sarah: The evaluators encourage early design assistance. They recommend we strengthen the Outreach Manager and participant connections. Customers need more information on the new tax credit program. The New Buildings program is reluctant to make promises about tax credit availability when it is difficult for projects to receive the credit. It's tricky for us to walk that line of providing information, but not promising the money.

Theresa: Would it be possible to do it as an upsell? We needed that with schools when we had a fixed number of tax credits. Either people could not get it at all, or the amount could change. With districts that had less money, we found it worked by positioning it as an upside. It pays even if you don't get the tax credit. It's good enough on it's own, and better with tax credits. It gives you tool in your toolbox for projects that won't quite make it without the tax credit, now.
Jessica: In general we point customers to the Oregon Department of Energy to get that information. Typically the customer is looking for a specific piece of tax credit information or dollar figure and we can't provide that but we do point them to the department.

Theresa: Districts and cities don't have time to do more than check boxes, and they have responded very well to an upsell. I don't know if you have tried that, but it worked much better than expected.
Sarah: Some customers are better than others with ambiguity around incentives and tax credits. Some customers are very unhappy if they don't get the money they are expecting.

Scott Inman: Part of this is that you can't start the project unless you've been approved already for the tax credit.

Theresa: The purpose is not to withhold it if you were going to do it anyway, it should be a competitive process of like technologies. The deduction for standard equipment doesn't require competition and is easy to use. There is a strong acknowledgement that the legislative requirements make it tough to use, and we need to connect with folks on messaging to make it easier.

9. Public comment
Juliet: The OPUC has job openings right now, so please send good referrals our way. They are RPS and climate change compliance openings.

Charlie: The RTF has openings as well.

10. Meeting adjournment
Oliver thanked all council members for their participation and adjourned the meeting at 4:30 p.m.

The next council meeting is February 13, 2013.