CONSERVATION ADVISORY COUNCIL
Notes from meeting Aug. 12, 2009

Attending from the Council:
Jim Abrahamson, Cascade Natural Gas
Jeff Bissonnette, Fair & Clean Coalition
Paul Case, Oregon Remodelers Association
Suzanne Dillard, ODOE
Bruce Dobbs, BOMA
Andria Jacob, City of Portland
Don Jones, Pacificorp
Holly Meyer, NW Natural
Stan Price, NEEC
Lauren Shapton, PGE
Bill Welch, EWEB

Attending from the Energy Trust:
Dan Enloe, board of directors
John Reynolds, board of directors
Pete Catching
Kacia Brockman
Amber Cole
Phil Degens
Diane Ferington
Fred Gordon
Steve Lacey
Spencer Moersfelder
Kate Scott
Greg Stiles
John Volkman
Peter West
Kendall Youngblood

Others attending:
Jeremy Anderson, WISE
Theresa Gibney, OPUC
Jason Junot, Oregon Dept. of Revenue
Erin Rowe, PECI
Jan Schaeffer
Stephanie Vasquez, CSG
Becky Walker, PECI
Marilyn Williamson, NW Natural

1. Welcome and Introductions
Steve Lacey noted he is transitioning chairing of the CAC to Peter West, director of programs. Steve is now operations director. Peter asked for self-introductions.

2. Path to Net Zero pilot
Spencer Moersfelder made the presentation. He noted the pilot is intended to encourage the market to move to high-performance design in pursuit of a net-zero standard, providing richer incentives to do this. To be eligible, projects must be at least 50% more efficient than the 2007 Oregon code and at least another 10% better than Oregon code through any combination of energy efficiency and on-site renewable energy generation. Projects must be in schematic design or earlier.

Eleven projects have enrolled (nearly 800,000 square feet). Seven are striving for net-zero site energy use. Types include school, retail, office, multifamily, residential.

We are offering up to $10,000 to help offset the cost of an integrated design charrette, and up to $50,000 for energy studies and building simulation modeling – double what we offer in the custom track for new buildings.

We will release the installation incentive Oct. 1. The incentive will be calculated at 20 cents/kWh and $1.60/therm – twice the current custom track incentive for new construction. Incentivized measures will be site-verified. We are looking at bundling measures to assess cost effectiveness. We are also looking to support new technologies.

He asked if the incentive level is acceptable. Dan Enloe asked who owns the intellectual property rights of new designs. Don Jones suggested it would follow the customary practice of AIA. John Reynolds said that unless there's a patent there is very little that is proprietary in building design. Spencer said we are hoping the market will learn from successes and failures of projects participating in the pilot. The incentives are performance-based, based on results.

Don Jones asked if the incentives are offered by measure or by the package of measures in each project. Spencer said we will review measures individually for cost-effectiveness, unless we can come up with a good justification for bundling measures. He said we have to take care not to support "gold-plated" measures. Don discussed Pacific Power's experience in this area.

Spencer explained the renewables incentives will be those offered through the renewables program.

Responding to questions from Stan Price, Spencer said we look to Oregon code to establish baseline, in most cases. He noted projects that may not qualify for the higher incentives in the pilot are directed to mainstream Energy Trust programs.

Spencer noted the pilot emphasizes providing information about how the building is performing. He noted they are considering offering incentives for phasing out a technical function altogether.

Bruce Dobbs asked about CHP. Spencer said the present CHP policy will continue to apply. Bruce said if you draw an envelope around a building you may miss opportunities to collaborate on CHP with another building. Spencer said he will give this some thought.

Responding to Spencer, CAC members all raised hands to indicate support for the incentive levels.

Spencer asked for thoughts on the level of data resolution that should be required to verify if the building's performance is in alignment with the modeling. Should requirements vary based on building type and/or size? CAC members discussed this subject. Lauren noted if the building fails you will need to know net levels. Bruce said these days monitoring down to systems level is not difficult. He thinks that a building aiming for net zero would have to put the monitoring systems in anyway. Bill suggested a higher level of monitoring might be useful in getting information out to other designers. Bruce suggested putting in a monitor that everyone can see.

Spencer asked if the incentives should be about achieving success per the original models or about the instruments for monitoring. CAC members assented. Spencer noted the monitoring + verification incentive will be offered starting December. He will come back to the CAC with a more refined proposal in October.

3. **Savings within Reach**
Diane Ferington presented. She noted the purpose of the offering is to target homeowners are at 200% of the federal poverty level – and are not eligible for free low-income weatherization.

She reviewed measures and maximum incentives. Incentives are increased over the core program. They are the same regardless of fuel.

The incentives would be paid to the contractor, whose invoice would need to show a reduction of cost to the customer.

Participating contractors are required to be ready to conduct a blower door test and must focus recommendations on what is cost effective for the participant: first air sealing, then insulation, then HVAC. They must provide a two-year warranty for parts and labor. Air sealing and ventilation training is required for any trade ally who is not already BPI certified.

Participating contractors were selected last week. Kick off meeting is Sept. 1. There were 39 applicants, representing 9 of Energy Trust's 11 regions. We continue to seek contractors from those two region. 11 have bilingual and/or trilingual capabilities. 19 were selected. Marketing materials will be in both English and Spanish.

Marketing includes targeted mailings to potential participants, depending on contractor coverage, and targeted to census blocks based on income levels. Participating contractors will initiate campaigns.

She reviewed the path toward enrollment. Participants would be required to sign an income verification form. Paul asked if the income definition equates to taxable income. He prefers it be simple and related to the state tax return, line XX. Diane said she will check with the legal department. There was discussion. Peter said we need to find out what the law says the definition of income is. Bill suggested Diane call Kathy at EWEB to find out the definition they use.

Diane explained the home assessment protocol. The contractor uses the HER checklist to identify energy saving measures. An air leakage test is required prior to bidding. Other visual or diagnostic inspections are conducted, as appropriate. The incentive application allows us to accept invoices that haven't been paid yet, which helps with the contractor cash flow. She noted there will be continuous evaluation.

In conclusion, she noted the program launches Sept. 1.

Jim asked about the spread of contractors geographically. Stephanie explained the distribution: 4 in central Oregon, 1 in Klamath Falls, 3 in Medford, 3 in Grants Pass, 5 in Eugene, 4 in Salem, 13 in Portland, 2 in North Coast.

Holly asked how cost-effectiveness fits in. Diane said the measures are cost effective. Standard track will be better for homes over 1,600 sf.

4. **Furnace Market Transformation**

Matt Braman presented this topic. Since 2003 Energy Trust has been offering incentives and claiming savings on units installed using our incentives. He noted the high efficiency market share has grown to over 70%. The baseline shows what we think would have happened without our incentives, based on interviews in Clark County along with national sales data. To be conservative, he said, we are reporting on the low case. He noted the high efficiency market reaches 100% in our model in 2014, a year after a national code change is expected.

Matt said in 2006 there were 5,000 high efficiency furnaces sold above baseline. Energy Trust incented about that number. But in earlier years there was a bigger gap. Marilyn asked if there is a report that shows detail; Matt said yes and it will be posted on our website.

Paul expressed concerns that the economy depresses sales, pointing to years in which Energy Trust paid for more efficient furnaces than were in the high efficient market above the baseline. Matt said this reflects free riders. We cannot claim savings from free riders.

Stan thinks it's early to declare victory and go home. He thinks markets fluctuate for a period of time, and cited the example of manufactured homes. Fred added that this was not a very good comparison because the manufactured homes program paid for the entire regional market to be efficient furnaces, while the furnace program has already driven a large proportion of efficient furnace purchases to be without incentives. There are indications that the market behavior hasa changed. Peter noted the average difference in cost between a lower efficiency and higher efficiency model is $900. He wonders how our $100 incentive (with a $100 bonus in some prior months) makes a significant difference.

Fred, Stan and Paul continued the discussion. Fred asked what a good standard of evidence might be that a market is sufficiently transformed that the incentive is no longer necessary. Bill suggested waiting until the code changes.

Bruce asked if a similar analysis has been done on heat pumps. Matt said an analysis is in process.

Peter asked if it was alright to count gas market transformation savings the same way we do with NEEA on the electric side. There were no objections.

The discussion of free riders continued. Fred said the standard is whether the market has changed, not if mandates/code changes. Holly suggested the discussion leads her to doubt the baseline. Matt said there is a lower baseline, that produces more savings for Energy Trust. Theresa asked if Holly is arguing that if there is a bigger delta between the baseline and the results with Energy Trust incentives, then the incentives had a bigger role. If the other baseline does not intersect with market behavior in 2010, then the market cannot be declared to be transformed. Bill has concern about the validity of the chart.

Peter suggests bringing this topic back for further review. He asks CAC to consider what the metric should be to determine market transformation. Peter said we will come back to this with a more detailed explanation of the bottom line, the baseline. Stan asked about the timeline for deciding. Peter said the November board meeting considers the budget, with a final decision in December.

5. Strategic Plan

Fred Gordon made the presentation. He noted the current strategic plan reflects a 2012 sunset. The draft plan presents a long-term vision, mission and goals through 2026, along with short-term, five-year, quantitative goals. The draft is open for discussion, with comments accepted through October 16.

He reviewed long-term goals:

1. Help utilities and ratepayers acquire all cost-effective energy efficiency.
2. Accelerate new renewable energy generation to help achieve Oregon's 2025 goal of meeting at least 8% of retail electric load from small-scale renewable energy projects.

The five-year electric efficiency goal is 200-244 aMW, depending on availability of funding. The five-year gas efficiency goal is 8.5-19.4 million annual therms. The five-year renewable energy goal is 36 aMW.

He reviewed activities of the five years to accelerate activity, provide excellent customer service, encourage innovation, balance investments, support businesses and industry, communicate the value of efficiency and renewables, and be efficient and transparent.

Bruce asked if renewable monies might be used for efficiency projects. Fred said no, there is a clear division in enabling legislation between renewables and efficiency money.

Lauren noted the desire to align the new PGE IRP with the plan. Theresa asked if the high curve shown by Fred is the one in the PGE IRP. Pete Catching said yes. We're trying to stay in sync and will adjust our plan.

5. **Evaluations**
Phil presented evaluations of steam tracks and tankless gas water heaters. The former was a site verification study for steam traps in the Existing Buildings program.

Steam traps. Steam traps saw a dramatic rise and fall in late 2008. A contractor from California came up here then to promote steam traps to dry cleaners. The Oregon market appears to be saturated. We hired SEG in May 2009 to do 10 site visits to verify measure assumptions regarding installations, boiler operating hours and customer satisfaction.

Installations were high quality. Customers were highly satisfied. Boilers were found to operate 62% of assumed hours. An in-house analysis showed savings considerably lower than expected. A more rigorous analysis showed savings equal to only 32%-39% of the expected 139 therms/trap. The b/c ratio remained positive.

The evaluation left the general feeling that the Oregon market has been saturated, or at least that portion of the market served by the contractors active in Oregon. A business-as-usual approach to Clark County, where there are 43 geographically concentrated dry cleaners, has the potential to deplete the first year existing buildings budget. Greg noted the success in Oregon depended on getting support of the Korean dry cleaners association.

Tankless gas water heaters. Phil then moved to tankless gas water heaters. Incentives have been offered since 2007 ($200) with an Oregon tax credit up to $340 also available. Deemed savings was 100 therms. In 2007-8 1,347 tankless systems were installed in existing homes, and 333 in new homes. Installed cost in existing homes averaged $2,600-$2,700.

Analysis was conducted by four different contractors. They showed issues with fuel-switching (gas water heaters replaced electric ones, increasing gas load). Homes without prior gas water heat were removed from the study. Results clustered around 59-71 therms saved, compared to the 100 therms engineering estimate.

New Building impact evaluation. Phil noted an analysis showed 39% of the market participated in the New Buildings program. He reviewed methodology for the impact evaluation. Results showed kWh realization rates going down from over 100% to 92% in 2007, and therm savings above 100%. The process evaluation found the program has been good at adapting to the market; satisfaction levels are high; paperwork is a major complaint; clients are not aware of the differences among the four program tracks.

Existing Buildings impact evaluation. Phil noted participating sites grew from 210 in 2003 to 1,581 in 2006 and 1,388 in 2007 (the 2006 numbers included a lot of pre-spray valves in restaurants). 2006-2007 participants represent 12%-14% of the market. He reviewed methodology. Realization rates showed 90%-94%% of electric savings and 98%-103% of therm savings over the two years. Free rider rates increased to 40%. Customer satisfaction was high.

6**. Adjourn**

The meeting adjourned at 4:20 pm. Next meeting is October 14, 2009.