CONSERVATION ADVISORY COUNCIL
Notes from meeting November 28, 2007

Attending from the Council:
Steve Bicker, NW Natural
Joe Esmonde, IBEW #48
Charlie Grist, NW Power & Conservation Council
Lori Koho, OPUC
Karen Meadows, BPA
Mathew Northway, EWEB
Paul Olson, Oregon Remodelers Association
Lauren Shapton, PGE

Attending from the Energy Trust of Oregon:
Pete Catching
Fred Gordon
Danielle Gidding
Margie Harris
Steve Lacey
Ted Light
Tricia McGuire
Spencer Moersfelder
John Reynolds, Board of Directors
Sue Meyer Sample
Jan Schaeffer
Greg Stiles
Kendall Youngblood

Others attending;
Jeremy Anderson, WISE
Verlea Briggs, PGE
Paul Case, Home Visions West
Chad Davis, Sustainable Northwest
Nick Parsons, Lockheed Martin
John Sorensen, Mid Tech Energy
Aaron Wines, Lockheed Martin
Michael Yablonsky, Emcor Facilities

1. Introductions
Steve Lacey reviewed the agenda and asked for self introductions.

2. 2008 budget and action plan
Margie led the presentation of changes in the most recent draft 2008 budget compared to the one reviewed by CAC in October. She said that, even though Energy Trust is in full compliance with the 80% rule in SB 1149 (spend 80% of efficiency resources in utility territories, 20% could be outside the territory), when looking across the two revenue sources (SB 1149 and SB 838), we determined the need to better match spending to revenue sources by utility. This consideration, an updated rollover forecast, and a $1.3 million increase in revenue, led us to add $7 million to PGE expenses and to reduce Pacific Power spending by $1.5 million. The net change in expenses is $5.5 million. Savings increased by 2.2 aMW; therm impact is negligible. She reviewed changes by program.

Responding to a question from Charlie Grist, Steve explained that (1) the changes presented at the meeting are in comparison to the first draft of the budget, (2) the budget was only being increased by the revenue change amount and the $5.5 million program expenditure increase resulted from a net reduction of the unallocated carryover of PGE funds.

Lori Koho noted an increase in other program costs and other professional services across the board in many programs. Sue Meyer Sample responded that a lot of the costs reflect initiatives in the IT department. Administrative costs didn't go up much, she said. Steve said other professional services reflects consultant services such as hiring consultants to research new measures. Fred said we are doing more market research and evaluation to reach new markets. Lori noted the relationship between program support and incentives in New Homes and Products has switched. Steve said this change reflects the downturn in the market so fewer incentives will be processed but program outreach and delivery will continue at the same level to maintain momentum for when the new homes market rebounds. Kendall Youngblood said we expect the housing market to start picking up in 2009 and grow significantly stronger in 2009.

Steve Bicker asked what cost-effectiveness assumptions were used in calculating goals. Steve said we are assuming the existing PUC performance measures (40 cents/therm), since changes are still in negotiation. Margie said we expect to do at least one budget revision, to reflect addition of SB 838 efficiency funds. She said we will update the strategic plan next year to reflect changes in our goals in light of the change in our planning horizon.

Comments on draft 2008 budget

Paul Olson said, in general, where the emphasis seems to be on additional R&D, marketing and market research instead of increasing the incentives, we would like to see the budget reflect a more balanced percentage between incentives, delivery and marketing expenditures. The contractors he talks to would like to see stronger incentives, in light of fears in the marketplace about higher fuel costs and so forth.

Steve Bicker had no comments.

Lauren Shapton appreciates the intent to do more market research and program support. The easy stuff has been done and it's harder to find customers.

Karen Meadows said BPA too sees the need for more market research and marketing. Hopefully this will attract participants and generate savings.

Lori Koho said she is still putting her thoughts together. She thinks we need a better understanding of what we are doing with staff head counts. She appreciates the white paper on this subject Margie gave her today. She noted the write up in the action plan for the Production Efficiency program didn't highlight the effect of bringing the program in house. Steve said this reflects our sense that the program will not look different to participants; however, we should make note of the change.

Charlie Grist strongly supports the fact that the budget increases funding for commercial conservation, because that's where much of the untapped potential lies. He hopes we have some flexibility in the budget, because he thinks 2008 will be a year of change. He thinks coordinated research makes sense. He thinks this is one area where more needs to be done regionwide. He thinks money spent on this is a really good thing. Also, finding good people in this industry is tough, and we have to find a way to attract and keep them. He strongly supports what he sees in the budget.

Steve Lacey said our board made a similar comment about flexibility. He said we will be going back to the board with any changes we think need to be made outside individual programs.

Steve Bicker said there is a lot going on in the natural gas industry, especially in the residential market, with furnaces getting to the tipping point and new water heater technologies getting to the cusp. He hopes the budget is flexible enough to adjust to changes over the year. Fred said if we find additional cost effective measures in gas, we have money to fund them. Margie noted we have been spending the gas carryover down and will continue doing so over the next two years.

Lori noted there is a lot of comment in the Action Plan about partnering, such as working with ODOE on forms. She notes these are important things, and are hard and costly to do. She hopes we find ways of monitoring our accomplishments in these areas. Steve Lacey noted that the ultimate indicator of effectiveness is levelized cost and that we are predicting seeing a slightly higher levelized cost in certain programs but that these efforts will pay off in 2009 and 2010 with increased penetration at a lower transaction cost.

Steve asked Paul whether remodelers are losing sales because incentives are not sweet enough. Paul Case, from the audience, thinks creating more flexible incentives, bonuses, allowing incentives to buy down interest rates on financing, and not necessarily increasing incentives can be beneficial. Margie asked if arranging to pay back through utility bills would be helpful; Paul Case said yes.

Paul Olson said financing is attractive to households with limited resources. He thinks increased incentives would energize the trade allies. He's looking for a better balance between marketing increases and incentive increases. Fred asked Paul's opinion if raising incentives for lower income households would help. Paul said he's involved in NW Natural's program to reach lower income households and finds it challenging to attract this segment to participate. Maybe market research could help. Paul Case said he had some success with special offers as small as $50 off; this creates a sense of urgency about the need to buy now.

2. PUC performance measures and avoided cost

Fred said we are working to update assumptions used in establishing cost effectiveness. He said we have been working with the OPUC and utilities on this but have not reached closure. Therefore, the budget analysis of levelized cost and cost/benefit uses the old values. He said avoided costs are going up with the cost of fossil fuel, which will make efficiency investments more cost-effective. Depending on what discount rate we use, longer-lived measures will not increase as much in value as short-lived measures.

Charlie Grist said another way to say this is that the value of energy efficiency is going up.

Karen Meadows asked how Energy Trust's avoided cost assumptions mesh with the Power & Conservation Council's new values. Fred said we aren't certain yet.

Fred reviewed the components of utility system avoided cost, including:

- Avoided generation, including the avoided cost from reducing carbon output
- Reduced system delivery losses
- Deferred system transmission and distribution construction
- 10% added benefit of conservation

He reviewed components of societal avoided cost:

- Utility system avoided cost
- Site-based non-energy benefits
- Hedge value (debates underway about how this overlaps or not with the 110% added benefit of conservation value included in utility system avoided cost)

Fred reviewed some technical considerations in updating the avoided cost formulas and assumptions.

Paul Olson asked where the parties are on establishing agreement on the values. Fred noted OPUC has constrained staff and complicated discussions with utilities have not been resolved. Lori said she thinks OPUC and Energy Trust are not too far apart. OPUC would like the values Energy Trust use to be as closely aligned with utility values as possible to make it clear that efficiency and other supply resources are being considered on the same financial basis. OPUC would like to see the discount rate go up to 5.2%. Paul asked if there is a shock on the horizon; would a whole group of measures\no longer be cost effective. Charlie said, inasmuch as avoided costs are going up, it's unlikely that measures would stop being cost effective.

Paul Case asked what will become of Home Performance with ENERGY STAR with the new assumptions, given that it developed to increase duct sealing and air sealing. Fred said we have continued with these measures in spite of marginal "on paper" cost-effectiveness because we knew our avoided costs were likely to go up. We are awaiting the results of our first evaluation and will know more about actual savings when results are in. If new avoided costs are higher, that will increase the probability that those measures are cost-effective.

Paul Olsen said he had a ½ hour interview with Itron and wondered if Energy Trust has research in the field. Fred later confirmed that Itron is part of our ongoing evaluation of the Home Energy Savings program and informed Paul Olsen and Paul Case.

3. Proposed 2008 incentive structure for Existing Buildings program

Greg Stiles noted we have significantly fewer 2008 commitments compared to 2005 and 2006 commitments this time of year. He also noted analysis shows that our ability to obtain natural gas savings is very much dependent on electric incentives.

He recalled the budget issues at the end 2005 and 2006, which resulted from miscommunications between Energy Trust and program managers. In response, we implemented a reservation system and an enhanced forecasting system. We also reduced custom incentive caps (mechanical went from 35% to 25% of incremental project cost), and capped projects at 12 cents/kWh (was 20 cents/kWh). We also eliminated some prescriptive measures.

Nick Parsons reviewed an analysis of electric savings and incentives from 2003 through present. He said that for 2008, we are roughly doubling goals at a time when much low hanging fruit has been picked. We are proposing going back to the 2005 incentives, in anticipation of higher cost projects. Karen asked which cap governs the most projects. Nick said the larger projects trigger the percentage; chillers and controls trigger the kWh cap.

Nick said we are trying to stimulate the market by bringing on some new prescriptive incentives. He proposes to reduce the incentive for condensing gas boilers from $6/MBH to $4/MBH. He wants to adopt the heat pump measures developed for the New Buildings program. He proposes to add

measures for hospitality/lodging occupancy controls, low-flow shower heads, UV water treatment. He proposes to add a number of foodservice measures, and measures for new markets, such as PC servers. No changes to the prescriptive lighting incentives are planned at this time.

He reviewed 2007 special incentives for direct-digital control and variable air volume conversions, explaining that they did not get the expected uptake. He proposes to raise the custom incentive cap from $250,000 to $500,000 per site per year and $1,000,000 per business entity per year. We're going to work with the large businesses that could undertake such large efforts and help them develop multi-year capital improvement plants. He proposes to raise the custom mechanical incentives to the previous 35% and $.20/kWh levels. He proposes to adjust the payback criteria for O&M measures, including lowering the payback floor from 18 months to 12 months. He will maintain 18 months for custom mechanical measures. He proposes to discontinue the special natural gas incentives, assuming the richer electric incentives will be more successful in attracting HVAC projects where gas savings are also realized. We will re-adjust the natural gas incentives if we find this to be necessary to get projects to come in.

Joe Esmonde asked if Nick had reached out to contractors. Nick has consulted with some but wanted a sense of what he could put out there before widely talking to trade allies.

Charlie Grist asked why not shoot for double or triple the lighting savings. Greg said we are confident new staffing and marketing will bring in more lighting projects. Nick said we would increase incentives to support new lighting technologies such as LEDs. Charlie said he just talked to Michael Lange at Lighting Lab, who said new troffers raise efficiency 30-50%. If that pans out, he hopes Energy Trust would be willing to promote new lighting system design, which would be required to realize the efficiency gain of these new fixtures. Nick said we like to keep flexible enough to do those kinds of things. Steve said NYSERDA did this but it required a lot of trade ally training.

Joe asked how much remaining potential is available in the commercial sector in Portland. Nick said millions and millions of square feet. Charlie asked how we are going to avoid overselling, like in the 2005 year-end scenario. Fred said we expect new money through SB 838. Greg said the lighting reservation system is still in place; lighting projects are submitted the first week of every month for approval. Steve explained that the reservation system is in place for all Existing Building projects but the gate is wide open. We know how much budget remains through the forecasting system and could close the gate if needed.

Mike Yablonsky asked if we are going to re-institute the incentive for rooftop HVAC units. Fred said those units have become baseline. Nick said we will continue to look at this.

Greg said the proposed custom measure changes have been discussed with the New Buildings program; we will closely watch whether there are any issues with differing incentive levels. The Production Efficiency small industrial initiative is exploring changes but is not ready to adopt custom measure incentives. We are looking for consistent incentives and messages where possible and will maintain prescriptive measure incentives across business programs.

He's looking for general endorsement that this is the right direction.

Paul Olson said he thinks Greg and Nick are on the right track. It doesn't escape his attention that this involves an increase in incentives, which is what we were talking about earlier. If we are going to do market research, he suggests investigating what was the incentive level tipping point that got residential participants to act.

Joe Esmonde endorses.

Lauren Shapton supports this but suggests we emphasize marketing and market research. Greg said a new marketing person is being added to the Lockheed Martin team.

Mat Northway supports.

Karen Meadows asked if these changes are long term. Greg said they are; we anticipate doubling in revenue. She supports the proposal.

Charlie Grist supports it. He is pleased the program is increasing marketing, and pleased they are retaining flexibility. Doubling is an ambitious goal; he supports it.

Steve Bicker commented he would like the incentive change to condensing boilers (reduced 1/3) be subject to re-adjustment if uptake slows. Greg reiterated the intent of using the increased electric incentives to drive gas savings.

Verlea Briggs said she agrees with the plan to increase mechanical incentives while holding lighting incentives steady.

4. Biofuel Efficiency programs

Steve posed the question whether Energy Trust efficiency programs should fund projects that use renewable biofuels or biogas to supplant the thermal load supplied by natural gas or electricity. Should we extend the policy of incenting solar thermal to other renewable sources of energy that can reduce natural gas or electric consumption.

We believe we retain fuel neutrality by not converting systems to a competing utility's energy source, thereby putting increased load on a competitor's system. Projects presumably will have electricity or natural gas onsite as a backup source.

He posed environmental questions, including whether to accept only local bio-waste fuel versus commercially produced biofuels. Do we want to specify which sources are acceptable for which applications, such as using manure biogas for hot water at dairies, or local source hog fuel to offset natural gas to heat drying kilns.

Steve Bicker said the definition of biofuels in Steve's presentation should list the actual biofuels that would be acceptable. He suggested adding carbon dioxide into the cost effectiveness calculation as a way to rule out carbon-generating fuels. Steve Lacey suggested considering net carbon emissions instead of carbon content.

Adam Serchuk, Energy Trust biopower program manager, said the board has disallowed us from funding renewable projects that mix fossil fuels with renewables. He noted definitions of biowaste in SB 1149 and SB 838 could be used. Steve Bicker endorses this.

Mat Northway is concerned about diverting funds meant for energy efficiency and using them instead as an alternative fuel source. A discussion ensued regarding whether solar thermal or geothermal heat are like biofuels because they reduce load on gas or electric equipment, or different in that they increase the efficiency of that equipment. He is concerned about the nightmare scenario of funding biopower in an

inefficient building. There was further discussion of whether, if the fuel is renewable and therefore in some senses "carbon neutral", this is good or bad.

Fred expressed concern about biodiesel generated by fuels such as palm oil requiring the stripping of tropical rain forests, resulting in destroying the carbon-absorbing capabilities of that rain forest.

Chad Davis said smaller scale community sized facilities require small, sustainable amounts of forest waste. He thinks Energy Trust could help these community projects.

Steve Lacey asked one final question: should a project site be a current contributor to the public purpose fund? Should it be required to continue contributing, noting that new construction projects may never have a meter installed. Steve Bicker said that the gas company clearly thinks that funds should only be used for customers with a meter.

Adam Serchuk said on the renewables side we have no problem with funding projects that don't pay into the public purpose charge, as our mission is to add renewable generation to the mix.

Steve adjourned the meeting, explaining

The next meeting will be Jan. 23, 2007 and not Jan. 16 as noted on the agenda..