Evaluation Committee Meeting – February 2010

February 26, 2010 10am-1pm

Attendees:

Phil Degens, Evaluation Manager
Sarah Castor, Evaluation Project Manager
Brien Sipe, Evaluation Project Manager
Debbie Kitchin, Board Member – Committee Chair
Fred Gordon, Director of Planning and Evaluation
Ken Keating, Evaluation expert
Lauren Gauge, Bonneville Power Administration
Zach Wilson, Evaluation intern
Dan Davis, Board Member
Jan Schaeffer, Communications and Customer Services Contractor
Alan Meyer, Board Member
Teresa Gibney, Oregon Public Utility Commission Liaison
Steve Lacey, Director of Operations
Peter West, Director of Energy Programs
Susan Jamison, Residential Marketing Manager
Kim Crossman Industrial/Agriculture lead
Sue Fletcher, Communications and Customer Services Sr. Manager
Amber Cole, Director of Communications and Customer Service

Topics:

1. Corvallis Energy Challenge Evaluation
2. Segmentation Comparison Study
3. Multifamily Savings Calculation Methodology
4. Small Commercial Lighting Logger Study
5. Fast Feedback Pilot Results

1. Corvallis Energy Challenge

Contractor: Dethman and Associates

Phil presented the results from the Corvallis energy challenge evaluation. Project spanned spring 2008 to winter 2009 through a partnership with the Corvallis sustainability coalition (representing 140 community groups). The challenge kicked off March 1, 2008.

Evaluation focused on interviews with staff and community leaders, in addition to quantitative analysis of savings and audit follow-through rates.

Project goals:

- Gain experience with setting goals
- Collaboration with community groups
- Test if community approaches result in increased energy savings compared to other delivery mechanism
- 1000 Home Energy Review goal
- 50 commercial audits

- 65 PV installations

Project components
- Dedicated staff member to coordinate challenge
- Solar workshops
- Greek challenge
- Climate masters training (Energy Trust did not sponsor, but happened concurrently)

Findings
- Nearly met HER goals (800), met commercial audit/follow-up goal
- Impressive community wide effort developed in a short time frame
- Provided visibility for sustainability coalition and Energy Trust
- provided momentum and credibility for community to apply/receive 500k in stimulus funds, (causality is hard to prove, but the challenge could have helped with the grant)
- 38% of commercial audits results in ETO incentives
    - Commercial participants reported following through on over 40% of audit recommendations
- 70 renewable projects during challenge time period
    - 75% residential, causality is once again unclear
    - Very high for a small community (~50,000 residents)
- Commercial activity linkage to challenge unclear
- Spent more to deliver savings ($112,000 or $4 per electric account for marketing expenses)
    - Was this a cheaper way to deliver savings? The answer appears to be no

Phil indicated the immediate follow-through rate was less than years prior to the challenge. Debbie mentioned that this pilot occurred during an intense recession. Ken indicated it may be a targeting issue, depends on what you're aiming for (HER goals). If emphasis was placed on getting HERs, but not targeting, follow-through you get what you aim for. Jan mentioned that 2 years out, the follow-through rate has increased, and approached the overall average follow-through. She also stressed the impact of the recession. Phil emphasized that not all audit recipients may be ready to install a measure immediately, and time is needed for follow-through to occur.

Teresa asked why stress the lower follow-through rate, when the actual change in program activity in Corvallis was much higher, year on year, compared to itself, the Willamette valley, and the entire service territory.

Phil discussed that the program activity pick-up cannot be explicitly traced to the challenge. Subsequent community challenges may want to explicitly collect data for program activity and tie it to the challenge.

Fred raised the issue of discussions from years ago which examined community projects. That there is a discussion between short term-fast, and long term development.

Lauren asked about commercial follow-through rates compared to average. Matthew Taylor (evaluation contractor) has recently completed an analysis of studies/closure rates, and a wide scatter has been identified (depending on contractor/industry focus).

Phil identified that the initial community goals were overly aggressive (dropping energy intensity per capita). Corvallis has several extremely large self directors representing large amount of load.

Fred mentioned that the community had champions for the effort, but a large swathe of the residential load in consumer power territory, energy trust could not influence. Phil mentioned that effects are still continuing, with the stimulus dollars.

Jan described the stimulus funds as being used for volunteer coordinator position, and door to door activities for non-follow through HER participants. Monies will also be used to set up revolving loan fund or incentives for projects. Ken mentioned that the report indicated the grant will also be covering transportation issues (coverall climate/sustainability agenda). Fred mentioned that this challenge may be a way to help communities catch federal money, which is a theory to test, but how can Energy Trust capture the savings from the agencies investment? Teresa, speaking to the stimulus funds indicated the 500k grant was non-competitive but did indicate that the existence of the sustainability coalition (started concurrently with kick off of the energy challenge) was responsible for the funding.

Recommendations

- Clarify what success is
- Creating a system that gives a better before/after look at the community efforts
- Being more ‘hardboiled’ about articulating/reaching savings goals
- Reach beyond sustainability audiences
- Smaller/more manageable pilots
- Prepare for demand
- Provide hand holding
- Clarify roles of community
- Ensure Energy Trust TA involvement
    - Many TA were from Eugene, people may have preferences for local contractors, need to examine infrastructure
- Clarify how hard to reach audiences will be included
    - Renters, large industrial customers

Debbie indicated budget was fairly small to begin with, what is smaller? Phil indicated we’ve looked at communities like independence.

Evaluation Takeaways

- Require significant resources
- Partner priorities may not reflect Energy Trust’s
- Communities for these efforts can be difficult to find/replicate
- May not result in higher savings and lower costs
- Need to take into account increased resource requirements
- Need more up front planning on what Energy Trust services to offer

Alan asked does this need to be a ‘whole community’ giving the Salem example where three utilities are located, with territories defined by neighborhoods. Phil mentioned the Solarize Portland projects, by NE, SE, and SW as being very successful examples of slicing up one city.

Teresa asked if we’re looking to contrast what is and isn’t working between the Solarize SE projects, and the Corvallis challenge (no plans but something to look into).

Phil mentioned that other considerations would be to develop a portfolio of offerings for any community initiatives: Consider turn-key services – low income fridges, kill-o-watt library loan, community lighting retrofit, climate master training, and solar PV initiative.

Teresa mentioned that partnering with long term established partners is needed, and one needs to understand community and services available to deliver. Also, emphasized the need for political infrastructure, not just technical.

Fred mentioned that we had involvement but lacked some of the technical infrastructure with Corvallis. With Energy Trust already working in the area, we have a fairly effective baseline model for delivery that community projects are competing with.

Phil mentioned potential for 'Solarize Pendleton', and that other communities are interested in bits and pieces of initiatives like this, not always a need to go whole hog.

Ken highlighted the expense and planning of communities (Hood River initiative), massive implementation and evaluation budgets. Highlighted Canadian example of failure, and indicated Corvallis experience was a good experience. Got good recommendations, but asked if this project is one that Energy Trust wants to replicate?

2. Segmentation Comparison Study

Contractor: Dethman & Associates

Sarah presented the comparison study. The project began in February of 2009. The purpose of the study was to answer questions that arose after the segmentation work we did after the 2008 Residential Awareness Survey. Questions were:

- Do the customer types we identified really exist?
- Are our segments a figment of our particular segmentation method?
- How can we use segmentation to improve communications and program design?

The contractor reviewed the history of segmentation and studies conducted by other west coast utilities, including:

- BC Hydro (Canada)
- Puget Sound Energy (Washington)
- Tacoma Power
- Snohomish Public Utility District
- Bonneville Power Administration
- Sacramento Municipal Utility District.

The evaluator also conducted interviews with representatives from the above utilities.

Findings

- Organizations had reasons similar to ours for undertaking segmentation.
- There are many different statistical methods used to derive segments.
- Survey methods varied widely in length, sampling, and types of questions, although all asked questions about attitudes, habits and values.
- Energy Trust used very different variables to form segments than other utilities.

One way to compare the segments found by all organizations is based on concern, capacity, and conditions of customers, which lead the contractor to identify 10 customer archetypes (all of our identified segments were among them). Most Energy Trust segments are similar to those in at least one other utility, but there is no consistent pattern – we do not share all the same segments with one utility.

Progress in using segmentation at other utilities has led to focus groups to refine the segments and develop messaging, follow-up surveys, and the development of short-form segmentation questionnaires. Some utilities have also developed programs or marketing campaigns for specific segments.

The contractor identified "10 steps for success" with segmentation:

- Form a cross-department team
- Develop a research plan
- Define quantitative variables
- Develop a survey instrument
- Develop segments
- Present findings
- Design (or re-design) programs
- Implement
- Develop metrics, test and evaluate
- Learn and revise segmentation

Teresa asked why metrics were developed after the design phase. Sarah responded that they could come before or during the design phase, but that would have to be developed in order to test the strategy used. Ken mentioned many tasks can be conducted concurrently.

Conclusions, next steps

- No one way to segment (i.e., we didn't do it wrong), doesn't appear to be a 'right way'
- Segmentation requires a serious investment of resources
- Segmentation can result in a challenge to prevailing assumptions about customers and customer groups
- Coming up with segments isn't the end, ongoing research is required

Lauren indicated PSE led the segment initiative for Washington, BPA regions. The only difference across all service territories was an additional 'rural' segment compared to the Puget Sound area. She also noted the 'gearbox' (short-form) questionnaire they developed. BPA is ramping up its use of the segmentation.

Debbie indicated that aligning with regional approaches could be a way to realize economies of scale.

There are currently no firm plans to move toward widespread use of segmentation, although marketing does consider our segmentation results when developing marketing materials.

Alan asked why we are not implementing the results. Whose support does it take to have the agency use the results? If we aren't using the results, why are we doing the research?

Fred responded that there are many demands on resources and the programs operate on one-year goals, whereas segmentation takes significant resources and is a long-term approach. And

we may not have products to offer some segments, as lagging segments are often resistance heated, and we have limited offerings. So using segmentation is not the top priority.

Alan said that from a marketing perspective current work is product-focused rather than customer-focused, and that the agency has a goal of getting everyone to participate equally, but segmentation is indicating that some segments are not participating. Debbie seconded Alan's point.

Peter west indicated that we are examining the packages and how we're offering them. That there is no current plan is not entirely accurate, as conversations have been occurring about how to use these findings.

Phil and Sarah said that the segmentation findings have changed the way ETO talks about customers.

Teresa suggested that we say we have no current plans for *more evaluation* of segmentation.

Amber re-iterated Fred's point that using segmentation is resource intensive and a long term process. Peter said we recognize the need to work on how we package. We're currently involved in researching what customers are selecting, and will be trying to determine why people choose certain packages.

Fred noted that the policy world has been asking Energy Trust to focus on resource intensive projects (Clean Energy Works: Portland, etc.) lately.

Debbie said that given the long term work involved in these initiatives, we need to place ourselves in a position to get started now.

Amber noted that the next residential awareness survey will test some marketing messages with customers.

Alan said this conversation was useful in putting the 'no current plans' finding in context.

3. Multifamily impact evaluation and new savings methodology

Contractor: Stellar Processes

Brien touched on results from the full report of the recent multi-family impact and review of savings methodology project. Results have been presented to the Conservation Advisory Committee.

Project goals:

- Review of current savings calculations.
- Recommendations on savings calculations.
- Realization rates for 2008-09 projects.
    - Study examined projects representing over 50% of gas and electric weatherization savings.

Findings

- Considerable space heating savings from weatherization projects (clustering around 20-40% of space heating loads in units)
- Despite high savings, realization rates were low:
    - Electric 22%
    - Gas 48%
- Predicted savings were unrealistically high, with 50% of projects examined having predicted savings greater than actual space heating usage.
- Contractor reported some uncertainty about base load measures (showerheads, aerators, CFLs) but no recommendations on changing savings estimates.

Project outcomes

- New weatherization savings tool
    - Simple to use and scalable (can be used on a structure with 5 units, or 500)
    - Allows for the discontinuation of the SUNDAY modeling tool, which took considerable staff time to calibrate.
    - Simple to use, more realistic savings, based on delta Ua (change in thermal integrity multiplied by area treated).
- Rescreening program and measures for cost-effectiveness
    - More emphasis on non-energy benefits is likely to be needed to maintain cost effectiveness for windows.
        - Energy savings is a very narrow base to support such a large investment.

4. Small Commercial Lighting Logger Study

Contractor: The Cadmus Group

Brien re-presented results summarizing the recent site visit measurement and verification study of lighting only projects from the 2006-2007 Existing Buildings program. Original Existing Buildings 2006-2007 impact evaluation found a wide discrepancy in the realization rate when comparing site verified lighting savings to those which had billing analysis conducted on them.

Project scope

- Site visits to 40 sites (20 from each program year).
- 22 sites received lighting loggers for about two weeks to verify operating hours.

Findings

- Study site verified realization rates nearly identical to 2006-07 site visits.

Outcomes

- Billing analysis will not be used on commercial projects for the foreseeable future.
- Current and subsequent Commercial impact evaluations will rely solely on site visits to verify savings estimates.
- Realization rates reflecting site visits for 06-07 were used in the 2010 true-up.

5. Fast Feedback Pilot

Contractor: Research Into Action (RIA)

This pilot began in June 2009.

The purpose of the fast feedback pilot was to gather feedback closer to time of investment decisions, while evaluating different survey methods (phone, paper, email). We anticipated that

by surveying closer to project completion, answers would be more accurate than in the usual program survey, which occurs one to two years after completion. The survey was designed to be useful for both evaluation and program staff.

The survey was piloted for participants of Existing Buildings (EB) and Production Efficiency (PE) programs. Site verified PE projects have high contact with PDCs, so we tested paper surveys delivered by the PDC, both with and without a privacy envelope. Non-site verified PE projects and EB projects were randomized to a phone or web survey.

The pilot involved the design of survey instruments and samples, creating a monthly report of eligible projects, fielding and tracking surveys, and analysis of results, by program and by survey method.

Survey questions covered satisfaction with program experience, suggestions for improvement, free ridership, willingness to contact us again for another project, and interest in other offerings.

The highest survey completion rates were achieved by phone (77%). Web had the poorest completion rate (about one third took the survey).

Results – EB program

- High satisfaction with all program elements (95% rating 4 or 5 out of 5 overall)
- Lowest satisfaction was for paperwork (73% rating 4 or 5 out of 5)
- Only 27% said they could have paid for the project without us
- All respondents indicated they would contact us again

Ken asked about the preponderance of lighting in the sample. Sarah responded that lighting is a large slice of program savings and an even larger slice of total measures, but that the survey sample was chosen to make sure non-lighting projects were represented in the sample.

Other feedback included a desire for less complex paperwork, and faster program progress. Much praise for the program was received in open-ended feedback.

Free ridership:
Unweighted – 19%
Savings-weighted – 37% (in line with 2006-2007 evaluation)

RIA reported that a few large projects had high free ridership, leading to the higher figure when weighted by savings.

Dan asked for a quick description of free ridership. Free riders are those who would have installed the measure without our influence (incentive or program assistance). Fred noted that the survey only captured free ridership, but was not concerned with spillover. Spillover is when someone implements a measure due to program influence, but did not apply for or receive an incentive. Sarah indicated she would provide the background memo on free ridership estimation method.

Results – PE program

- Very high satisfaction (94% rating 4 or 5 out of 5 overall)
- Lowest satisfaction (87% rating 4 or 5 out of 5) was for paperwork and information on tax credits
- Only 27% in could have paid for the project without incentives
- 98% said they would contact us again

Other feedback was almost identical to that for the EB program, including praise for the program.

Free ridership
Unweighted – 21%,
Savings-weighted – 21% (5 points lower than 2007-2008 evaluation)

Effect of survey method
For the EB, there were no differences in responses between phone and web surveys.

There were some differences for PE, but they can be accounted for by differences in project type (custom vs. prescriptive) correlated with survey method, or by self-selection in the web respondents.

Kim noted that prescriptive measures tend to be new participants (who received a paper or web survey), and custom tend to be recurring customers (who all received paper surveys), which could also lead to the differences observed.

There was no effect of a privacy envelope on responses to the paper survey, just the response rate (higher when using the privacy envelope).

Recommendations and next steps
Fast Feedback will be continued for the EB and PE programs and extended to most of our other programs in Q2 of this year. Phone surveys will be used for all respondents from now on, due to the following factors:

- Many programs cannot use the paper method (no direct program contact)
- Per completed survey, phone is about as cost effective as web and response rates are better
- PDCs felt it was awkward to give a survey to participants. Kim indicated the surveys were an administrative burden on industrial program staff as well.
- Using only one method results in a simpler process and analysis.

The EB and PE programs should also expand energy management and O&M offerings, based on feedback. We would also like to improve the question on how the project would have changed without program, since it was cumbersome to administer by phone (many possible responses to read off).

The kick-off meeting for the roll-out is March 1. Energy trust call center will be involved, and will likely conduct more than 800 of the surveys. Samples will be sufficient for 90% confidence/10% precision for all programs or measures. We have contracted with RIA for the roll-out, and will transition surveying to a permanent home (either the Energy Trust call center, or the winner of a competitive bid process) after Q2. Survey calls will start in May and go through July.

Fred asked if there will be a way to ask spillover questions now that we have a good delivery mechanism. Sarah noted that verification of spillover is expensive (verifying they installed what they said). There is not enough space in a fast feedback survey for good spillover questions.

Dan noted that there may be a correlation between paperwork burden and spillover. Phil responded that many requirements have been removed around forms and processes to simplify them. The lighting tool is an example of a fairly automated device, which also includes the tax credit form which is pre-populated by the project. Kim noted custom tracks don't have forms filled out by the participant; the PDC does all the work.

Alan asked if we examine HER data to follow up with participants who may have done something without an incentive, or taken behavioral steps. Phil indicated that with spillover, it's difficult to estimate savings accurately.

Alan mentioned that businesses will slowly replace old equipment with efficient equipment through O&M budgets, but do not always do comprehensive projects with incentives. He also re-iterated that we count free riders but don't invest as much time in capturing spillover, which may in fact be greater than or equal to free ridership.

Ken noted that research budgets needed for spillover are very large.

Ken mentioned that Energy Trust has been doing its due diligence to examine its offerings to ensure program quality.

After the last Evaluation Committee meeting, Dan Enloe asked whether this meeting is a forum for looking at new technologies. Currently, we do not have a board committee that examines or follows new technologies. Fred noted that we have documentation on what we're field testing, and asked if the board does want to get into that level of detail. Debbie indicated Dan Enloe is very interested in this topic, and that new and emerging technologies may be outside the charter of the evaluation committee.

Ken asked if BPA is taking the lead on technologies. Fred indicated Energy Trust does field testing of near market technologies, and BPA is going another direction. NEEA does have some budget for evaluating and supporting emerging technologies; Fred is a member of that committee.

Fred did indicate that many program scale new technologies will be presented to the board (regional ductless heat pump testing, OPOWER residential project).

Debbie indicated that at some interval, the board may like a presentation on new technology. Fred asked if it would be an effective forum. Phil suggested a status update on various technologies. On an annual basis, more things are moving, and may have moved significantly, thus an annual presentation may be the best idea.

Teresa indicated interest in a presentation as well, and suggested a one-pager on the status of technologies in a list format. Sarah suggested we discuss this again when Dan Enloe is also present to discuss the best way to present this.

The meeting adjourned at 12:40pm
The next meeting tentatively is tentatively scheduled for April 23rd or 30th, 2010.