Evaluation Committee Meeting

May 11, 2012 10:00am-1:00pm

Attendees

1. Debbie Kitchin, Board Member – Committee Chair
2. Alan Meyer, Board Member
3. Ken Keating, Expert Outside Reviewer
4. Peter West, Director of Energy Programs
5. Steve Lacey, Director of Operations
6. Phil Degens, Evaluation Manager
7. Sarah Castor, Evaluation Sr. Project Manager
8. Dan Rubado, Evaluation Project Manager
9. Ryan Eddings, Evaluation Intern
10. Fred Gordon, Director of Planning and Evaluation
11. Ted Light, Planning Project Manager
12. Lakin Garth, Planning Engineer
13. Sue Fletcher, Communication and Customer Service Sr. Manager
14. Matt Braman, Residential Sector Manager
15. Kate Scott, Residential Project Manager
16. Erika Kociolek, Residential Intern
17. Adam Bartini, NW Natural WA Sr. Project Manager
18. Lewis Colon, Sr. Manager - Strategies and New Initiatives, CSG
19. Sara Brockmeier, Sr. Manager - Customer Engagement, CSG
20. Simone Auger, NW Natural WA Regional Rep, CSG

Agenda

1. HER Follow-Through Analysis
2. NW Natural WA Process Evaluation
3. 2011 Fast Feedback Summary Report(11:15-12:15)

1. HER Follow-Through Analysis

Presented by: Erika Kociolek

Erika conducted an analysis of Energy Trust project data to update the follow-through rates for Home Energy Review (HER) customers. She also looked at follow-through rates for customers that received Energy Saver Kits (ESKs) as a comparison.

In the analysis, follow-through was defined as any existing home program efficiency measures or home products that were installed in a home after receiving a HER, excluding ESKs. Homes were selected that had received an HER from Energy Trust. Homes that had received multiple HERs were excluded. The follow-through time for HER customers was determined by taking the difference in dates between the HER and the first subsequent measure installation. The

analysis looked only at correlations between HERs and measures installed afterwards in the same home. These correlations are not necessarily causal relationships.

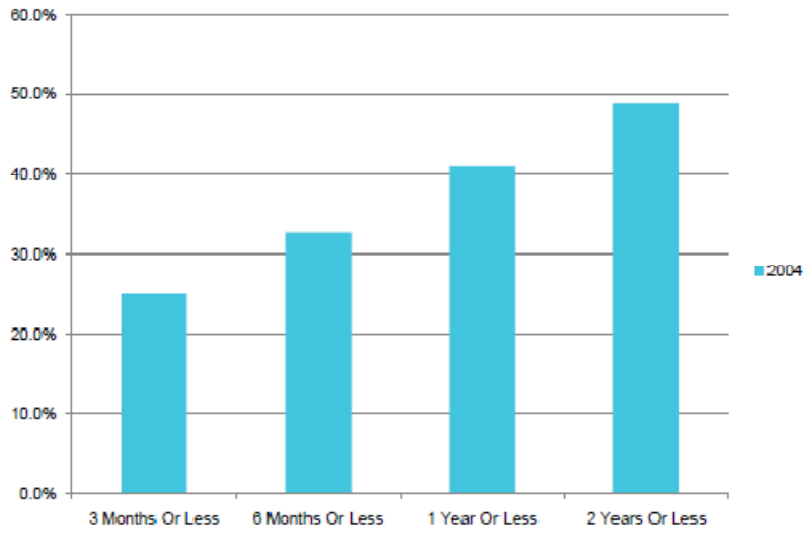
It is unknown whether installed measures were action items from the HERs or whether they were at all motivated by the HER. It is possible that the occupants of a home could have changed after the HER was conducted and the measure was not installed by the HER participant, but analysis was done at the home level and individual customers weren't tracked. In addition to the effect of the HERs, there may have been other factors acting on follow-through rate. We haven't yet tried to determine the number of people receiving a HER that would have installed measures anyway.

The analysis looked at program participation follow-through by year as the percent of households that installed efficiency measures after receiving a HER. Follow-through rates were broken into several categories based on the amount of elapsed time since the HER (Table 1).

Table 1. Historical HER follow-through rates, 2003-2011.

Year	HER (N)	3 Months Or Less	6 Months Or Less	1 Year Or Less	2 Years Or Less	To Date
2003	2,103	9.2%	15.5%	19.7%	24.3%	50.3%
2004	2,330	16.9%	20.6%	26.0%	31.9%	55.6%
2005	2,806	17.5%	22.6%	28.5%	35.0%	58.2%
2006	4,569	14.5%	21.1%	28.0%	34.8%	55.9%
2007	5,253	13.9%	20.1%	26.8%	36.0%	53.7%
2008	6,395	14.3%	20.3%	28.8%	39.5%	50.8%
2009	9,314	16.2%	22.2%	29.7%	39.3%	44.3%
2010	6,556	17.1%	23.7%	31.7%	-	-
2011	2,916	13.6%	17.9%	-	-	-
All Years	42,242	15.2%	21.1%	28.1%	35.6%	47.0%

Figure 1. Measure Installation Over Time for HERs Performed in 2004.



Debbie commented on the number of HERs; in 2009 there was a huge number of HERs, but they have dropped off since then. Actions did not drop off with the decreased emphasis on HERs.

Matt added that refrigerator recycling started in 2009 and that this is an easy measure that could have bumped up follow-through numbers after it was introduced.

Ken said that the increase in uptake of refrigerator recycling was probably a lot of second units.

Next we looked at measures installed over time for just those household that received a HER in 2004. We saw that 50% of all measures installed after an HER were installed within the first two years (Figure 1).

Alan said that this shows there is a long lasting effect from the HERs.

Steve said it could be a function of finance. It might take time to get the capital together to do the projects.

Fred said, what about everyone else? Is this normal or is there more than the average number of measures being installed in HER homes? It looks like there are a lot more measures being installed than in the general population.

Follow-through by utility service. Households that have both electric and gas incentives have higher uptake of measures after HER than being in only one service territory (Table 2). Gas was added pretty early on in Energy Trust history, so that cannot explain a difference from electric. .

Table 2. HER follow through by utility service, 2003-2011.

Type	N	3Months or Less	6 Months or Less	1 Year or Less	2 Years or Less	To Date
Electric and Gas	29,626	15.6%	21.9%	29.5%	37.8%	50.5%
Electric and non-ETO Gas	349	12.6%	15.5%	19.8%	22.3%	27.2%
Electric Only	9,337	14.8%	19.9%	26.2%	32.5%	42.1%
Gas Only	2,914	12.7%	17.3%	21.6%	24.6%	30.0%

Phil said that there are a limited number of measures/services available in gas only service territory, which may be why follow-through is lower there.

Alan said that the field of possibilities is much wider when a home is in both gas and electric service territories.

Debbie asked if there were a difference between electric only homes in PGE and Pacific Power territories.

Phil said that in rural areas with only electric service, heating can be electric, wood, propane or other fuels. The electric-only group is hard to classify. They might also be urban.

Fred said that most people who get a HER are both electric and gas customers.

Next, an easy/hard measure comparison was done (Table 3). Easy measures were those that were low complexity and did not require hiring a contractor, like appliances. There was slightly faster follow-through for hard measures than easy measures. This could be because appliances aren't replaced until they are old or not functioning, whereas hard improvements are often adding something that was previously lacking, such as insulation. So, the hard measures will be undertaken before existing appliances reach the end of their life and are replaced.

A comparison was done between homeowners that had taken action prior to receiving a HER and those that had not. We did not see any big differences between these two groups. This relationship could be obscured since only Energy Trust measures that were given an incentive were counted as prior actions. It is possible that many of the "no prior action" households had installed non-Energy Trust measures that were not captured in this analysis.

In addition to HERs, we also looked at the impact of ESKs. The analysis was done for 2008 and 2009 ESKs. Follow-through rates were very low compared with HERs (Table 3).

Table 3. ESK follow-through rates, 2008-2009.

Year	N	3 Months Or Less	6 Months Or Less	1 Year Or Less	2 Years Or Less	To Date
2008	8812	1.3%	2.3%	5.2%	10.7%	17.4%
2009	2791	1.6%	2.9%	8.1%	14.5%	15.3%
All Years	11603	1.3%	2.5%	5.9%	11.7%	16.9%

Debbie asked about the call to action included with the ESKs. Do we do any follow up with these people via email or otherwise?

Sarah C said we haven't gotten many email addresses from participants in the past, but CSG has recently made an effort to collect more email addresses and is up to 70% email capture.

Kate said we are planning to follow up with ESK customers in the near future to recommend a phone based HER as their next step to Energy Savings.

Adam said that a follow-up post card is being sent out in SW WA. They were also offering an "Act Now" bonus that was driving up follow through there.

In conclusion, follow-through rates have been pretty constant over time, even with changes in program offerings and incentive levels. ESKs lead to very little follow-through, possibly with no program lift. In further analysis, we need to look at overlaps between ESK and HER. We will also want to look at whether phone HERs differ from in-home HERs. We may want to compare follow-through rates with the distribution of incentives and savings over time. We need to answer the question of what proportion of measures installed post-HER is attributable to the HER.

Sara B explained phone HERs. They ask homeowners the same questions and fill out the same tools over the phone as for an in-home HER. Sometimes they dead-end if the homeowner doesn't know something or isn't willing to check something. In these cases, CSG will follow up with an in-home HER. Phone HERs take a lot less time, maybe 20 minutes, compared with 2 hours for the in-home version.

2. NW Natural SW WA Process Evaluation

Contractor: Research Into Action

Presented by Phil Degens.

This evaluation was an update to the previous evaluation of SW WA programs with the same contractor. This time around, we tried to leverage existing surveys and data to make the evaluation funds go further.

Energy Trust provides gas efficiency services to 71,000 NW Natural residential and commercial customers in SW WA. Services are provided through the Existing Buildings (Lockheed), Existing

Homes (CSG) and New Homes (PECI) programs. Program offerings and incentives are different in WA than they are in Oregon.

All programs exceeded stretch goals in WA for 2011 (Table 4). There can be a lot of variation from year to year with a comparatively small population.

Table 4. SW WA program goals and realized savings.

PROGRAM	2011 CONSERVATIVE THERM GOAL	2011 STRETCH THERM GOAL	THERMS SAVED AS OF 12/31/12	% OF STRETCH GOAL
Existing Buildings	89,250	105,000	121,198	115%
Existing Single Family	54,106	63,654	63,922a	100%
New Homes	15,895	18,700	19,324	103%
Total	**159,251**	**187,354**	**204,445**	**109%**

A lot of prescriptive measures are done in WA. 60% of funds are supposed to be spent on incentives and not outreach and other activities. The federal tax credit declined significantly over this time period. Each individual measure must pass the cost effectiveness test rather than the entire portfolio.

Standard evaluation methods were used including a review of program documents and a review of Trade Ally Survey and Fast Feedback survey results for SW WA. More in depth interviews were also done with program staff, a sample of commercial and residential trade allies (TAs), nonparticipating residential contractors and new home builders.

Existing Buildings: Outreach is limited to ½ FTE for outreach. As services moved from pilot to a program, more trade ally outreach and development was needed. The project process is similar to Oregon, except that customers must cover the cost of studies upfront and receive the study incentive later. Fast Feedback from customers showed good satisfaction with a few exceptions, including equipment performance.

Trade ally interviews revealed that a lack of customer awareness of Energy Trust and the limited number and amount of incentives were the main complaints from contractors. Usually SW WA contractors had worked with Energy Trust for more than a year. Responses about comparing program experiences in both states were mixed. Contractors wanted programs to be more alike between the two states, but this is hard to do given the differing requirements.

Existing Homes: No appliance incentives are offered in WA. A gas furnace incentive is still in effect in WA for 90%+ efficient units. This is effective until about May 2013. The program has 1 FTE for outreach in SW WA to recruit and support contractors and outreach to community groups. Program challenges included the reduced federal tax credit, only two NWN certified gas furnace contractors, which limits bundling NWN incentives, and fewer old furnaces in SW WA than Oregon.

Fast feedback responses indicated that more than 90% of customers were satisfied overall. 73% were satisfied with the time to get their incentive check. 48% of participants said they would have done the project without the program but 90% said they were influenced by their contractor and two thirds were influenced by the incentive.

Trade allies said there was low awareness of Energy Trust in SW WA. Most contractors included Energy Trust incentives in sales pitch, but most said that very few jobs included incentives. Most responded that less than 25% of their business involved Energy Trust. Trade allies were highly satisfied with program interactions overall. 8 of 11 contractors interviewed were Energy Trust trade allies. There were some barriers noted to becoming trade allies in WA. There were a few challenges with submitting projects and paper work, but this has been addressed. Only a few were concerned with differences between WA and OR program offerings. Contractors generally wanted to have more marketing support. All worked with Clark County PUD programs. Insulation technical requirements were viewed as burdensome. Non participating contractors were all familiar with Energy Trust and some were becoming TAs.

New homes: Major differences between OR and WA programs are that only two prescriptive actions receive incentives in Washington (tankless water heaters and Energy Star homes) and there is limited marketing and support. Only 1/3 FTE is committed to SW WA for everything. The program works with the existing Energy Star program and does limited marketing.

The five builders interviewed were responsible for one third of the 182 Energy Star homes built through the program. 4 of 5 were very familiar with Energy Trust. All were committed to building Energy Star Homes and go above this standard to Earth Advantage, LEED, etc. There were no concerns about building homes to 2012 Energy Star spec. Some were worried about possible future spec changes. No problems with paperwork were reported and one respondent wanted more interaction with Energy Trust. Challenges included the mortgage industry not valuing energy efficiency. Requiring that builders become trade allies by July 1 did not seem to be a problem.

Conclusions and Recommendations:

Existing Buildings – Need to develop network of Trade Allies in SW WA. PMC should expand recruitment and training efforts. Energy Trust should work with NWN and the Washington Utility and Transportation Commission (WUTC) to increase the budget and change the 60% number to allow more outreach.

Existing Homes – Need to target areas outside Vancouver and Camas to get additional gas savings. Contractors need help finding and targeting gas households. Increase efforts to recruit and train trade allies. Having only 2 Washington-based NWN-certified furnace contractors limits the amount of bundled incentives that can be done. Work with WA trade allies to get NWN certification.

New Homes – Energy Trust should investigate new homes because there is a lot of free-riding from builders. Builders were already building to Energy Star specs without the program or incentives. Energy Trust should consider market transformation as part of its strategy.

All programs exceeded their stretch goals. There is a need to increase the number of contractors to help programs reach 2012 goals. Major program changes will be considered after

Existing Buildings and Existing Homes rebids come in. There might be just one PMC delivering all services in SW WA, depending on bids that come in.

Adam said that there is no industrial program being done in SW WA. There are very few industrial customers.

Alan asked how we would transform the market in SW WA.

Fred responded that we are doing market transformation work, some through NEEA for the entire region. This work supports changes in WA state codes.

Ken said that it can be hard to do market transformation with only gas incentives. If existing buildings doesn't include industrial processes, what does it include?

Adam responded that it includes insulation, boilers, etc.

3. 2011 Fast Feedback Summary

Contractor: Gilmore Research

Presented by Sarah Castor

Background: The Fast Feedback pilot was conducted in 2009 and led to expansion for all programs in Q2 2010. Sampling and reporting were brought in-house at that point. Gilmore Research Group has done the surveys since Q2 2011. This is the first annual summary.

Fast Feedback is a short phone survey to recent participants that asks questions about satisfaction, investment decisions, use of tax credits, suggestions for changes, and program-specific pet questions. We try to get a representative sample of customers and achieve 90% confidence with a 10% margin of error. These criteria were achieved for almost all groups in 2011. More than 3,400 surveys were completed for 2011.

More surveys are done in the residential sector because the volume is larger. This allows us to look at specific measures more closely for residential.

Commercial and Industrial Sectors:

Overall satisfaction was very good across the commercial and industrial programs. New buildings and new multifamily had the lowest satisfaction level at 83%. Free ridership is calculated for only a few programs. It was generally relatively low (Table 5).

Table 5. Satisfaction and free ridership by program, 2011.

Survey Group	Satisfaction	Free Ridership (savings-weighted)	
		Electric	Gas
Existing Buildings – Oregon	94%	30%	27%
Existing Buildings – Washington	100%	--	--
Existing Multifamily	87%	27%	48%
New Buildings and Multifamily	83%	--	--
Production Efficiency	91%	14%	20%
Commercial Solar Electric and Water Heating	91%	--	--
Small Wind	4 of 5		

Business Energy Tax Credit (BETC) changes were a common theme in surveys. There was a significant decline in use of tax credits. These changes caused a decrease in satisfaction with the info Energy Trust provides about tax credits. Some confusion resulted from this about the difference between Energy Trust incentives and BETC. We saw a drop in free ridership during mitigation funding when the BETC first disappeared, but it is creeping back up.

It is hard to talk with New Building project owners. We decided that free ridership could not be accurately assessed with responses from non-owners. We don't know how well Fast Feedback works in general for this group. It is a very different experience with New Building projects because the timelines are usually long. Open comments may be more useful for this group.

Debbie commented that the person you get a hold of is probably not the decision maker with New Building projects.

Fred responded that it is tough to get good information from these people and to figure out how financial decisions are made. The person that is interviewed may not know.

Satisfaction for New Buildings and Existing Multifamily bounce around on a quarterly basis due to small samples.

Debbie asked about building owners that do multiple projects and how they are selected for interviews.

Sarah responded that they are asked about only a single project, so they are not interviewed about the other projects that they may have done.

In 2012, we added questions about BETC changes in Q1 and Q2. We wanted to know what was going on with projects for just a couple quarters.

Alan asked if we asked whether the BETC ending caused projects to get sped up. Debbie asked a clarifying question.

Sarah said that we did not ask these questions.

Residential Sector:

Satisfaction was good for almost all measures (Table 6). Windows were the lowest at 85%. Free ridership varied a lot. Lowest free ridership was found with air sealing and the highest with refrigerators.

Table 6. Satisfaction and free ridership by category, 2011.

		Satisfaction	Free Ridership
Home Products	Clothes Washer	88%	47%
	Refrigerators	90%	52%
	Refrigerator Recycling	95%	31%
Existing Homes	Air Sealing	88%	21%
	Ceiling Insulation	92%	28%
	Floor Insulation	96%	27%
	Wall Insulation	90%	35%
	Duct Insulation	88%	31%
	Duct Sealing	89%	38%
	Heat Pump	88%	42%
	Water Heater	91%	47%
	Windows	85%	42%
	Home Performance	90%	27%
	Home Energy Review	91%	--
	Washington	86%	--
Residential Solar	Solar Electric	94%	--
	Solar Water Heating	100%	--

Matt mentioned that when the incentive turnaround times went up, due to increased volume, they saw a big decrease in satisfaction. This was particularly the case before tax time when the number of applications increased dramatically. In 2011 there were two tiers of appliances that qualified for incentives, but the lower tier was eliminated for 2012 and now only the top tier qualifies. This may lower the high free-ridership rates for some appliances in 2012.

Home Performance free ridership (non CEWO projects) has increased.

Spec changes for appliances only slightly reduced free ridership compared to 2010. 2011 was the last year of the Residential Energy Tax Credit (RETC) for appliances and use was high for clothes washers, so it will be interesting to see what happens to appliance free ridership in 2012. Free ridership is climbing for fridge recycling. Most recycled fridges were replaced with a new unit, which is not good for our savings estimates. RTF originally assumed that 50% of recycled refrigerators would be second refrigerators and not replaced.

Ken said that the RTF assumption was just a fudge factor. They didn’t have a good forecast for how many second fridges were out there. Most fridges will be recycled one way or the other. Scrap metal is too expensive.

Debbie concurred that almost all fridges are recycled whether or not they went through the Energy Trust program.

Alan asked how we know about free ridership with refrigerator recycling.

Sarah C clarified that free ridership was calculated for fridges based on the unit being taken off the grid through any avenue, not whether or not it would ultimately be recycled.

Satisfaction was very high across the board for residential measures. Windows are still difficult, though. This measure requires the stickers to be removed from every window and sent in with the incentive application materials.

Phil said that the contractors need to be trained to take off stickers and staple them together. Otherwise, manufacturers could engrave the U-value on the window frames for easier verification.

Free ridership was down for air sealing. Satisfaction in WA trended up over the year to 100% in Q3 and Q4. Free ridership for other measures were stable or slightly up.

In residential solar, there were no real trends in satisfaction, it remained high for both PV and water heating.

2012 survey changes:

For 2012, we removed questions on federal and state tax credits for measures where they are no longer available. Questions were added about gas furnaces for SW WA. A new question was added for market research in SW WA on the relative importance of cost savings, comfort, environmental benefits, etc. For Q2 and Q3 surveys, refrigerator rebate participants will be drawn from the Sears instant incentive participants to get more information about this new initiative. Water heater participants will be sampled from 0.67 gas units only. Phone HERs will be added to the HER sample beginning in Q2.

Using results:

Free ridership results will be used in the true-up process. Satisfaction results are used in quarterly and annual PUC reports. There is also a new PUC requirement that Energy Trust reports a single overall satisfaction number. Evaluation will determine the best method for determining satisfaction for all Energy Trust programs using some sort of weighting scheme.

Phil commented that we will create the procedure and make it transparent.

Staff continue to use fast feedback results and comments for insight on program experience. Future reporting will be quarterly with an annual summary. In the future reporting may be transitioned to the survey contractor to free up staff time.

Wrap Up

Next Evaluation Committee Meeting will be June/July 2012, or possibly August 22 to coincide with the board meeting

Debbie mentioned that there is a new board member and another that is interested in being on the committee, but they live outside of the Portland area. It may be necessary to move committee meetings to the same day as the board meetings to allow these members to attend. Otherwise, we may need to do video conferencing.

Fred said that we won't be doing any impact evaluations at the next meeting.