Evaluation Committee Meeting

March 8, 2012 9:30am -11:30am

Attendees

1. Debbie Kitchin, Board Member – Committee Chair
2. Alan Meyer, Board Member
3. Ken Canon, Board Member
4. Ken Keating, Expert Outside Reviewer
5. Tom Eckman, Northwest Power and Conservation Council
6. Phil Degens, Evaluation Manager
7. Sarah Castor, Evaluation Sr. Project Manager
8. Dan Rubado, Evaluation Project Manager
9. Andrew Shepard, Homes Sector Project Manager
10. Elaine Prause, Sr. Planning Manager
11. Fred Gordon, Director of Planning and Evaluation
12. Kate Scott, Residential Project Manager
13. Lewis Colon, Sr. Manager - Strategies and New Initiatives, Conservation Services Group (CSG)
14. Marshall Johnson, Homes Program Manager
15. Matt Braman, Residential Sector Manager
16. Peter West, Director of Energy Programs
17. Rachael Singer, Customer Relations and Marketing Manager
18. Steve Lacey, Director of Operations
19. Sue Fletcher, Communication and Customer Service Sr. Manager
20. Ted Light, Planning Project Manager
21. Tim Davis, Sr. Manager - Contractor Programs, CSG

Ken Canon will be leaving the Evaluation Committee. He has too many committees to participate in, but would like to continue receiving the materials for the Evaluation Committee.

Agenda

1. Home Performance Track Process Evaluation
2. OPOWER Personal Energy Report Process Evaluation 6-month Survey Report
3. Sustainable Energy Systems (SES) for Waste Water Treatment Plants Evaluation

1. Home Performance Track Process Evaluation

Contractor: Johnson Consulting

Sarah presented results from the first full process evaluation of the Home Performance track of the Existing Homes program. The evaluation was conducted during Q3 and Q4 of 2011. Interviews were conducted with four Energy Trust and CSG program staff. Customer interviews were done with 30 program participants and 15 non-participants by phone. Trade ally interviews included 15 phone interviews.

The evaluation objectives were to assess the effectiveness of program operations, determine customer and trade ally satisfaction and document the interrelationship between Home Performance (HP) and Clean Energy Works Oregon (CEWO). This was not an evaluation of CEWO.

The first step of the evaluation was a database and document review. From 2010 through mid-2011 there were 582 assessments with 513 projects and 1,619 measures. On average, there were 3.2 measures installed per project. There were a relatively small number of assessments that didn't go on to do a Home Performance project. The most common measures were air sealing and all types of insulation. The least common were heating and water heating equipment. In general, HP is focused on weatherization measures.

When multiple measures were done, air sealing and insulation were the most common measures to be installed together. Blower door tests are required with all air sealing measures and were performed accordingly. The HP assessment differs from individual diagnostic measures promoted in the standard track because it consists of two tests packaged together with a $150 incentive.

During the study period the participating homes were mostly gas heated. Twenty percent had electric heat. Most projects were in the Portland metro area. Home ages varied widely with the largest group built in the 1960's and 70's.

Staff interviews:

The focus of the HP track has shifted from recruiting trade allies to maintaining the existing pool. The program is well enough known that new contractors are joining the network without being approached by Energy Trust. Energy Trust is also doing less direct marketing and encouraging contractors to take over this function.

CEWO represents the majority of projects in the track at this point. The number of non-CEWO projects is smaller than the number of CEWO projects. CEWO projects are generally assigned a contractor, rather than the customer selecting from the trade ally list through a competitive bid process. Thus, contractor selection is not as competitive under the CEWO model.

There is some tension between contractors involved in CEWO and those not involved. All CEWO contractors must be BPI certified. To be a contractor for CEWO, they must be an Energy Trust trade ally.

For promotion of the HP track, bill inserts are viewed by program staff as most effective. Coop marketing is available to contractors for HP.

Ken K. asked if there is a sufficient number of contractors in Home Performance. Tim said that there is in the Portland Metro area; other areas have fewer HP trade allies, but there has been an increase in contractors in the Bend area related to CEWO. Awareness of the HP track is out there. There is no need for active recruitment at this point. A lot of contractors are not interested in CEWO but want HP as their business. Debbie noted that HP has created general interest around the state, including in CEWO.

Trade Ally Interviews:

Fifteen HP trade allies were interviewed. All reported that they were committed to the whole house energy approach. Three quarters of their business was reportedly in energy efficiency. On average, these trade allies had been in business 7.7 years. The group consisted mostly of weatherization contractors; many sub-contract with HVAC companies.

Trade allies reported that most customers were motivated to participate in the HP track by energy savings. Comfort was important for some, but this was usually not an initial motivation. Many of the contractors believed that customers would not get the home assessment without the incentive. Some trade allies saw the Energy Trust three-tier rating system of Existing Homes trade allies, which results in the display of one, two, or three stars next to each trade ally listed on the Energy Trust web site, as unfair because it was partially based on sales volume and therefore put small contractors at a disadvantage.

For HP program track information, most trade allies relied on e-mails and newsletters from Energy Trust. For marketing, contractors reported that the best method was one-on-one communication with customers to describe the benefits of the HP approach. However, many trade allies wanted to see more differentiation between the HP and standard track in Energy Trust marketing.

Many of the trade allies belong to the Home Performance Contractors Guild. Many of them participate in Energy Trust's "Savings within Reach" program track, as well as HP. Some contractors expressed that they were not sure of the long term effects of CEWO on the market.

Trade allies were generally interested in more advanced training and trainings offered via webinar. There was a lot of negative feedback about the new software tool used for home assessments. However, these interviews were conducted at the initial launch of the software application and it had a lot of bugs early on that have since been resolved.

Contractors often create their own report on assessment findings and potential savings instead of using the report template provided by Energy Trust. Most contractors liked the program staff but not the incentive applications.

Alan asked about the new software contractors were required to use. Sarah said it is a CSG product called EMHome; CSG is working to make improvements. Alan asked what was used before. Marshall said that another CSG-provided tool was used before. He noted that we found that modeling software tools have a lot of variability and add an additional step to the home assessment. We are heading to a path of using the Energy Performance Score for this type of energy modeling. We plan to engage the trade allies to drive the development of future modeling software. They know how much energy each measure saves. In the future, we could also embed Energy Trust energy savings data into a savings calculator, which might allow for more accurate estimation of measure energy savings. Phil added that there are currently other evaluations looking at the EPS and modeling software.

Alan asked if the trade allies are the ones using the modeling software, Sarah said yes. Ken K. said contractors don't feel they are modelers. They are sometimes criticized by their customers on the model outputs. Could there be a third party process? There are others evaluating these things around the country.

Debbie commented on the band around the EPS score; we can provide the calculator but let people know there is a wide range in actual outcomes. We should move in that direction, not necessarily more sophisticated models. Fred noted that the EPS tries to measure the assets of the home (like a miles per gallon rating), but users will make that vary considerably. Real users could be off by 40-50% from the modeled estimate. Debbie said that's the part people don't like.

Fred added that this evaluation is looking at modeling software that has since been updated and Energy Trust is working on a path forward.

Customer surveys:

The customer surveys included a sample of 30 participants who had a home assessment and completed a project through the HP track and 15 "non-participants" who did the assessment but did not complete a HP project. However, the non-participants may have completed projects through another program track or not received an incentive. Quite a few who did home assessments ended up getting incentives through the standard track. All non-participants reported installing some type of measure after receiving the assessment including some low- or no-cost measures.

Ken K. said there might be some self-report bias from non-participants on whether they went ahead and installed measures because there is a cultural bias. Sarah noted there could be some self-report bias, but customers also identified their reasons for not doing the job through HP.

Fred said that early in the program, contractors didn't want to do the test-out, so they just took the incentives for doing the test-ins and did the measures through the standard track. Then the incentives were restructured so that this was not encouraged.

More than half of customers visited the Energy Trust website before scheduling a HP assessment. Motivations for signing up included a desire to improve efficiency, reduce the energy use of their home, save money, make their home comfortable and help the environment. It was mostly energy benefits that people were interested in; 73% said that energy savings were the primary motivator and non-energy benefits were not as important.

Reasons for Hiring a Home Performance Contractor	Participants (%)	Nonparticipants (%)
Improve/increase energy efficiency/reduce energy use	33%	73%
Save Money/Reduce bill	30%	33%
Make my home more comfortable to live in	13%	0%
Needed insulate/weatherize my home	13%	0%
Rebate/Government incentives available	13%	0%
To find the issues with my house	10%	0%
Help the environment	7%	20%

Reasons for Hiring a Home Performance Contractor	Participants (%)	Nonparticipants (%)
Needed to replace equipment/upgrade	7%	17%
It was recommended	7%	0%

For non-energy benefits there were some differences between participants' expected and realized benefits. People expected and received an increased level of comfort. However, participants who expected to see an environmental benefit often did not feel that they got it, or else they did not know how to evaluate this. Additionally, increased home value was often expected but not realized, probably because the value of these things is invisible or is only realized by appraising or selling the home. On a positive note, more people experienced noise reduction as a benefit than expected it.

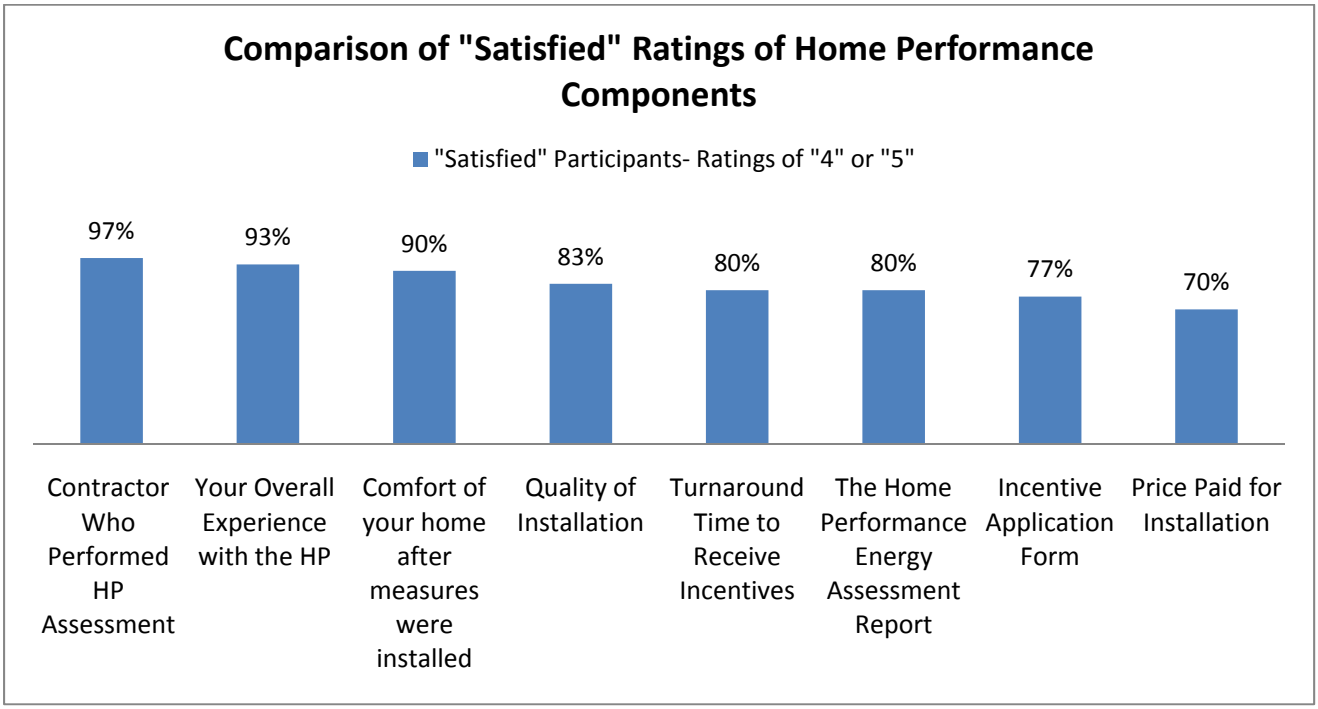
Respondent Expectation of Results	Before Measure Installation		After Measure Installation		
	Number Responding	% of Total	Number Responding	% of Total	Net Difference
Comfort	28	93%	28	93%	0%
Environmental Impact/Carbon Footprint	22	73%	18	60%	-13%
Ability to pay bills	21	70%	21	70%	0%
Home Value	14	53%	8	27%	-26%
Health/indoor air quality	12	40%	13	43%	3%
Equipment performance	10	33%	11	37%	4%
Noise reduction	7	23%	11	37%	14%
Safety of home	4	13%	3	10%	-3%

Marshall noted that noise reduction is an important non-energy benefit. TriMet is currently looking at strategies for noise reduction along their new light rail line through southeast Portland to Milwaukie. Fred added that in a Hood River project, customers reported that putting storm windows on made everything quieter.

The survey asked which non-energy benefit was the most important; Sarah said the results were in the same order as in the table above.

Debbie said that non-energy benefits may become more important when the economy is better - these responses could change in 3-4 years.

For satisfaction with the program track, 93% of participants reported that they were satisfied overall. These results matched what is seen in Fast Feedback surveys, which is reassuring. The incentive application and price paid received the lowest satisfaction levels though were still 77% and 70%, respectively.



When non-participants were asked about their reasons for not moving forward with a HP project, 40% (6) responded that they couldn't afford it. Four (27%) said that they did the work themselves. Two (13%) didn't agree with contractor's recommendations.

Recommendations:

Recommendations were to maintain contractor support through CSG account representatives, provide an online application and consider paying incentives to contractors rather than customers. The support for the last one is weak, but it could streamline the process for some people.

Ken C. calculated that this track spends about $850 per customer on incentives. Does getting this check tell customers something? What would paying incentives to the contractors achieve? Fred said that contractors like to get their money faster. Sarah noted that if incentives were paid to the contractor, the money would come right off the final bill and customers might not see it.

Fred said that in other evaluations, some contractors say customers need to see the check. Debbie said the check makes more of an impression on the customer. People don't look at their bill.

Peter said to the customer, it matters what the first cost is. The solar program pays incentives to the contractor but requires contractors to list all prices on the bill, including the incentive. That

way people know they are getting the incentive and it is a meaningful line item. To do this, you need a system that captures whether customers actually get the incentive or not. With a lot of transactions, there would be a lot of policing. With high ticket items, you could consider it, but it depends on prices whether it makes sense.

Marshall said usually the Homes program pays one incentive per measure, but HP incentives are for the entire project. CEWO is providing buckets of incentive levels based on packaging multiple measures together into a single project. CEWO then provides financing on-bill. What is the impact of this on pricing? It's yet to be determined.

Debbie asked about the perception of price to customers. What was the price really? It's a perception thing.

Phil said that from the trade ally survey we have low satisfaction marks for check turnaround time. For high volume contractors, paying the contractors directly reduces the turnaround time. Debbie noted that customers complain to their contractor if they don't get their incentive on time. Alan said we want to show the customer that the incentive is coming from Energy Trust if it goes to the contractor.

Phil said sometimes turnaround is slow because we withhold the rebate check because the contractor didn't finish the project. This puts more pressure on the contractor to complete the project. Peter also noted that we've seen in the solar program that you get better paperwork from contractors because they don't get paid until the project is complete.

Marshall said the new online application for HP will transition administrative costs from the contractor and will reduce the time that it takes to give customers their check. It will also give visibility to the contractor on the status of the application and incentive check. These issues are going to be addressed.

Peter asked if the committee was interested in pursuing paying the contractor. Alan said if it makes the process work better, then yes. Debbie said it should be examined. Experience with solar trade allies may give us a basis for wanting to do it. But it also seems like there is value to Energy Trust in sending the check to the customer. She would like to know which one customers prefer. Fred said this might be too hypothetical a question to ask directly.

Phil added that there is a significant cost for each check that is sent out. We can lower that if we bundle them together and pay them to contractors. This might also speed up payment time - we could upload 40 in a week and then send an electronic transfer to the contractor instead of cutting 40 checks. Sarah noted that 80% of customers were satisfied with the current turnaround time for the incentive.

Tim said that often we are missing info from the contractor. For windows, we need every window sticker. Many contractors fill out the application and send it to the customer for signing. Then it gets lost or is missing info. The online application will help with this a lot.

The evaluation also recommended that Energy Trust provide trade ally training via webinar. Another recommendation was to consider altering the trade ally rating system, but we are not considering this. Tim and Marshall noted the trade ally rating system has already been changed to accommodate smaller volume contractors.

Other insights were that there needs to be better differentiation of the HP from the standard track, and we need to improve the HP assessment software. Both have been done. We should encourage low/no cost measures as part of the HP assessment. We could also promote financing for projects, including non-CEWO financing.

Energy Trust Take:

There is good satisfaction among trade allies and customers. The HP track is coming to terms with its identity - is there a place for non-CEWO financed projects or will CEWO absorb all these projects? The assessment software has improved, but modeling requirements should be minimized for contractors. Overall, HP is an expensive program, both in measures and administration.

Ken C. and Ken K. asked about the cost of the HP track. Fred said that we don't analyze by track, but we know that costs are higher. High quality assessments and certified contractors cost more. Management costs are higher too. We don't know exactly, though, because costs are shared across the Existing Homes program. The plan was to convert HP to a market-based service. Measured costs and cost-effectiveness will be looked at because the costs are high. We will also continue to evaluate CEWO to see how it works out.

Ken C. calculated that the HP track costs about 5.7 cents per kWh based on the table in the report, but is not sure if that is the right cost. Debbie said it seems like the HP track may be only marginally or maybe not cost-effective. Fred said Energy Trust is looking to make costs more competitive throughout the gas programs.

Debbie said we get other benefits from the track that contribute to their costs such as work force development, equity, etc. Those are things we value that have costs, but they count against energy savings. That doesn't seem right. Fred noted that is it hard to quantify the non-energy costs and benefits. Sarah added that the HP track has a much lower free rider rate than other measures and that helps the energy savings.

Marshall said that the program is being carried by the market now. We currently have a contract with the HP Contractors' Guild to help maintain those contacts and our relationship. Debbie said the Guild has a mix of contractors who've been in the field for a long time, and it has social values, and provides green jobs. It is good to support organizations like the Guild because you can improve performance.

Fred G: Every year we have looked at the gas weatherization program, it has been cost effective overall. It is some of the individual measures that are under question.

2. OPOWER Process Evaluation 6-Month Survey

Contractor: Opinion Dynamics

Phil presented on the six month follow-up survey results from the OPOWER Personal Energy Report process evaluation. The study period was January 2011 to October 2011. This was the second of three reports.

We just covered the 3-month follow-up survey at the last committee meeting, so this will look similar. There were 60,000 randomly selected gas and electric customers who were assigned to

receive a bimonthly personal energy report. An additional randomly selected 60,000 customers make up the control group. This experimental design is being used to test the effectiveness of the OPOWER reports.

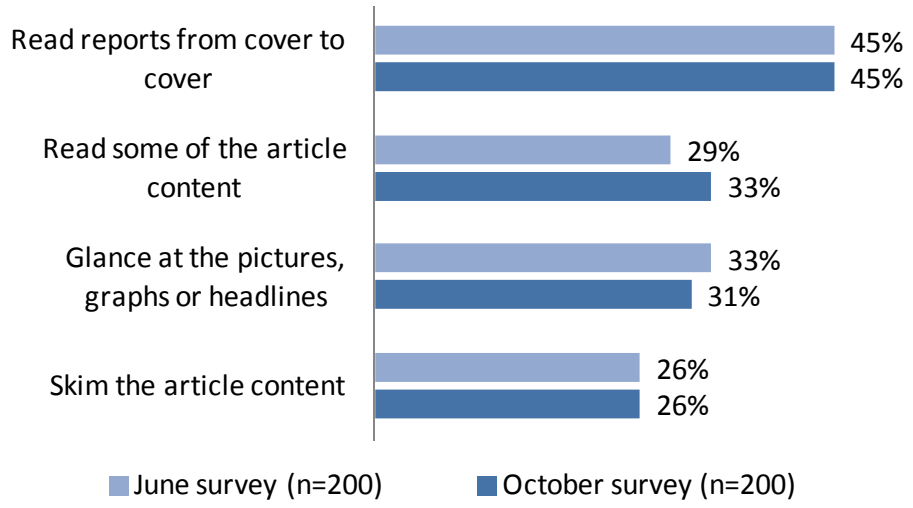
Personal energy reports are sent to customers to increase energy efficiency and other energy conservation measures at residences. Nationally, this has been implemented in many other places. Puget Sound Electric is evaluating the energy reports on an ongoing basis. They have realized modest gas and electric savings. Energy Trust is hoping to get about same amount of savings, in the 1-2% range. Energy Trust recently continued the contract with OPOWER to deliver the service for an additional year of testing while evaluation is underway.

A relatively low number of calls have been received from customers about the reports: 1,174 total. Only a very few, 0.6%, have opted out. Among the calls there were some complaints and others were about energy use, general feedback or to update their home profile. This shows a very low rate of complaints overall.

Customer Survey:

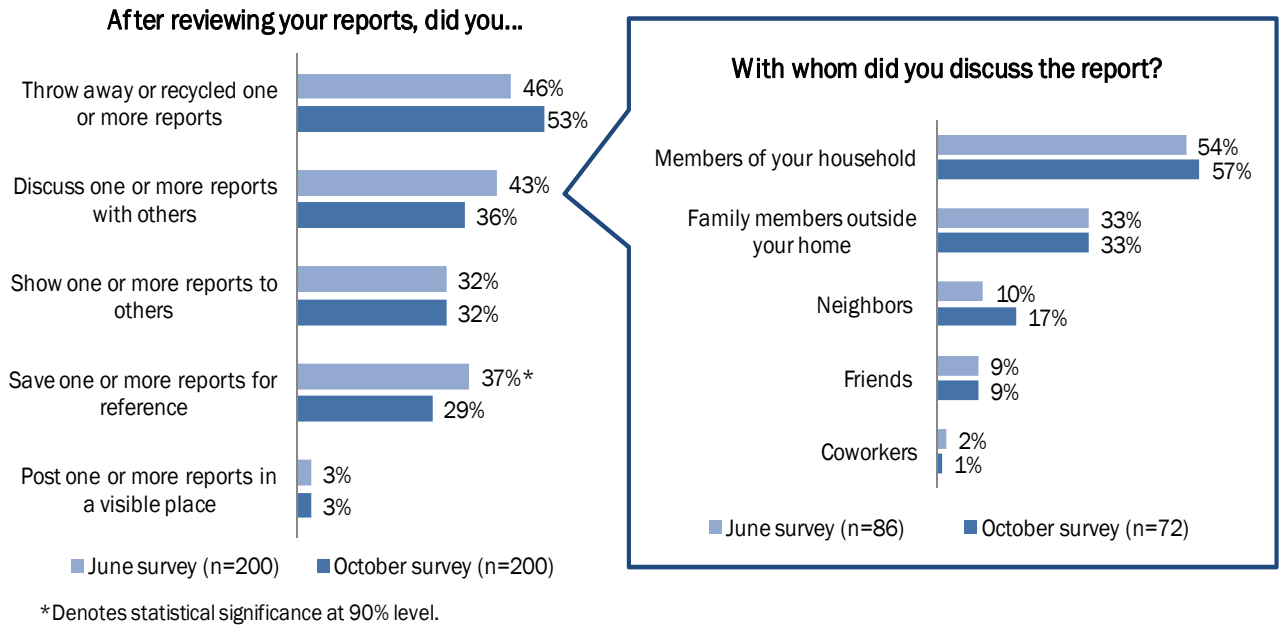
A random sample of 200 participants was drawn from the population. This was a separate sample from the June survey. A 1-year survey will be done soon with a sample of 250 participants and 250 non-participants from the control group. The two time periods of the survey, June and October, had very similar responses overall. Most people thought that collaboration between Energy Trust and utilities was valuable. A few did not. Opinion of utilities was either neutral or positive.

Customer impressions of the report were mostly neutral or favorable. Forty-five percent reported reading the report cover to cover. About 30% reported reading some of the article content.



Tom noted that there is a cultural bias to be diligent and these numbers seem pretty high.

After reviewing the report, many respondents reported saving one, showing or discussing it with others.

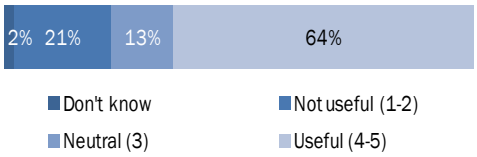


Ken K. asked what proportion of people actually reviewed the report of those receiving it. Phil said all of them – the question was only asked of people who reported receiving it. Ken C. asked how many people contacted for the survey reported not receiving the report and so did not continue on with survey at this point. Ken K. said this is an important piece of information. Phil said he would follow up and find out.

The percent reporting that the information was useful/valuable increased between surveys. The percent that reported the info was not accurate also increased. The percent that wanted more info after receiving the report decreased from June to October. Eighteen percent of customers reported that the information was interesting which has not changed.

In the neighbor comparison module, the definition of neighbor is contentious. The neighbor comparison module was recently renamed to “similar homes.” Alan noted that his wife did not like the “neighbor” language, because their neighbors are never home and don’t have similar energy usage patterns.

Two-thirds of respondents found the neighbor rank module to be useful. Many thought it was interesting to see the rank. Of those who felt it was not useful, it was primarily because they didn’t think the neighbor information was accurate or comparable. Another 16% said they were not interested in saving energy.

How useful to you is... (5-point scale)	Useful	Not Useful
The Neighbor Rank Module (n=188) Mean = 3.6  	(n=121) Interesting to see how we rank 23% Interesting to see that we rank well 18% Interesting to see that we rank poorly 14% Helps me know how to improve 18% Informative 14% Helps set realistic goals 11%	(n=64) Comparison not accurate 56% Not informative 18% Not interested in saving energy 16% Hard to understand 10% Personal choice to consume 4%

Three fourths of respondents said they had a better understanding of energy use after receiving the report. About 40% said the report gave them new ways to save energy. Ken C. asked if the report gave Alan new ways to save energy. Alan said he didn't know he was receiving the report at first, only his wife saw it.

The percent that looked for info on ways to save energy after receiving the report increased modestly to 16%. Very few people visited the website. Reasons for not visiting the website included no time, don't use internet, no interest in website, get info from other sources. There were not very many people who didn't realize there was a website.

Debbie noted that with a printed report, it is more difficult to reach the website than when you are already online. You have to type the address in. It is too many steps. Ken K. noted the surprisingly large number of people who are not using the internet. Fred said that PGE has a web-based tool attached to their smart meters and are defining success by getting just a few thousand people to use it out of a half million customers.

In both surveys, two-thirds reported that they took actions in the past year. Actions taken since getting the reports has increased since the first survey and the number of planned actions has stayed the same. So this is encouraging that people are starting to do things the longer they receive the reports. Prior to receiving the reports people reported taking mostly measure-based actions which are more expensive. After receiving the report, many respondents took low-cost/no-cost measures or made behavioral changes. Respondents who were planning to take future actions tended to be planning more measure-based changes.

Phil said we want to do some in-depth analysis to find out which measures are related to one another. For example, if windows were done in the past, what measure are they likely to do in the future? Fred said we know that just about everyone has done something in their home at this point. There is insulation in virtually every attic.

People who feel they have received new info seem to take and plan more actions. This difference was bigger in the June survey than current survey.

Recommendations:

Continue to develop methods to provide customers with new information. There may be a different way to present info as well. The information also needs to be useful to people.

"Neighbor" comparison was changed to "similar homes." Customers can also update their household info on the website. Continue to encourage customers to visit the website to improve accuracy of characteristics of their home to improve the "similar homes" comparisons. We should consider alternate ways of presenting energy efficiency info and recommendations. For future surveys, compare actions taken and those that people plan on taking. A billing analysis of all participants vs. non-participants will allow us to look at energy savings. OPOWER also does this, but we need to validate what they are doing.

Tom noted that savings are based on initial energy usage and may vary dramatically. A random sample for a survey may not contain a representative proportion of the small number of customers that use the most energy. He suggested stratifying the survey sample to make sure we are getting a representative sample based on energy use and potential savings. Phil noted that demographic info is collected in the survey including type of home, home ownership, heating fuel, income, etc.

Alan said he is interested in cost of the reports, complexity and persistence of savings. After someone gets two or three reports these are going to go in the trash. How are we going to tell this has value in terms of long-term continuation? Phil said this will be achieved through billing analysis. If this indicates good savings, then that's good. If the personal energy report drives people to participate in programs, it can be viewed as a marketing tool. It also can be provided to all customers whether or not they own their home or have a high income, unlike other Energy Trust programs.

Alan is curious about what happens the second year; after a time people become numb to things. Sarah noted that Puget Sound Electric (PSE) has seen savings go up over time. PSE is also dropping a portion of their participants and seeing if their savings are maintained even though they no longer receive the reports. Marshall said the upper quartile of users is where most of savings are found.

Phil said customers reported the amount of info they were receiving was perfect in the survey; bimonthly report brings big cost reductions compared to monthly reports.

Ken K. said it would not be a cost effective program to be sending reports out to apartment dwellers and other non-owners who can't make efficiency upgrades. Fred said we will be looking into whether the report is a referral tool. It is cost effective, but just barely.

3. Sustainable Energy Systems (SES) for Waste Water Treatment Plants Evaluation

Contractor: Navigant Consulting

Phil discussed the SES process evaluation, which was a program that Energy Trust helps support and sponsor but it is run by the Oregon Association of Clean Water Agencies (ACWA). It was a collaborative effort with DEQ, EPA, Energy Trust, BPA and the Zero Waste Alliance. We will follow up in September to see if they are still using the processes they learned in the training to determine persistence.

SES set an audacious goal for waste water utilities to become energy independent through energy efficiency and renewable energy while maintaining water quality. The series of seven

workshops described here occurred from April 2010 to May 2011. Thirteen waste water treatment plant operators participated. Management approval was required for participation. Final reports were submitted by all participating agencies.

At this point, there are no energy savings that Energy Trust can claim directly from this program, since there was no baseline and no tracking done. However, a number of capital projects did occur at a number of plants through the Production Efficiency program, which provide savings. Some facilities had worked with Energy Trust before but more of them have now.

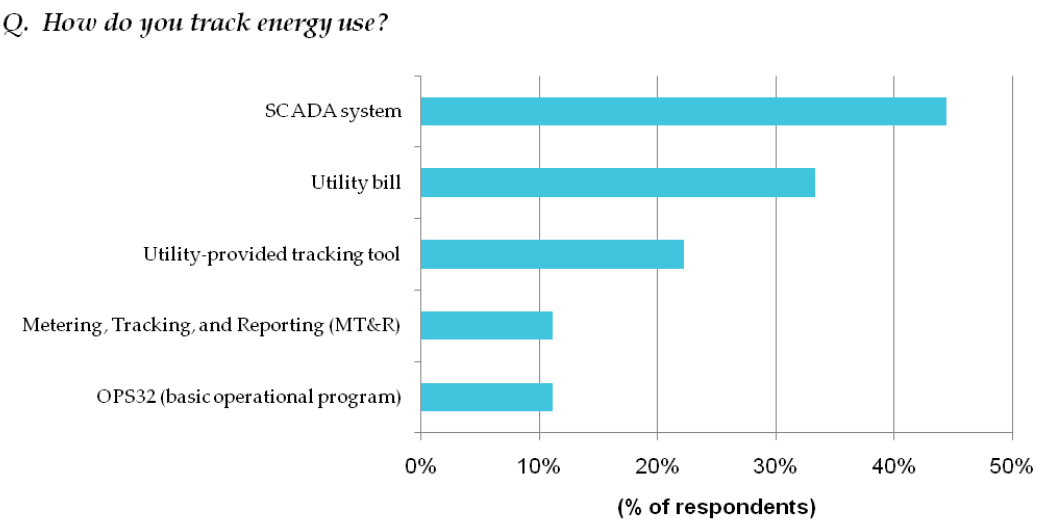
Most facilities were motivated by energy savings and cost savings. They also wanted to learn from and share with other facilities. There were many goals: to compare facilities, learn about conservation, create energy management plans, improve energy monitoring systems, install specific efficiency equipment, install renewables, operations and maintenance type activities to improve, etc. Individual numeric goals included: 5-10% energy savings, 20% savings, net zero in 5 years.

Targets:

•	**1**	•	**Complete goals by 2011/2012**
•	2	•	100% energy independent by 2015/2016
		•	10% energy reduction by 2012/2013 compared to 2009 baseline, or 12 month running average consumption of 450,000 kWh/month or less
•	**3**	•	**Achieve 10% energy savings across core areas within five years**
•	4	•	Increase energy efficiency at plant by 5% within the next two years using 2010 baseline
•	**5**	•	**N/A**
•	6	•	Reduce 5% of energy used per gallon of water treated by 2012
		•	Utilize 10% of total power from a renewable resource by 2015
•	**7**	•	**Reduce overall energy use by 6.5% over the next year**
•	8	•	Initial goal: reduce plant's energy consumption 10% by July 2011, and 20% by 2016.
		•	Final goal: reduce electrical consumption by 1MW over 2011 compared to an approved MT&R baseline

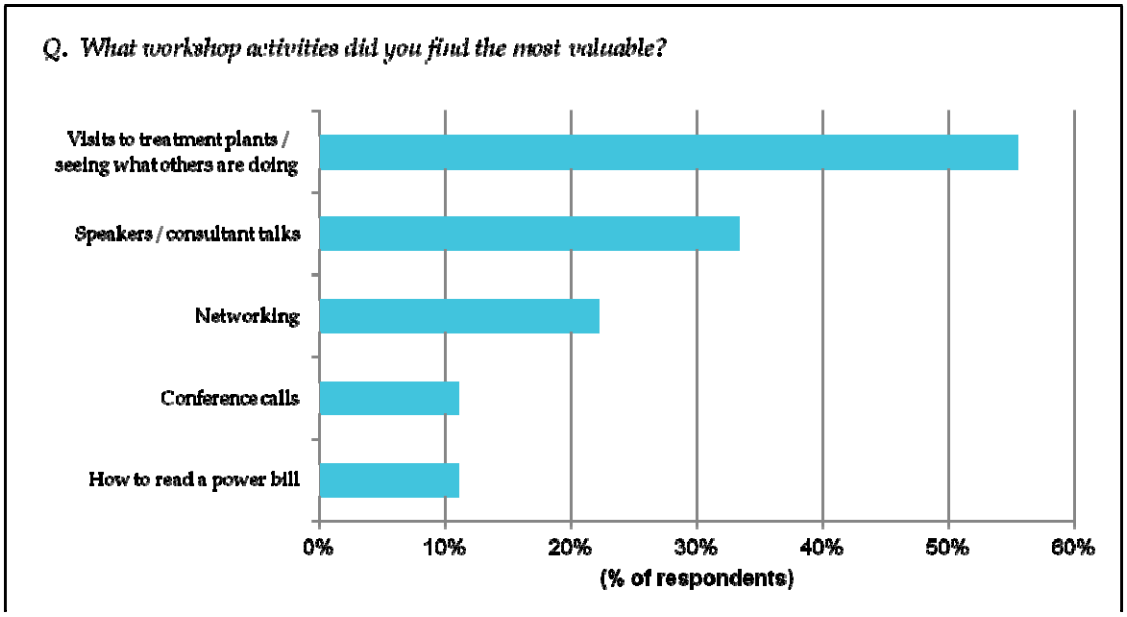
Reported outcomes included: 7 of 8 facilities completed capital projects and 2 completed renewable projects. Blower projects for dissolved oxygen were done. Variable frequency drive (VFD) installation and optimization, air pressure sequencing and blower turndowns were all among the projects reported after the training. Four facilities reported savings in different terms, including: 10%, 100,000 kWh, 1 MW, and $100,000 gas savings.

Many projects are in planning phases. Several participants began tracking energy, formed energy teams, or created energy plans. Participants felt that these processes would persist over time. Energy consumption tracking was done using several different systems: SCADA, PGE tracking tool, utility bills, monitoring/tracking/reporting tools. All waste water treatment energy use is very seasonal, based on throughput in million gallons per day.



There were some challenges in making changes, including internal program management issues within facilities. There were also capital budget constraints.

Valued training components were site visits and seeing what others were doing. Compliance with DEQ regulations is very important to facilities, above all else. Networking and seeing that others had installed efficient technologies and were still meeting the regulations was important. There were talented speakers and consultants involved in the trainings. Conference calls were useful. Some benefited from training on how to read a power bill, especially the demand charge. The workshops had a good balance of talks, experts and group work. There was a high level of satisfaction with the overall training.



Suggestions for content change included more time spent on EE and more time on renewables. Shorter duration of a training program with less travel would be okay, though some participants cautioned not to reduce networking or site visits as these were the most valuable elements.

Before starting the training program, facility managers should have a good understanding of energy consumption. They need to meter and track energy ahead of time so they know what their usage looks like.

Conclusions:

The program resulted in energy cost savings. There were a large number of capital and O&M projects, including both efficiency and generation. Energy teams and energy plans increased since the training. Tours, talks and networking were the most valuable elements. Challenges revolved around managing and administering the various projects. Operators were confident that savings gains will persist. There were high levels of satisfaction with the program.

Recommendations:

Continue to sponsor the training. The program could have a shorter duration and more of a focus on efficiency with a separate renewable training track for those who were interested. Larger facilities are different than smaller ones and have different needs and smaller capital budgets. Ask past participants to speak at trainings. Host an annual follow up meetings to discuss progress and new initiatives. Continue networking. Ask participants to meter and track energy ahead of time.

Energy Trust Take:

Recommendations were taken by ACWA. They are rolling out additional year of SES training. Energy Trust projects with participants have increased. We will consider doing a simple impact evaluation to estimate and claim some of the savings.

Alan asked why we did this evaluation if we did not get credit for the savings. Phil said that since we sponsored it, we wanted to learn from it and if we hadn't, nobody would have evaluated this training program. Fred added that for years there have been issues trying to approach this industry to get them to do projects and finally they organized this themselves and it is working. Peter said that we have engaged this industry separately on renewables and efficiency but this project approached them together.

Fred said that these facilities have big loads; if we can get more projects then this is big. Coming in this way may really work. Phil added that we may get credit for some of the savings if we do a simple impact evaluation, which wouldn't be too complicated.

Evaluation Team update:

Our department just increased by 50%, by adding Dan. Phil briefly reviewed all the projects in progress.

Debbie asked about the agenda and timing for the next meeting. Phil suggested a late April/early May meeting and said we should have the NW Natural Washington Evaluation, the OPOWER one year survey, Path to net zero pilot update, and Fast Feedback 2011 summary.

Debbie asked that we stagger the delivery of evaluation reports enough so that we don't have too many to review at a time.

The next Evaluation Committee meeting date and time are still to be determined.