CONSERVATION ADVISORY COUNCIL
Notes from meeting on September 11, 2013

Attending from the Council:
Brent Barclay, Bonneville Power Administration
Warren Cook, Oregon Department of Energy
Garrett Harris, Portland General Electric
Karen Horkitz, Northwest Energy Efficiency Alliance
Wendy Gerlitz, Northwest Energy Coalition
Charlie Grist, NW Power and Conservation Council
Scott Inman, Oregon Remodelers Association
Andria Jacob, City of Portland
Juliet Johnson, Oregon Public Utility Commission
Don Jones, Jr., Pacific Power
Don MacOdrum, Home Performance Guild Council

Attending from Energy Trust:
Susan Badger-Jones
Matt Braman
Amber Cole
Tara Crookshank
Kim Crossman
Brian DiGiorgio
Diane Ferington
Jackie Goss
Andrew Hudson
Susan Jamison
Susan Jowaiszas
Oliver Kesting
Elaine Prause
Jessica Rose
Scott Swearingen
Julianne Thacher
Peter West
Mark Wyman

Others attending:
Mark Kendall, Energy Trust board of directors
Christina Cabrales, Conservation Services Group
Scott Davidson, Clean Energy Works Oregon
Tim Davis, Conservation Services Group
Carolyn Farrar, NW Natural
Kari Greer, Pacific Power
Theresa Gibney, Citizens Utility League
Joanna King, Portland Hospital Service Corporation
Pat Lydon, Legacy Health Systems
Marshall Runkell, Clean Energy Works Oregon
Lisa Sanders, Northwest Energy Efficiency Alliance
Jim Volkman, Strategic Energy Group
Becky Walker, PECI

1. Welcome and introductions

Kim Crossman convened the meeting at 1:35 p.m. and reviewed the agenda. The agenda, notes and presentation materials are available on Energy Trust's website at www.energytrust.org/About/public-meetings/CACMeetings.aspx.

Kim: Welcome. Garrett Harris is new on the Conservation Advisory Council from Portland General Electric, replacing Anne Snyder-Grassman. Garrett's background includes a variety of energy efficiency roles at PGE. He was briefly a Program Delivery Contractor for the Energy Trust Production Efficiency program. At PGE, Garrett is responsible for promoting energy efficiency and non-energy related services. Garrett is a graduate of Linfield College and the Lane Community College Northwest Energy Education Institute.

2. Residential sector 2013 fall bonus

Diane Ferington: Marshall Johnson manages this program. He's at another meeting and I will present on his behalf.

Diane: Existing Homes is pleased to bring a fall bonus to the marketplace to capture potential savings and add an extra tool for contractors promoting insulation. The bonus is $100 for Existing Homes wall, floor and attic insulation measures. Projects must be completed and applications submitted by December 31, 2013. The bonus will use dollars in the Existing Homes budget that have not been spent because some activity has been lower than expected in 2013. Extra budget is not needed.

Diane: The program will also offer a fireplace bonus of $100 split between market actors, with a $25 sales spiff and $75 bonus to the consumer. There is also a water heater bonus that is a $25 sales spiff only for gas 0.70 EF water heaters.

Don Jones, Jr.: The bonuses are for electrically heated homes?
Diane: Yes, the insulation bonuses are for all fuel sources. The water heater spiff is specifically for gas water heaters.

Diane: The fall bonus is being announced at trade ally roundtables this week. Collateral is expected on October first and will have a code for trade ally contractors to use. The bonus is intended to be a trade ally tool, and we are not doing broad consumer marketing. The bonus will be driven by trade allies to encourage customer projects to complete in this calendar year.

Juliet Johnson: So the standard incentive is standard, and the bonus is added? (Referencing the table in the PowerPoint)
Diane: Yes.
Peter West: There is a minimum amount of insulation required to qualify for a bonus.

Juliet: How do the bonuses impact cost-effectiveness?
Diane: The measures are all operating under cost-effectiveness standards, although the gas measures are operating under cost-effectiveness exceptions. Insulation measures are the most cost-effective gas measures.
Juliet: They'll still pass the utility test?
Peter: Yes, these are well within the utility test. The bonuses don't change the Total Resource Cost test.

Kim: Jim Abrahamson emailed me a question in advance. He asked about the budgetary impact, and Diane answered the question by saying the bonuses will use the current budget.

Charlie Grist: How often do you use these end-of-year bonuses?
Kim: Energy Trust has used Energy Saver Kits as levers to achieve quick-turn savings for many years. But we've been under pressure to have fewer kits and more long-term measures. So these bonuses are a shift away from the kits.
Peter: It changes from year to year. There are always things we can lever up and down. Last year we did an extra fridge campaign in Portland General Electric territory and ratcheted back on fridge recycling for Pacific Power territory. In Quarter 4, we are always looking to do something to book savings if needed, whether it's ratcheting savings up or down. Traditionally we've done a lot more Energy Saver Kits, and this year we're trying to do fewer kits and promote more long-life measures. We could do kits again this year but that's not part of our long-term strategy. We are focusing on longer-life shell measures. The dollar investment up front is higher and savings continue over time.

Kim: We have fewer levers to pull for Production Efficiency. There's not much we can do for large customers. Lighting can be quick. Energy Trust's nimbleness as an organization is in the residential sector.

Mark Kendall: How big is the toggle as a percent of residential savings?
Peter: Roughly in the neighborhood of 10-12 percent of residential savings, but I'll have to get back to you with a better number.

Charlie: With the same spiff every year, people will wait for the sale. But it sounds like you use different mechanisms at different times, so you avoid that problem.
Kim: Yes, we pay close attention to not repeating bonuses, keeping these fresh. If our incentives aren't at the right level, we should be changing our base incentive. For example, you'll see next month that our custom lighting incentive is proposed to be raised. We're seeing a slowing in savings at the base level. It's time to stop running lighting bonuses and increase the incentive.

Scott: Insulation is seasonal, so it makes sense to put it on sale in the high season.
Peter: Those first few fall heating bills sell insulation and we can't change that.

Kim: Great point, timing is important. The market is doing various things: we don't run a bonus for farmers during harvest season. We can also use bonuses as a tool to tune our outcomes. To address the "hockey stick" savings effect and try to get more savings in the beginning of the year, we ran a 90 by 90 bonus in industrial for the first six months of the year. It didn't solve the hockey stick, but it did get us other savings. The last thing I'll say about bonuses is that they can be highly disruptive to the program.

3. Customer panel: Strategic Energy Management
Kim: Welcome Pat and Joanna. Joanna King is the executive assistant and energy champion at Portland Hospital Service Corporation. Deborah Lark, the executive director, spoke at our 10-anniversary celebration last year. Joanna will talk about the work her company has been doing in CORE, which is Energy Trust's small industrial Strategic Energy Management, SEM, pilot. Pat Wyden is sustainability and strategic resource program manager at Legacy Health System and has been participating in the commercial SEM pilot.

> We talk about SEM as behavioral savings, and that can be confusing. You will hear about some very technical, very concrete ways these companies are saving energy. So, by behavior, we don't mean that the savings are "soft" or less quantifiable. We mean that savings are achieved by interacting with people who interact with other people at their facilities. SEM is the most human way to save energy, and it is powerful. I'm excited to expose you to what SEM really is by hearing from these speakers.

Joanna: SEM helped us be more aware of our energy use and how it impacts our financials. Portland Hospital Service Corporation is a cooperative healthcare laundry owned by Legacy, Kaiser and Providence. We've been around for 40 years, and we provide all textiles and laundry for 15 local hospitals. We process 24 million pounds of linens every year, so water is big for us. This project focuses on electric and gas use. Portland Hospital Service has 145 employees. The organization is unique in that that we provide 100 percent of health benefits for employees and their family members. We operate six days per week for 10 hours per day. We made the choice to have longer shifts to save energy. There are 400 other similar facilities in the U.S.

> Before participating in CORE, we completed a lighting project in 2009. That's when our relationship started with Energy Trust. Then we got new compressors in 2009. We

upgraded boiler controls and saved 10 percent on natural gas use. This work allows us to look at our baseline differently.

Some tangible accomplishments since participating in CORE include moving hospitals to 100 percent polyester fabrics for sheets and apparel. This reduces natural gas and water use because polyester fabrics take less dry time. They also last longer.

Portland Hospital Service maintains an extensive preventative maintenance program. A night crew does work on machines every night.

We review utility information along with financial statements every month. Our work with CORE helps us identify numbers on bills and ask why.

We have used data tools provided by Energy Trust. We pulled a lot of historical data to identify usage trends. We have achieved greater savings on the natural gas side than on the electricity side. (See presentation)

Energy efficiency relates to the way linens are used in our facility and hospitals. We expected a 3 percent increase in linen volume last year, but we actually experienced a 3 percent volume decrease due to the way linens are used in facilities. We have two new customers this year: Providence Willamette Falls and Kaiser West. When linens don't come back to us, where do they go? Are we using linens better or not?

Energy Trust helped us create a project list that we review and update quarterly.

We learned to use data loggers. Now, when we look at capital decisions, we present real potential energy savings based on data. This is more impactful for management. We put potential energy savings into purchase agreement contracts. This challenges our providers to follow through with energy promises, and we've been encouraged to do this by Energy Trust.

Kim: Do you use the tools we provided or did you get more?
Joanna: No, we've used what you've given us. We have plans to purchase bigger data loggers because our current loggers have limited memory. This helps us be aware of our fixed costs. This helps our employees see how they can make an impact on the organization's financials through energy use. We have been posting our utility bills. Employees are asking questions and getting engaged.

Joanna continued: We created a monthly production report that looks at energy costs per pound of laundry. We also created a timeline of events parallel to energy data. This is the best tool we got from Energy Trust. It shows how our actions impact energy use. If there are spikes in our energy use, it forces us to go back and ask why.

For example, from looking at the timeline to diagnose a spike in energy use, we realized that in the past year, we added a piece of equipment we hadn't taken into consideration: a vacuum system in our soil sort that sucks out plastic bags. The vacuum explained the spike and now we monitor it on an ongoing basis.

What's next? This is a time of growth and strategic planning for us. We are training our customers to encourage reuse of products, to reuse a bedsheet instead of throwing it away. We are increasing our quality standards.

A future project we're planning is from an employee suggestion about parking lot lighting. Pursuing this project has been great for employee morale. We are also increasing water recycling. We have a local detergent company that helps us use water more efficiently. By manipulating temperature and chemicals, you can lower water use. We turn off idle equipment and computers during breaks and lunch. We also started a leak tag program. There are big orange tags that people put in places where they hear or see a leak. Leak tags are examined nightly. We're looking holistically at all aspects of our business. For example, we have a "going green initiative" to encourage paperless paychecks and W2 forms.

Our biggest challenge has been to get commitment from our maintenance staff. Moving forward, we are trying to secure leadership from our maintenance team, people who assess and maintain machines. They know more about energy use than we can learn from financial statements. We also want a leader from every department within the organization on the energy team.

What we've learned is to actively engage employees. In the beginning, we wanted to present something polished to our colleagues. We learned that letting people in early was best, even when it was messy. Input from everyone in the organization at the beginning of the process is helpful.

We also learned to schedule energy team meetings regularly and not let them slide. We learned that awareness is a powerful tool. Energy use is sent to management and posted in the lunchroom. To encourage employee participation, we asked employees to bring three months of home electric bills to work. We looked at electric use and measured it against their next three months of electric use. The company paid the past three months of energy bills for the employee who showed the biggest reduction in energy use.

Pat: Did you find any good benchmarking data for laundry services?
Joanna: We use an international healthcare laundry association group to create a pilot of similar laundries to compare energy use. Comparison has been challenging, but we are moving forward and have generated some interest in the industry.
Kim: Industrial SEM rarely has good benchmarking, but commercial SEM often does.

Pat: How many different utility bills do you use to track?
Joanna: We just read from meters, including water use.

Don J.: On your fabric change out, did you do that when the fabric reached the end of its useful life?
Joanne: We didn't replace it early. We went to vendors and said, prove to us the new fabric will live longer. We included our chemist. We made a decision based on industry data about wash cycles. We've had most success with patient gowns and sheets.

Don: Were your data loggers from Energy Trust?
Joanna: Yes, but we want to purchase bigger data loggers. Energy Trust also gave us sonar air leak detectors. We played with those for a week and tagged all leaks. We are hoping to invest in one.
Kim: We provide a starter data logger kit as part of CORE and train the energy teams on how to use it.

Andria: Where's your facility?

Joanna: It's at 185th and Sandy, in Portland but bordering Gresham.

Andria: The city has a program to support green teams, Sustainability at Work. It might be a resource for you.
Joanna: Thanks. We serve three different health systems and aligning needs and standards is difficult.

Pat: Providence and Kaiser are also strong sustainability supporters. We should all get together and talk.

Charlie: How long have you been tracking kilowatts per pound?
Joanna: For a very long time. But now we're looking at daily trends and mechanical failure. Our processes are pretty tight and we're looking at finer detail.

Charlie: How do you get help from Energy Trust on metrics? It seems like there's a wealth of technical information in those models that would be really useful to the energy community.
Kim: Building complex models and training people to use them is a significant part of all of our SEM initiatives. Our contractor for CORE is Triple Point. We work with a few different contractors on SEM. There is a lot of business sensitive information in these models because they're tied to production.

Charlie: On the linen utilization, are you saying you send 1,000 pounds to Legacy and 800 pounds come back?
Joanna: That's what we're saying. Hospitals are throwing linen in the garbage instead of the soiled linens basket.

Pat: Is there a cost impact?
Joanna: We do quarterly true ups of linen utilization. Hospitals get debits and credits based on how much linen they return.

Pat: Can you take linens with biohazard materials?
Joanna: No.

Kim: The SEM toolset applies beyond energy to water, fuel, etc. By and large, our customers take it and apply it broadly. We focus on energy but it's a very flexible toolset.

Joanna: We've learned to make these numbers transparent and explain them. It holds us accountable to our employees and customers.

Brent: How about the sustainability of this energy savings effort? It's working great now but looking forward, what will it take to make this part of the company culture?
Joanna: It takes active participation from all departments. We need to make this a common conversation and a company value. We have not yet secured leadership from all departments, and we could be doing more to engage the maintenance team. This year has been an opportunity to prove ourselves as an energy team. We also present at board meetings. We have articles in staff newsletters. I take pride in our energy team. I've sold the idea to our Human Resources manager because sustainable practices can be consistent with safety practices. We need buy-in from everyone, especially maintenance and facilities. We need their help with our preventative maintenance program.

Pat: It's crucial to automate collection mechanisms for information and make them visible. The process of keeping data current is very labor intensive. It's worth investing in automation.

Joanna: We have made data collection part of staff assignments.

Kim: Now I'll turn the floor over to Pat Lydon from Legacy Health Systems.

Pat: My position came out of the Northwest Energy Efficiency Alliance, NEEA, Better Bricks program back in 2004. Prior to that, my career was in purchasing management. I joined Legacy in 2002 as a purchasing manager and was assigned to make choices about energy commodities. Finance did not understand how we were buying energy.

> In 2004, Legacy was asked to participate in the NEEA Better Bricks program. It got us thinking about how we could use less of the commodity and made us focus on energy efficiency. In 2007, we got a strategic resource management plan approved. This was a shift from supply side management to conservation management. It led to a full-time energy and resource management position for our entire system, which is five campuses and 4.3 million square feet total.
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> Hospitals are interesting examples of commercial buildings because we represent multiple customer types. We have food services and lodging, so there are similarities to the hospitality industry. Hospitals are also highly regulated.
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> In 2012 and 2013, Energy Trust approached us about joining the Commercial Energy Improvement program. It seemed like what we were already doing, but then I realized this could be a next step to evolve our work even further. That's what it turned out to do for us.
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> The Commercial Energy Improvement program helped us improve our processes. It started with an energy management assessment interview, which is an in-depth process and included interviewing the vice president of operations. This helped us understand the current state of our energy management program. For example, what don't we have? We don't have an energy management policy in place.
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> The Commercial Energy Improvement program prompted us to put an energy management team in place with system-wide representation. We didn't have consistent participation. The assessment really prompted us to get internal support. It was very beneficial. After putting a team together, we conducted site assessments at the five hospital sites, plus patient billing services and lab and research institute buildings. We adopted Energy Trust's Commercial Energy Improvement monitoring, tracking and reporting tools.
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> Out of our five hospitals, two of them have Energy Expert. It's an energy information system that reads meters, looks at temperatures and evaluates and compares energy use from day to day. Energy Expert tells you if you used more or less energy than you should have. Even though it's not expensive, we only got approval to use it at two sites. The only reason we got approval for those two sites is because installation was funded by NEEA Better Bricks. It took that incentive to get Energy Expert in and it's still used. Some of the other sites have good sub-metering that gives huge amounts of data, but it doesn't display the data in a useful way for energy management. Sub-metering is intended as a power quality management tool.
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> For other sites, Energy Trust provided measure tracking and reporting spreadsheets. These are a very useful tool to track savings and see progress, but it's a very manual process. We probably have 75 different electric bills, 35-40 natural gas bills and who

knows how many water accounts. There's a lot of information I can get to but there's very little automation. I also use ENERGY STAR® Portfolio Manager and use that data to update spreadsheets

Oliver Kesting: I want to introduce Jim Volkman with Strategic Energy Group. Energy Trust hired Jim, and his engineering services are a big part of what we bring to customers though SEM.

Pat: Here are some examples of opportunities discovered and measures implemented. Scheduling was an area for improvement. Hospitals operate 24/7, but there are opportunities for scheduling adjustments in medical office buildings. There are opportunities for controls calibration, including making sure controls are tuned correctly, reporting accurately and set properly. We optimized variable frequency drive settings and performance.

We are investigating possibilities to reduce air change rates. These are regulated by the Joint Commission of Hospital Accreditation, but the right rates are in dispute. There are equipment upgrade possibilities, including lots of lighting opportunities. We still have a lot of T12s in our hospitals. There are opportunities to upgrade occupancy controls for HVAC or lighting in certain spaces. We can address elevator pressurization fan isolation dampers and other damper repairs to fix dampers that are open that shouldn't be open. When you have an outside expert looking at these things, you discover all kinds of things; like that sensors are not working properly.

Kim: On annual projected energy savings, the SEM section is what you can directly attribute to actions taken? And gross savings includes capital? (Referencing table in presentation)
Pat: Gross savings includes savings where we couldn't find evidence to prove they are a result of SEM.

Kim: We take a rigorous approach to verifying savings. We track specific actions and corresponding energy savings.

Mark: What are gross versus SEM savings? Is that relationship interactive? (Referencing table in presentation)
Jim: Yes.

Pat: Our next steps are to finalize, approve and implement policy. Our last chief financial officer was amenable to setting up a fund dedicated for additional energy-efficiency investment, and the fund would be equal to money saved from energy-efficiency savings. This is challenging because of generally accepted accounting principles and Medicare accounting requirements. We now have new leadership.

We have integrated ongoing monitoring into building management routines, which is reviewed in monthly conference calls with site facility teams. We have one call for each of our five sites, so five calls total. We plan to implement a regular reporting cycle for leadership and a regular update schedule for our resource management plan.

We have also had challenges, such as the persistence of savings question: how can we ensure that monitoring remains a priority? Even though we identified scheduling as an opportunity and implemented it, it just takes a complaint from one high-profile building occupant to change things. Persistence can be challenging. If we have the right measurement systems, we can at least make a better argument for cost impacts.

> We have to maintain discipline to regularly conduct operations assessments. We need to figure out how to continue to benefit from an outside, third-party view of our operations; that's Jim. I know our relationship with Jim won't last forever. So when it's gone, we need to figure out how to replace it. We may need to budget for additional periodic outside review to provide an unbiased opinion.
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> It's challenging to keep the team together and focused on resource conservation. Competing needs bump resource conservation to the back burner. In addition, lower natural gas prices may tempt us to reduce our focus on opportunities related to this fuel. Prices vary from month to month and year to year, so we need to focus on the right units of energy use. We need to continue to educate finance on what units to look at.

Mark: Is there an industry knowledge base? Is it collaborative? Competitive? Do you collaborate with the energy professional from Providence, Richard Beam?
Pat: We don't collaborate often. Richard is responsible for the design side and management side.

Peter: When you pitch capital projects to the chief financial officer, is there a minimum hurdle break?
Pat: No. I've asked that question of our finance folks. Their answer is always: if it makes sense, we'll do it. Our last chief financial officer said that if a project has less than a year of simple payback, we'll do it. Now he's gone. We talked with the vice president of finance about the policy. She made the point that she will fast track quick payback projects that are less than one or two years through our approval process. This was in lieu of the fund idea. But that has to be tested. We do have a good financial analysis tool to calculate rate of return that is blessed by our finance department.

Scott: Have you developed any internal team competitions?
Pat: No. It's a great idea.

Charlie: I appreciate your historical context about the NEEA connection. It's a good story. How long are you going to have a job doing this? Is there a lot left to do?
Pat: You can say I should be working myself out of a job and that my role should transition to facilities staff. But my role includes all of sustainability program management, so this is just one small piece of my job. We had cuts a few years ago, including a sustainability coordinator, and my position was cut back to part time. My position was increased last year to full time by the vice president of operations. We have not been able to make the case to hire an additional coordinator.

Charlie: This question is for Joanna, too. How do you decide what is an energy management initiative and what is a capital project? In some cases, it seems like energy management work is finding capital projects to do. There's a fuzzy line.
Pat: Right now, we're still reactive, seeing problems and responding to them. In order to be more thoughtful about that, we need to be proactive and set targets and goals. We're just not that proactive yet.
Joanna: I agree with Pat. We're looking at what problems we're having and how we can best solve them. We're not looking at long-term sustainability yet. That takes time and long-term commitment.
Pat: A shift from treatment to prevention is a theme in healthcare. When someone becomes willing to pay for prevention, we'll have a much greater ability to influence sustainability choices. Nobody will pay for prevention activities now. There's a parallel between healthcare and sustainability.

Kim: From an Energy Trust perspective, SEM is defined as a holistic approach. We are claiming direct savings from operations and maintenance and other measures that are not capital measures. But we always say there are two sources of SEM savings, there are direct savings and capital savings from an increase in future capital projects. Nobody does SEM who isn't already doing capital projects. That's more of a macro view. In the moment, we can only measure operations and maintenance savings. The idea is that it's all part of SEM.
Charlie: Glad to hear you're looking at that. It's hard to test incremental benefit of finding more projects because you're looking for them.

Kim: Industrial SEM launched in 2009. Preliminary results are showing that we've doubled capital project volume, that's number of projects, not savings, for SEM customers.

4. Commercial Pay for Performance pilot
Oliver: We recruited Brian DiGiorgio to implement financing related offers. One of the things he's working on is Pay for Performance, as well as developing commercial lending allies and building the business case for energy efficiency. Brian came from Pacific Gas and Electric, where he launched an off-bill financing pilot and developed an on-bill financing pilot program for commercial and government customers. Brian will give you an overview of Pay for Performance, but first I want to ask Juliet to give background on how we got here.

Juliet: In 2011, the Oregon legislature passed a bill requiring the Oregon Public Utility Commission, OPUC, to do a report on energy-efficiency power purchase agreements. We worked on it quite a bit last year and brought in experts to talk about the potential for paying energy costs over time.

> In the late 1990s and early 2000s, a lot of Pay for Performance was tried. There were disagreements about baselines. These programs were difficult to manage and most of them eventually converted into the programs we see today.
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> With new monitoring tools and in the large commercial sector, commissioners are interested in trying an energy-efficiency power purchase agreements pilot. It may help with persistence of savings. Seattle City Light is doing a Pay for Performance pilot.

Brian: What is a Pay for Performance initiative? Let's define the term. Energy Trust pays for savings over time, which may include evaluation, measurement and verification over multiple years. We want to shift the risk to the building owners and operators rather than Energy Trust. If savings persist, Energy Trust pays. If savings don't persist, Energy Trust doesn't pay.

> There's a long history of varying success with Pay for Performance. Right now there are five programs in the country. Most of them are on the East Coast. There's also the Savings by Design program in California, which is not analogous because it's for new construction.
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> The East Coast programs are run by TRC, including the New York State Energy Research and Development Authority multifamily program and New Jersey and New Hampshire Pay for Performance programs. These programs only pay part of the incentives on a performance basis. There are three steps: they pay money up front to develop a building energy plan, pay on installation and then pay again after 12 months. These programs aggregate as many measures as possible. They try to verify the energy savings. Projects must save 10-15 percent of energy, otherwise they are not eligible and can participate in other existing programs. Although service providers are trained to do

whole-building modeling, it is truly more evaluation, measurement and verification modeling of installed measures.

The Rocky Mountain Workshop resulted in the decision to launch the Seattle City Light pilot. Seattle City Light revised and rereleased a more flexible request for proposals in January 2013. They let the service provider determine what they need to make based on proposed measures. This will be complicated to implement. The customer gets the option to integrate operations and maintenance and behavior modification with capital measures, or can separate them out. This adds complexity. They do measure against a fixed baseline. There are a lot of new elements here. Contracts are being negotiated through September. Risk is shifting to the customer. They have three different service providers for three different buildings.

Regarding incentive payment calculations, Seattle City Light feels that all measures will be cost-effective. Service providers must agree on a baseline. Once installation is complete, the clock starts ticking for the first 12 month measurement period. If use drops 35 percent, the customer will get incentives based on that 35 percent. Incentives can go up or down each year based on energy use. All energy reductions will be reflected in incentive payments. The hard part is agreeing on incentive payment rates on the front end.

Seattle City Light's supporting rationale is that by looking at whole building, they are capturing and paying for all savings. Also, contractors have the ability to tweak and optimize the building to get interaction between systems. One of the service providers for Seattle has a strong behavioral component.

Seattle City Light's pilot presents a number of challenges that Energy Trust's pilot will also face. The program administrator and the service provider must agree on the completion date of the projects, which has been surprisingly difficult to determine. At what point do we start measuring the first 12 months of usage? We can't let the contractor spend years optimizing the building. We are pushing for a six to nine month window from agreement to project completion. Also, in order to scale this to a full-size program, we will need to put a number on the incentive level so we're not negotiating individually with every customer.

Oliver: It's difficult to define a mix of capital and operations and maintenance measures in determining incentive levels. How do you predetermine that you're getting enough savings from capital projects?
Brent: How do you determine the average measure life of these savings? Is that the crux?
Oliver: Yes.

Don J.: Incentives are custom and ongoing. Are they tied to measure length? For how long do incentives get paid?
Brian: We're talking about a three-year pilot. So if the measure life is 10 years, we need to calculate that into the three-year incentive stream.
Kim: For example, we currently pay $0.25 per kilowatt hour for a custom incentive in one year, based on a 15-year measure life. You'd take that and calculate a three-year incentive stream.
Juliet: So you really can't calculate payback based on total energy savings. You need to base it on specific measure savings. It's very complicated.

Brian: Energy Trust's Pay for Performance pilot will have two to three service providers and two to three office buildings. Buildings must be fairly large, from 50,000-500,000 square feet. Like

Seattle City Light, the service provider will determine project scope and incentive savings, and calculate the baseline for the building. Energy Trust's vendor will review protocols and savings estimates. The timeline for Pay for Performance is to send out a request for proposals in Quarter 4 2013 or Quarter 1 2014. Construction will begin in Quarter 1 or Quarter 2 2014.

Oliver: Brian talked a lot about challenges. I want to talk about the upside to the Pay for Performance pilot. You saw the SEM presentations earlier, and what we're talking about here is very similar to SEM. But not every customer is ready to implement Strategic Energy Management. A customer has to be fairly sophisticated to run an SEM program. There is an opportunity here for customers who wouldn't be ready for SEM otherwise. There's a different market here.

Mark: So you don't see this building on SEM?
Oliver: It's a pilot, so let's run it as a pilot and use the learning to potentially tweak how we're offering SEM and come up with a new offering for this other set of customers.

Karen Horkitz: I don't understand the design of the pilot to make sure that measures occur in a fixed period. This sounds like a fixed intervention. Another question is, if it's a pilot, are you piloting what you will ultimately be shooting for?
Oliver: It's a fixed period because there are challenges with ongoing payments. First, we can't commit funds in perpetuity. We need a time limit. Second, at some point the baseline changes, so at some point you need to reassess. If you hadn't had this intervention, the baseline will have changed for other reasons.

Karen: The part I'm confused about is do you want ongoing improvements, whatever they might be, like capital and operations and maintenance?
Brian: Yes, but how we pay for ongoing improvements is complicated. It would be simpler to pay for operations and maintenance separately from capital projects. If a customer wants to combine operations and maintenance and capital investments, how do we account for that? If a customer wants x, y and z, and then they decide to add w, how do we account for that?

Juliet: If you're not doing what you're suggesting, you're losing the point of the pilot. If you're just doing one three-year intervention, then that's no different than just paying an incentive. It would be nice to just see what the savings are each year and pay for those savings over time.
Kim: That's similar to what we do in Strategic Energy Management.
Brian: The difference between SEM and Pay for Performance is a payment stream over time. It's been argued that payments over time are more appealing to businesses. Seattle's Bullitt Center building is a 20-year pilot for avoided energy. Seattle City Light is paying for avoided energy for 20 years as if they're buying power.

Kim: Oliver said earlier that we're shifting risk from us to the customer. It seems the risk being addressed is persistence of operations and maintenance savings. Many organizations don't provide incentives for operations and maintenance savings, so a big part of this is a way to feel confident we'll get at least a three-year measure life out of operations and maintenance. So it's less about continuous improvement and more about doing operations and maintenance at all in a commercial building.

Oliver: In the commercial programs, we can only pay for operations and maintenance through the SEM program. We have limited vendors who deliver this, Jim at Strategic Energy Group and Ecova. This approach does potentially open up operations and maintenance savings to other vendors.

Juliet: I like the question, what are we learning from this pilot? Are we learning whether operations and maintenance savings will persist for three years?
Brian: Yes. I would add that even capital measures are installed and not maintained. So can we maintain savings by maintaining systems properly?

Charlie: The longer the window, the more likely businesses will want to invest in expensive measures.
Oliver: But the incentives can be higher if we pay over a shorter time period.

Charlie: Payment negotiation seems to be at the heart of the question. What do you really want to test and what will you learn? So if a longer term deal is not possible because you can't guarantee a payment stream, maybe there's a way to set the money aside now to overcome that barrier?
Brian: Let's stipulate that we're going to do three years.
Oliver: There are disadvantages to limiting the pilot to three years, but we currently can't commit ourselves to pay incentives for a longer period until we learn more from the pilot.

Mark: How does this build on business as usual for capital projects? You put in a chiller and achieve savings based on an agreed upon baseline. Then over the next two years, you adjust and balance and actually get the controls and scheduling right. And that optimizes savings. This is an example of hybridizing and providing incentive over design.

Don: I have a request. Presumably you'll wind up with three participants. Presumably you'll have adjustment terms to the contract. What resets the baseline? Will we see those before the end of the pilot? The reopen clause is critical. It needs to be very simple. It needs to include what you are going to pay, what you're going to get and what are the reopen terms. Re-evaluating the baseline can lead to a war of attrition. Also if both parties contractually agree on a certain incentive for a given capital and operations and maintenance mix, how do you adapt to a change in the actual installed measures, for example, if fewer capital measures are installed?
Juliet: This is different than other Energy Trust pilots because a request for proposals will go to commission staff and be presented at a public meeting. Stakeholders will give input on the request for proposals and there will be a period where we solicit comments.
Don: I'm asking for something after the request for proposals. the three deal sheets you get when you're done. Everything will flow from the deal sheets. The deal sheets are what you'll live with. We did a PacifiCorp military installation near Salt Lake. It was a nine-year, $20 million deal that paid for savings over time. It kicked off in the early 1990s. SEMPRA was the contract deliverer. The art is in the detail. The reopen clause is most important. How often will we sit down and what will we talk about?

Brent: What are the true transaction costs in administering this?
Oliver: There's a higher level of engineering required for this on our side and on the customer side.
Kim: And legal time.
Don: The shorter the contract, the better it is.

Oliver: To be clear, we're thinking about asking the bidder to propose a price. We're not sure what kind of price we'll see. We may not get bids that are appropriate to move forward.

Kim: Juliet, did you have other purposes in mind for what you thought this would test?
Juliet: No, I think I just hadn't thought about the details. I'm feeling good about it.

Kim: This is a meaty topic and we will probably bring it to the Conservation Advisory Council again.

Wendy Gerlitz: I have a question regarding the last council meeting. The Opower project evaluation results won't be ready until the program has been stopped. I had some concerns about that.
Kim: I'll follow up about that after this meeting.

Diane: A quick update about the Existing Homes bonus incentives. They are available today. Tell your contractors to start using the code and pushing insulation.

5. Public comment and future agenda items input
Don MacOdrum: I have an announcement. The Home Performance Contractors Guild of Oregon is putting on a Home Performance conference. I want to start a discussion that dives into heavier cost-effectiveness issues. Some of you might remember Robin Lebaron from the National Home Performance Council. He's coming out to head up a keynote panel along with other national and local policy leaders. We're seeking attendance form policy folks. It's after the Friday Citizens' Utility Board conference. I am hoping to get 40 or 50 leaders in the policy realm to attend. Many of you will receive invitations. The goal is two-fold: to bring together disparate silos of the Home Performance industry and to facilitate collaboration and institute solutions regarding cost-effectiveness. It's a full-day event on October 29 at the Ambridge Event Center.

Diane: Tomorrow in Washington D.C., policy folks are meeting to talk about rethinking Total Resource Cost Test solutions. Our hope is they can unveil their thinking at this conference.

Kim: I have a budget process announcement. The budget planning process is underway. Energy Trust is committed to an open, transparent process and we invite public and stakeholder participation. Drafts of the budget will be presented at the next two Renewable Energy Advisory Council and Conservation Advisory Council meetings. October will be a dense meeting. In addition, budget and action plan materials will be posted a week before the November 6 board meeting. There will also be a November 26 public hearing at the OPUC, and there may be a live webinar. Watch for information and links in the Synergy newsletter and on Energy Trust's website. Comments are invited. Written comments are due by November 27, email them to info@energytrust.org.

> The October Conservation Advisory Council agenda is packed, so there is no call for agenda items. I appreciate the email comments I received from some of you on the last agenda.
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> There's one thing we didn't talk out today. The last time we met there were requests to hear about Pay for Performance and Strategic Energy Management, and to be addressed by Clean Energy Works Oregon. One of those things didn't happen today. We now have members of Clean Energy Works Oregon who have committed to attending all Conservation Advisory Council meetings, so that will facilitate future conversations.

6. Meeting adjournment
Kim thanked all council members for their participation and adjourned the meeting at 4:20 p.m. The next full council meeting is October 23, 2013.