

Conservation Advisory Council Meeting Notes

October 25, 2017

Attending from the council:

JP Batmale, Oregon Public Utility
Commission
Holly Braun, NW Natural
Warren Cook, Oregon Department of
Energy
Kari Greer, Pacific Power (for Don Jones)
Garrett Harris, Portland General Electric
Andria Jacob, City of Portland

Lisa McGarity, Avista
Jeff Mitchell, Northwest Energy Efficiency
Alliance (for Julia Harper)
Carrie Nelson, Bonneville Power
Administration (for Brent Barclay)
Stan Price, Northwest Energy Efficiency
Council
Allison Spector, Cascade Natural Gas

Attending from Energy Trust:

Susan Badger-Jones
Mike Bailey
Gwen Barrow
Amber Cole
Mike Colgrove
Hannah Cruz
Lindsey Diercksen
Sue Fletcher
Fred Gordon
Susan Jamison
Susan Jowaiszas
Oliver Kesting
Steve Lacey

Scott Leonard
Spencer Moersfelder
Alex Novie
Amanda Potter
Thad Roth
Kate Scott
Zach Sippel
Cameron Starr
Julianne Thacher
John Volkman
Jay Ward
Peter West
Mark Wyman

Others attending:

Mark Bassett, OPUC
Stephanie Berkland, TRC
Lindsey Hardy, Energy Trust board (by
phone)
Rick Hodges, NW Natural
Brian Loghran, Evergreen

Lise Luchsinger, Home Performance Guild
Joe Marcott, LME
Alan Meyer, Energy Trust board
Lonney Peet, Nextant
Shannon Todd, TRC
Jeffrey Tambarro, NW Natural

1. Welcome, Old Business and Short Takes

Hannah Cruz convened the meeting at 1:30 p.m. The agenda, notes and presentation materials are available on Energy Trust's website at www.energytrust.org/about/public-meetings/conservation-advisory-council-meetings/.

Hannah provided a draft schedule for 2018 Conservation Advisory Council meetings. The schedule will be posted online.

For Energy Trust's 2018 Budget and 2018-2019 Budget and Action Plans, the public comment period is November 1 – 17, 2017.

Hannah provided an update on the Secretary of State's performance audit of Energy Trust. The auditors completed preliminary interviews of Energy Trust, the Oregon Public Utility Commission and stakeholders, and they did not identify any areas of risk or concern. The audit will move forward with a focus on Energy Trust's administrative costs.

2. Draft 2018 Budget

Peter West presented Energy Trust's draft 2018 annual budget. In 2017, Energy Trust expects to exceed energy savings for three utilities. A large megaproject will bolster savings in PGE territory. Shortfalls for two gas utilities are expected due to project delays and a strategy to delay savings per NW Natural's request. Energy Trust also expects to exceed its renewable energy generation goal, with strong standard solar demand and completion of two large-scale solar projects. NEEA is expected to exceed its 2017 Energy Trust goal.

Peter noted that action plans for programs and support groups will be included in the draft budget materials available on November 1, 2017. Feedback is requested by November 17, 2017.

Annual budgets are tied to Energy Trust's five-year strategic plan goals. Energy Trust is on track to achieve 74 percent of Strategic Plan electric savings goal, 81 percent of Strategic Plan gas savings goal and to exceed the Strategic Plan renewable generation goal by the end of 2017.

Peter described the 2018 market and context that impacts Energy Trust's budget. A stable economy will drive high activity in some program areas. Oregon's population is diversifying, and interest from stakeholder groups representing diverse communities is growing. Staff expect changing policies, markets and technologies, including the expiration of the state Residential Energy Tax Credit at the end of 2017. Fewer savings per project are expected as Energy Trust serves customers more deeply and acquires harder-to-reach savings. Avoided costs are shifting and cost-effectiveness challenges are anticipated.

Peter described three major areas of emphasis in the draft 2018 budget. They all support the core goal of benefiting customers and ratepayers by achieving energy goals and operating effectiveness. The focus areas are to diversify participation, manage change and prepare for the future, and enhance program methods and strategies.

Examples of efforts to diversify participation include increasing outreach to small- to medium-sized businesses and agricultural customers; identifying strategies to increase access to solar in low-income communities; pursuing contracts with community-based organizations to reach underserved communities; and applying a diversity, equity and inclusion lens to operations and programs.

Examples of efforts to enhance program methods and strategies include using new and improved data resources for analysis and targeted marketing, leveraging energy-related initiatives spearheaded by others, fostering long-term relationships with business customers and supporting long-term project planning for communities, and focusing outreach to irrigation hydropower and biogas projects.

Examples of work to manage change and prepare for the future include supporting targeted demand-side management efforts with utilities, collaborating with NEEA to identify new measures and strategies, implementing transitional strategies for solar and lighting, and implementing recommendations from internal Organizational Review and Budget Review projects.

All activities planned for the year are described in the action plans that will be available November 1. CAC saw the draft versions of these in September.

JP Batmale: How do you plan to track and report on efforts to diversify participation?

Peter West: We are still figuring out the best ways to do this. We regularly seek customer feedback through Fast Feedback surveys. There are other ways to collect information, whether on forms or

through surveying customers. We will determine what methods provide the most accurate responses.

Lisa McGarity: What is the starting point for working with community-based organizations to reach underserved communities?

Peter West: We will seek input from these organizations in developing and designing offerings for low-income customers.

Lisa McGarity: Will you start with a specific community, like the Latino community, or will you focus on all communities?

Michael Colgrove: One of our first steps will be to identify underserved customer groups to determine where Energy Trust should target efforts. We are now starting outreach to multicultural organizations that work across communities.

Peter continued his presentation. In 2018, Energy Trust proposes to invest \$199.6 million to save 56.52 average megawatts and 6.88 million annual therms. Electric savings will increase by 0.2 percent and gas savings will decrease by 7.2 percent. The decrease in gas savings is due to Energy Trust's agreement with NW Natural to level out acquisition of NW Natural DSM and updated data indicating we have more free riders than expected. We will save this energy at a levelized cost of 3.0 cents/kWh and 33.5 cents/therm.

Energy Trust will generate 2.18 aMW of renewable energy. This is a 24 percent reduction from 2017, largely due to expiration of the Residential Energy Tax Credit, the sector is working within flat annual revenues and having spent down carryover funds from prior years, and timing of other hydropower and biogas projects.

Holly Braun: For NW Natural demand-side management, Energy Trust expects to save more in 2018 than in 2017?

Peter West: The slide you are looking at is comparing budgeted goals for both years, not actual savings.

Peter: In the 2018 draft budget, spending is up 0.5 percent due to increased project volume and an increase in internal costs. However, revenue is down slightly from 2017. Energy Trust expects to acquire savings at a lower cost than planned in 2017, and staff will use the additional reserves to meet 2018 spending needs in excess of anticipated revenues. Administrative costs remain low.

The majority of 2018 draft budget expenditures are for efficiency and renewable energy programs. A minority of funds are for management, operations, communications and outreach. Of the program spending, 58 percent is for incentives, 11 percent is for internal program delivery and 31 percent is for external program delivery.

JP Batmale: What's the difference between internal and external program delivery costs? Where does Strategic Energy Management fall?

Peter West: External delivery is from the PMCs and the PDCs. Internal delivery are the costs for program delivery and support managed directly by Energy Trust staff. SEM program delivery is largely external, with a small number of staff members to manage contractors.

JP Batmale: I like the breakout of expenditures by program delivery and incentives.

Holly Braun: Washington Utilities and Transportation Commission is interested in this breakout, but they also look at the operations costs. Washington Utilities and Transportation Commission wants to see a ratio of incentives compared to all costs, including operations and marketing.

Peter: The budget for renewable energy programs will drop by about 25 percent in 2018. The Solar program will be challenged to support the market after RETC expires.

Andria Jacob: If RETC goes away and above-market costs go up, wouldn't we increase spending on renewable energy incentives?

Peter West: Yes, there will be some incentive increases in 2018 for solar projects. But not enough to fully compensate for the loss of the RETC. We do not have enough funding to fully offset RETC. We also need to let the market settle out before we make other major incentive changes. In this budget we also expect to pay incentives in Q1 of 2018 for projects that completed in Q4 2017 and still benefit from RETC.

Hannah Cruz: In addition, we are limited in the annual revenues Energy Trust receives for renewable energy programs.

Peter: Nearly one-half of natural gas savings in 2018 is expected to come from residential programs, with 26 percent from Existing Buildings, 14 percent from New Buildings and 15 percent from Production Efficiency. Production Efficiency is expected to provide roughly one-third of electric savings, followed by Existing Buildings at 29 percent, residential at 13 percent, NEEA at 13 percent and New Buildings at 11 percent.

Peter reminded the group that the three current residential programs—Existing Homes, New Homes and Products—will be consolidated into one program in 2018. Electric savings from the residential sector will be much smaller than in 2017, largely due to market transformation for LEDs. Energy Trust will incent about 1 million fewer bulbs in 2018 than in 2017, and will claim fewer savings per bulb due to increasing regional and federal baselines. Peter noted that lighting savings are also the cheapest savings with the lowest delivery and staffing costs. Residential gas savings will be primarily from EPS new home construction, followed by 29 percent of savings from home retrofits, 8 percent from retailers and distribution, and 0.01 percent from manufactured homes.

Kari Greer: Is support for manufactured homes an electric option?

Peter West: Yes.

Holly Braun: Is this a big shift of savings from home retrofit to new construction?

Hannah Cruz: The residential programs have been combined, so you haven't seen savings shown this way in prior years.

Thad Roth: The budget also reflects an expected decrease in showerheads.

Lisa McGarity: For low-income smart thermostats, how many low-income residents have Wi-Fi?

Peter West: That will be part of our low-income customer research and exploration.

Allison Spector: Avista's residential budget is much lower than Cascade Natural Gas's, but Avista savings are roughly on par with Cascade Natural Gas. Why is that?

Thad Roth: This could be market transformation savings related to new home construction. I will check.

Allison Spector: Avista would like to integrate more market transformation.

Alan Meyer: Is it accurate that the 2018 residential goals are lower than 2017 goals?

Peter West: Yes.

JP Batmale: Is NW Natural's residential goal up in 2018 over 2017?

Peter West: Yes, slightly.

Peter showed a chart of LEDs as percent of regional market share from 2011 to 2017. LEDs went from 1 percent of the market in 2011 to 58 percent of the market in 2017. Halogen bulbs have also increased market share from 1 percent in 2011 to 31 percent in 2017. The change reflects a significant decrease in sales of incandescents and CFLs. During this time period, LED prices dropped from more than \$18 per bulb in 2011 to less than \$4 in 2017.

Peter described the shift of savings and incentives allocation for new homes from electric to gas. This impacts homes that are served by both electric and gas utilities by changing the proportion of incentives and savings allocated for each utility. The change is due to lower avoided costs for

electric, a 6 percent increase in the electric code that reduces the amount of available savings and ten compounded by the much greater number of homes being built are gas-heated.

Holly Braun: You said there's more relative value for gas savings, but can you help us understand absolute value?

Peter West: Remember that we expect 18 percent more new homes built in 2018 than compared to the 2017 budget. I can follow up with you to provide this information.

Allison Spector: Is the split in dual-fuel homes between space and water heating?

Peter West: That is one source, but there are many combinations of gas and electric equipment that could be in a home. Dual-fuel homes do not include homes with only electric space and water heating. We will circle back with a better breakdown of how costs are being re-allocated.

Mark Wyman: The split between electric and gas represents the composition of available savings achieved by building above what is required by code. The new code reduces the opportunity for electric savings in homes that do not have electric space heat, and the new requirement for 100 percent efficient lighting in new homes. So there will only be electric new home savings from space heating, water heating, and shell measures, but not lighting.

Peter: Commercial sector electric savings are about two-thirds from Existing Buildings, 27 percent from New Buildings and 8 percent from Existing Multifamily. Growth is expected from Pay for Performance and commercial SEM. Staff expects more projects and smaller projects to complete in 2018. This is also true for the industrial sector. Industrial sector savings will increase in 2018. Custom savings are expected to make up 31 percent of 2018 Production Efficiency savings, with 26 percent from a megaproject, 23 percent from lighting, 11 percent from industrial SEM and 8 percent from standard upgrades.

Jeff Mitchell, NEEA residential and mass markets senior manager, described NEEA's plans for 2018. There are no large changes expected. On the natural gas side, NEEA will work to bring a more efficient gas clothes dryer and a more efficient gas water heater to market. On the electric side, NEEA will launch two new initiatives: extended motor products and dedicated outside area. Both of these initiatives would save both gas and electricity. Reducing ductless heat pump costs will also be a priority. NEEA will also pursue an efficient clothes washer initiative. A residential building stock assessment will complete and a commercial building stock assessment will launch in 2018.

Alan Meyer: Why is Portland General Electric's goal for NEEA going up and Pacific Power's goal going down?

Spencer Moersfelder: Energy Trust allocates savings to utilities based on revenue from PGE and Pacific Power. We will follow up with more detail.

Garrett Harris: Does it have to do with the mix of measures offered in each territory?

Fred Gordon: I don't think so. I will check.

Peter described customer benefits from Energy Trust's 2018 budget, and reviewed the budget outreach schedule and opportunities for input.

3. Net-to-gross Methodology

Spencer Moersfelder and Fred Gordon described how net and gross savings are calculated for tracking, budgeting and reporting purposes.

Working savings are the best estimate of savings realized at a participating site. Working savings do not include savings from transmission and distribution. Working savings includes different baselines and free ridership assumptions based on measure types. For prescriptive measures, Energy Trust uses market baselines or existing conditions. For custom projects, working savings do not account for free ridership and do not include a technical realization rate adjustment for impact evaluation findings. For market transformation, working savings are based on a shift in market share above a forecasted baseline.

Fred added that working savings are the savings Energy Trust starts with before applying economic principles. Working savings are the basic unit of savings.

Lisa McGarity: Is there an internal goal for realization rates?

Fred Gordon: No. Our goal is to estimate savings as close to actual savings as possible.

Alan Meyer: You start with working savings for both custom and prescription, but for prescriptive you apply learning from prior experience with prescriptive measures?

Fred Gordon: Correct.

Spencer: Net or reportable savings are the primary savings included in budgets and reports. These include transmission and distribution savings, and savings reductions attributed to free riders. Net savings also include savings attributed to spillover and technical realization rates where possible. Spillover refers to customers that install an efficiency upgrade because of Energy Trust's influence, but they did not participate in Energy Trust's programs. Market transformation quantifies the market shift from baseline for an entire market. There is no realization rate for market transformation. Market transformation savings do include transmission and distribution savings.

Alan Meyer: We always include transmission and distribution savings?

Fred Gordon: Yes, on the electric side. There's a different percentage for each sector.

Spencer: Gross savings are savings that utilities see at the generator from participating projects, regardless of free ridership. Free riders are added back into gross savings. We do this because utilities are interested in how much energy is needed to meet existing load after reductions from efficiency regardless of free-ridership. Gross savings do include adjustments based on impact evaluation findings. Energy Trust began reporting gross savings in budget documents and annual reports in 2016.

Because of changes in Savings Realization Adjustment Factors for 2018, Energy Trust needs to acquire more working savings in some programs, such as Existing Buildings program, in 2018 to claim the equivalent amount of net savings as in 2017.

Holly Braun: If Savings Realization Adjustment Factors comes down, how does that impact Integrated Resource Plan savings?

Fred Gordon: For utilities that use net savings for IRP, if your Savings Realization Adjustment Factor goes down, your net savings go down.

Holly Braun: So if Savings Realization Adjustment Factors go down, IRP goals go down accordingly?

Fred Gordon: The Integrated Resource Plan may have been set prior to the Savings Realization Adjustment Factor adjustment. This is one reason it's difficult to achieve IRP goals precisely. It depends on what you mean by the Integrated Resource Plan. There is a draft plan, then a final. Then there are annual updates to the efficiency forecast in the plan that Energy Trust develops with the utilities.

Warren Cook: What's the size of the difference between working savings and net savings?

Fred Gordon: That may be confusing because it includes line losses.

Peter West: We can provide that.

4. Residential Sector 2018 Incentive Changes

Scott Leonard, residential senior project manager, described residential year-end changes, including measures that were submitted for cost-effectiveness exceptions to the OPUC and are pending a decision. The OPUC is conducting a public input process, and will accept comments through Thursday, October 26, 2017. A decision will be made on November 7, 2017.

Factors influencing 2018 measures include updated avoided costs, RETC expiration, new codes and standards, expiring exceptions and changing market conditions. Measures pending OPUC

exceptions are gas new manufactured homes, a few EPS pathways in Oregon, gas tank water heaters and ductless heat pumps.

Allison Spector: Which exceptions are major and which are minor?

Scott Leonard: Gas manufactured homes are minor. The rest are major.

Warren Cook: The issue with the ductless heat pump is the cost of the measure, not the savings, correct?

Scott Leonard: Yes.

Holly Braun: What does major or minor mean?

Scott Leonard: The major/minor threshold is used by the OPUC to determine how measure exception requests are reviewed/approved. Minor exception requests can be approved by OPUC staff while major exception requests require commissioner approval. Several factors go into determining whether an exception request is minor versus major, such as a Total Resource Cost Test (TRC). TRC below .5 are not usually considered for exceptions unless part of a pilot, TRC between .5 & .8 are usually major exceptions. OPUC also considers the percentage of savings the measure in request contributes to the program. Usually 5 percent is the threshold for minor versus major exception requests

Scott described additional year-end measure changes. Market rate gas furnace incentives were offered for Avista customers in 2017 as an extension from Avista's previous incentive, and the current incentive will remain through Q1 2018. Additional market analysis is being done in Eastern Oregon to determine if the incentive should continue beyond Q1 in that region of Avista's service territory. New construction individual equipment incentives will be incorporated into the EPS homes incentives. Energy Trust will still provide incentives for the equipment installed in new homes, but not as individual equipment installations. Due to new home construction code change and an increase in baseline, Energy Trust will change the incentives for EPS. This is likely to result in a 15-20 percent reduction in new home incentives. Energy Trust will also change heat pump and heat pump controls measures.

Holly Braun: If heat pumps are not cost-effective now at a 9.0 HSPF, why would you increase the incentive and incent a lower HSPF? Why are you blending the two tiers into one incentive?

Scott Leonard: We expect fewer requests for incentives for higher tier units.

Holly Braun: You're getting less savings and you're paying more money.

Scott Leonard: The incentives are determined by the proportion of lower- and higher-tier heat pumps expected. The lower-tier units are more cost-effective, and we expect the majority to be lower tier units.

Holly Braun: I heard that 9.0 HSPF could not be incented anymore because it's common practice and that we could only incent 9.5. Now we are incenting 8.5. Are you going backward?

Mark Wyman: There's a difference between replacing a resistance heat system and upgrading to a new heat pump. Upgrading from a heat pump to a more efficient heat pump is not cost-effective. If the heat pump is replacing resistant heat, it is cost-effective and an incentive offered.

Peter West: So we're consolidating offerings, ending ones that did not work and removed heat pump to heat pump conversions. These revised HP incentives are only for conversion from resistance electric heat.

Mark Wyman: Correct. Customers can still get an incentive for controls when replacing a heat pump with a heat pump. The incentive is for controls, not heat pumps.

Scott: Our aim is to simplify and consolidate incentives and to encourage replacement of electric resistance heat with efficient heat pumps.

5. Existing Multifamily 2018 Incentive Changes

Kate Scott, Existing Multifamily program manager, described Existing Multifamily incentive changes. There are three pending cost-effectiveness exception requests with the OPUC, including ductless heat pumps, gas tank water heaters in duplex, triplex, fourplex and side-by-side structures, and

replacement of single-pane windows for electrically heated stacked structures with five or more units. Incentives for double-pane windows replacement will be discontinued.

Energy Trust will add incentives for heat pump advanced controls in duplex, triplex, fourplex and side-by-side structures to align with the residential sector. Existing Multifamily will also add incentives for rooftop unit controls. Existing Multifamily launched two new incentives in mid-2017, including smart thermostats and tankless water heaters less than 199 kBtu/h in stacked structures with five or more units.

Existing Multifamily will align ducted heat pump incentives and requirements with residential in 2018 for duplex, triplex, fourplex and side-by-side structures.

Alan Meyer: Do ducted heat pumps have to replace electric heat?

Kate Scott: Yes, the current measure already requires replacing electric resistance heat. Previously they had to replace central air conditioning as well, but that requirement is going away in 2018. Currently the efficiency requirement is 9.0 or greater, but in 2018 it will be 8.5, the same as residential.

Kate: Existing Multifamily is changing incentives for gas furnaces in stacked structures from a flat incentive to an incentive based on the size of the system being installed. This is to better align incentives with savings.

Existing Multifamily will discontinue incentives for replacing double-pane windows in electrically heated structures with five or more units. Incentives will be discontinued January 1; however, the program will have a process for submitted installation deadline extensions for customers or contractors with projects currently planned which cannot install by the December 31 deadline. Extension requests must be submitted by December 31, 2017, and approved projects only will receive an extension through March 31, 2018.

Existing Multifamily will remove the \$150 cap and ceiling insulation requirement for gas wall and floor insulation in duplex, triplex, fourplex and side-by-side structures. This is to align with the requirements laid out in the OPUC cost-effectiveness exception for these measures, and reduce customer confusion.

There are new federal standards and market baselines that make electric tank water heaters no longer cost-effective, and incentives will be phased out in 2018. New labeling standards that went into effect this year also complicate determining which models qualify for incentives. The program will work with customers on this issue during a transition period, and incentives will be fully discontinued by mid-year.

There will be two minor clothes washer requirements changes. There will be a minimum capacity requirement for residential clothes washers and commercial clothes washers must be front loading.

6. Agriculture 2018 Incentive Changes

Lindsey Dierksen, senior industrial program manager, presented on changes to agriculture incentives. There are seven irrigation measures pending OPUC exception requests. For three of them, the OPUC staff recommends retiring the exception and therefore the Energy Trust incentive at the end of 2018. For the remaining four, the OPUC staff recommend approving the cost-effectiveness exception until the end of 2019.

Peter added that Energy Trust's budget assumes that the OPUC grants pending measure cost-effectiveness exception requests.

7. Commercial Strategic Energy Management 2018 Incentive Changes

Kathleen Belkhat, commercial SEM manager, shared incentive changes for commercial SEM. In 2017, Energy Trust increased commercial SEM incentives to align with Pay for Performance and

retrocommissioning incentives. In 2017, Energy Trust also added an incentive for companies to hire interns to support commercial SEM efforts. Staff learned customers are motivated by SEM support services more than incentives. In 2018, incentives will be reduced to align with industrial SEM incentives. The program will also include one additional incentive for milestone achievements.

8. Public Comment

Holly Braun: I want to understand exactly what kind of feedback Energy Trust wants from Conservation Advisory Council members about the budget. I already have a forum for feedback as a utility, but I don't understand what kind of feedback you need from me as a council member. I will discuss this with Hannah.

Peter responded that we want input on any parts. There is not a separate view we need. The important part is to get to hear what makes sense, what does not, what may need to be re-considered and what may be missing.

There were no additional public comments.

9. Meeting Adjournment

The meeting adjourned at 4:45 p.m. The next scheduled meeting of the Conservation Advisory Council is Friday, November 17, 2017.