

Conservation Advisory Council Meeting Notes

May 9, 2018

Attending from the council:

JP Batmale, Oregon Public Utility
Commission
Holly Braun, NW Natural
Warren Cook, Oregon Department of
Energy
Tony Galuzzo, Building Owners and
Managers Association
Wendy Gerlitz, NW Energy Coalition
Danny Grady, City of Portland Bureau of
Planning and Sustainability
Kari Greer, Pacific Power
Lisa McGarity, Avista
Tina Jayaweera, NW Power and
Conservation Council
Dave Moody, Bonneville Power
Administration
Jason Klotz, Portland General Electric
Al Spector, Cascade Natural Gas

Jack Cullen
Andy Eiden
Emily Findley
Jackie Goss
Andy Hudson
Marshall Johnson
Steve Lacey
Scott Leonard
Spencer Moersfelder
Thad Roth
John Volkman
Mark Wyman

Attending from Energy Trust:

Mike Bailey
Gwen Barrow
Amber Cole
Hannah Cruz

Others attending:

Sara Fredrickson, CLEAResult
Lindsey Hardy, Energy Trust board (by
phone)
Rick Hodges, NW Natural
Mitt Jones, Cadmus
Don MacOdrum, TRC
Alan Meyer, Energy Trust board
John Molnar, Rogers Machinery
Jeffrey Tamburro, NW Natural
Aquila Velonis, Cadmus

Executive Summary:

- Air conditioning measure analysis:
 - Staff presented findings on the cost-effectiveness of a potential air conditioning measure.
 - The committee discussed potential measure design, benefits to utilities and non-energy benefits.
- Follow-up from World Café-style discussion at March Conservation Advisory Council meeting:
 - Staff reviewed the agenda topics identified by the committee as top priorities, as well as the best practices prioritized for meeting design.
 - Staff proposed operating principles and meeting guidelines based on this input. The committee requested more time to review the operating principles and meeting guidelines before finalizing.
- Preliminary changes to the 2019 budget development schedule:
 - Staff presented draft changes to the development and engagement schedule for the upcoming 2019 budget process, which begins in summer 2018.
 - Draft changes include a new workshop in mid-October aimed at giving Conservation Advisory Council and Renewable Energy Advisory Council a fuller picture of the budget and more engagement in the process.

1. Welcome, Old Business and Short Takes

Hannah Cruz convened the meeting at 1:35 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 asked if there were concerns or changes to the notes from the last meeting. No changes were noted, and the council adopted the notes.

Hannah reviewed changes in council membership. Three potential members will be considered by the Board Policy Committee on May 10, 2018:

- Dave Moody, manager of efficiency programs, to replace Brent Barclay in representing the Bonneville Power Administration. Dave has a deep understanding of efficiency programs, regional issues and the many stakeholders in this industry. Previously, Dave served as manager of the Energy Efficiency Marketing group at BPA.
- Jason Klotz, emerging technologies project manager, to replace Garrett Harris in representing PGE. Jason manages PGE's emerging technology work. Prior to joining PGE, Jason worked at the Oregon Public Utility Commission (OPUC) where he led work on greenhouse gas regulation, environmental compliance, electric vehicles, energy storage and demand response.
- Will Gehrke, economist, to replace Liz Jones at the Citizens' Utility Board of Oregon (CUB). Will is an economist at CUB, has worked on a number of energy efficiency dockets and is well-versed in analysis of conservation measures. Will previously worked for the Florida Public Utility Commission as a regulatory analyst.

Hannah invited the council to the Board of Directors Strategic Planning Workshop on May 17 and 18 in Portland.

2. Air Conditioning Measure Analysis

Planning Manager Spencer Moersfelder and Aquila Velonis from Cadmus presented findings from the second phase of an air conditioning study. The February 2017 presentation to the council on the first phase of the study is included in the packet materials online.

Spencer Moersfelder: Stakeholders are surprised that Energy Trust doesn't currently have a cost-effective air conditioning measure. In response to this, we conducted a more in-depth review. We released a request for proposals for consultants and selected Cadmus.

Jason Klotz: Weather modeling went back 40 years. Are we looking at air conditioning and energy efficiency because we're seeing an increase in peak energy usage?

Aquila Velonis: In phase one, we started by looking at modeling runs from the Regional Technical Forum SEEM models that rely on Typical Meteorological Year (TMY) 2 and TMY3 weather data. Combined, this data only runs up to 2005 and we wanted to assess possible impacts of more recent temperature trends on cooling loads. We gathered weather data from weather stations around Oregon going back at least 30 years and performed modeling runs with this data.

Jason Klotz: Is there some kind of weighted factor that has to do with accelerated warming in the last few years?

Aquila Velonis: We didn't weight the results or weather data across years. We ran models for every single year. For the purposes of this presentation, it shows the range in results of the lowest temperature year, median temperature year and highest temperature year (in terms of cooling degree days).

Jason Klotz: Was there a corollary between the increased number of warming days and air conditioning usage?

Aquila Velonis: A relationship between the increased number of warming days and air conditioning usage can be seen in the increased cooling degree days and the modeled consumption within our results. In addition, the most recent Residential Building Stock Assessment (RBSA) data show a higher saturation of mechanical cooling systems than the previous RBSA.

Holly Braun: Did you conduct this study to see if you could incent air conditioning cost-effectively?

Spencer Moersfelder: That's right. Air conditioning hasn't been cost-effective in the past. We talked to a climate scientist at Oregon State University (OSU). She said that we needed to be cautious about making assumptions about temperature increases using weather trends. Any data that represents less than 30 years isn't representative of full weather cycles. We went back a long way in time to satisfy that. For some weather stations we went back even further. We're cautious about making statements about what we saw because we're not weather experts and because short-term weather trends are not necessarily representative of long-term climate patterns.

Aquila Velonis: The main purpose of looking at a long history of weather is to look at the upper and lower bounds of weather over that period. We focused our results on that range to see what scenarios were cost-effective. We looked at scenarios with ranging incremental costs and equipment lifetimes, as well as changes in summer peak capacity benefits.

Jason Klotz: You could capture summer peak capacity if you teamed with utilities on demand response.

Spencer Moersfelder: That's not our purview.

Jason Klotz: I understand, but you could be doing that.

Spencer Moersfelder: We are doing that with thermostats.

JP Batmale: Thermostats are cost-effective in and of themselves.

Jason Klotz: For windows, we could quantify additional avoided cost value from capacity benefits.

Spencer Moersfelder: Interesting. We're participating in OPUC-hosted workshops to discuss the approach to more accurately value capacity benefits. These capacity benefits could push avoided costs higher.

Jason Klotz: You could sit down with Josh Keeling to talk about air-conditioning window units. They could make work faster. I don't know where Pacific Power would be on that, but it would be cost-effective to us if we could team up with you on cost-effective air conditioning.

Aquila Velonis continued with the findings for central air conditioning.

JP Batmale: On slide 6, what's driving low, medium and high?

Aquila Velonis: These represent the weather. In the 40 years of weather data we looked at, low represents the lowest temperature year (in cooling degree days) we found on record. The same is true for high (in cooling degree days). Median is the median temperature year (in cooling degree days) we found. It basically gives a range of weather within a 40-year period.

Jackie Goss: The cost-effectiveness analysis takes the results from the high year and assumes that these savings will persist for 15 years because of the life of an air conditioning system. It's an optimistic look at how much energy the air conditioning units might save.

Jason Klotz: What was the highest temperature year and the next highest?

Aquila Velonis: Depending on the weather station, 2015 represented the highest temperature year (in cooling degree days) for 8 of the 14 stations. Again, depending on the weather station

the next highest was 2014. (Temperature variations can be found in slides 21, 22 and 23 showing cooling degree days by year and by weather station.)

Aquila Velonis continued with results. We're not just looking at the highest temperature year. The median weather year, which is most typical, is relatively close to being cost-effective in all three zones with the low-cost scenario. It is cost-effective under the higher avoided cost scenario in all three zones.

Spencer Moersfelder: We think the council can provide value by sharing your thoughts on designing a potential program offering. We value input on what the Residential program should consider and what we can influence through program design.

Aquila Velonis continued with a scenario analysis for air conditioning window units. Spencer continued with conclusions.

Holly Braun: What is the base level for high-efficiency units?

Aquila Velonis: We used the federal standard for both window (CEER 10.9) and central air conditioners (SEER 13).

Jason Klotz: JP, was there a study on what PGE expected for Pacific Northwest weather trends?

JP Batmale: There was data in the PGE 2016 Integrated Resource Plan. PGE worked with OSU on weather data. We did not incorporate a weighted average toward hotter years, but took a 30-year average.

Jason Klotz: Did it show an increase in peak load? Did that drive a need for a new peaking plant?

JP Batmale: Yes. The percent of homes with air conditioning has gone up.

Jason Klotz: When talking internally for demand response, heat pumps count as air conditioning.

Spencer Moersfelder: Regardless of weather patterns, air conditioners run when it's hot. They correspond with PGE peaks and increase peak load. Overall, there is a relationship between measures that reduce peak through energy efficiency and demand response measures that shift loads to non-peak times. This has impacts on avoided costs that still need to be sorted out.

Hannah Cruz: How do other energy efficiency programs talk about weather trends?

Spencer Moersfelder: There is curiosity about whether temperatures are increasing and what this means for programs.

Tony Galuzzo: Are we solving for new homes, existing homes or both?

Aquila Velonis: Both.

Aquila Velonis: Incremental costs represent the additional cost of more efficient central air conditioning units when an existing unit fails and needs to be replaced. If we started to assume full cost for central air conditioners, it would have a negative impact on the cost-effectiveness of central air conditioners.

Tony Galuzzo: You would replace with more efficient units?

Spencer Moersfelder: We would upgrade to units that are more efficient than customers would have bought otherwise, assuming their previous systems failed. We would assume the price of a new system would be cost-prohibitive without incentives.

Jason Klotz: What are the incremental costs of going from a central air conditioning system to a window unit?

Spencer Moersfelder: We didn't look at that in this study. We would look at it in a heat pump measure, but this study only focused on air conditioning.

Spencer continued with considerations for program design.

Holly Braun asked about the second bullet on slide 10, which reads: "While not conclusive, contractor prices appear to include additional markups for efficient equipment." Additional costs are associated with efficient equipment?

Aquila Velonis: Yes.

Al Spector: Contractors recognize the value of energy efficiency, so some might increase their costs.

Wendy Gerlitz: PGE has interest in demand response, like turning off air conditioners for a period of time to save energy. Is there a difference in performance between units that leads people to use one unit more than another?

Spencer Moersfelder: By offering efficient air conditioning, we would reduce peak load. By shifting when the unit is operating, we would move load to a time that doesn't coincide with peak demand. Determining how to value that capacity is intricate, and we're still working to resolve it. Energy Trust is responsible for the energy efficiency side, so we would coordinate with utilities on a cost-effective measure that intersects with their demand response objectives.

Wendy Gerlitz: Is this analogous to a non-energy benefit? There is value to utilities in shifting peak. In the cost-effectiveness formula, there is already a placeholder for other values. This could be included as another placeholder.

Spencer Moersfelder: The avoided costs that Energy Trust uses to determine the cost-effectiveness of measures do include value associated with saving energy during peak times. The avoided cost value associated with demand response still needs to be worked out.

Dave Moody: Is any of this technology capable of demand response?

Aquila Velonis: There are additional costs for controls and switches, which we didn't include in the study.

Jason Klotz: You wouldn't want switches on an outdoor unit. If a window unit is not capable of demand response, you could put a switch on it. You could package it with a thermostat measure to be cost-effective and get both energy efficiency and demand response savings.

JP Batmale: In the avoided cost on slide 8, what was the value of additional capacity?

Aquila Velonis: It was at least 2.5 times higher.

JP Batmale: In terms of Energy Trust managing demand response value and capacity value, Energy Trust currently focuses on energy efficiency and utilities focus on reducing peak load. For now, will Energy Trust stick to that?

Spencer Moersfelder: That's how we understand our role. We're doing what we can to coordinate with utilities on intersecting interests.

Kari Greer: Are you still considering a regional rollout? Not statewide?

Spencer Moersfelder: We're not that far along at this point. Program planning needs to happen first.

Lisa McGarity: If rolling out regionally, it would be great to offer incentives for window units at the retail or distributor level.

Warren Cook: Buying down the extra markup might be all you need to do, but you might also need that non-energy benefit to push back on consumers.

Alan Meyer: You could define energy efficiency to include capacity, but our charter is about energy conservation. When studies indicate water heaters shift energy usage from on-peak to off-peak times, they actually use more water. You could argue that there's a benefit to doing that, but our founding legislation clearly says conservation.

JP Batmale: But are we properly assessing the value to the utility at peak?

Alan Meyer: We need you to interpret that for us. Other utilities offer incentives for whole-house exhaust fans, but we're told we can't do that. Should we investigate it as a step?

Tony Galuzzo: Contractors are marking up more efficient equipment. Similarly, people who buy Hondas are more commodity shoppers who drive the price point down. Hondas are heavily shopped. People who buy Acuras are willing to invest in the luxury portion, so the seller can ask for more margin on their side. But energy use is about how efficiently people drive cars, regardless of brand. So it might make more sense to incent smart technology.

3. 2018 Conservation Advisory Council Planning Workshop Follow-up

Staff and council members reviewed the outcomes of the World Café exercise conducted at the March meeting. Council members were asked to review the appendix to the March meeting minutes prior to this meeting.

Hannah Cruz: We sent out a draft meeting guidance document based on the feedback we received at the March meeting. The second page lists the top six agenda items for council meetings that received the most votes from council members:

1. Customer research and insights—who are we serving, reach of programs; including insights from big data
2. Context—market trends, policy issues affecting programs; includes research, evaluation, legislation, policy and policy barriers to Energy Trust work
3. Program innovations and new initiatives—Future sources of savings, pilot prioritization, horizon planning; especially, expanding reach or changing costs, and vetting approaches and delivery contracts
4. Challenges/barriers facing programs—including policy barriers
5. Program delivery to historically underrepresented groups and diversity/equity considerations—including savings, costs, metrics
6. What's working and not working nationally, including benchmarking

Holly Braun: Since items six and seven show the same score, what prompted the cut off?

Hannah Cruz: My understanding was item seven on board vetting was addressed during the meeting by the board members present.

Amber Cole: The workshop included a debate on what level of review the board conducts on items the council reviews. Alan Meyer and Lindsey Hardy offered clarity on what the board focuses on, which is not at the more detailed level of what the council reviews. We wanted to reflect that in the print out, but not list it as an agenda topic for the Conservation Advisory Council.

Hannah Cruz: Is this list of six in the right priority order for the council? Looking at the full list, do you see anything lower down the list that should be given higher priority?

Alan Meyer: My assumption was that we would still cover these low-priority topics, but with less focus.

Hannah Cruz: That's right. It sounds like the six topics here are accurately reflected as the highest priority.

Hannah Cruz: Is the sixth topic about delivery contracts?

Alan Meyer: It's about how contracts work between trade allies, Program Delivery Contractors and Program Management Contractors.

Holly Braun: The item on collaborative opportunities with partners feels more like an objective than a topic.

Hannah Cruz: For the benchmarking topic on what's working and not working nationally, Peter West and I have a question on how to bring in comparisons for other parts of the country. Would this be topically based, like looking at what others are doing around air conditioning? Or would it be at the level of measure or program design?

Dave Moody: I'm more interested in the measure-level.

Holly Braun: Both levels interesting.

Hannah Cruz: Because we could spend a lot of time doing this, we're looking for what it can help inform.

Warren Cook: Not all comparisons are useful to us.

Alan Meyer: The topic was about what's working or not working, *including* benchmarking.

Hannah Cruz asked Dave Moody if he would be interested in presenting on what the Bonneville Power Administration is doing. He said that it would be valuable.

Hannah Cruz: The topic on the budget and action plan process is near the end of this list. It was not highly prioritized by the council. It's important for us to present our strategies and assumptions that shape the budget each year, and to get feedback. We don't want to lose that. Steve Lacey will talk more about how we're implementing feedback. We still plan to bring our budget to the council, but we'd like to try a different approach that focuses on discussing drivers.

Kari Greer: How much budget detail do you need to bring here? As a utility, we get the details on a regular basis.

Lisa McGarity: For others on the council who do not represent utilities, it might be interesting to see and comment on the overall budget and big changes coming.

Hannah Cruz: It will take us a few tries to hit the right level of detail. We'd like to keep hearing your feedback.

Hannah Cruz: In the one-pager on meeting design, is there anything missing from this list?

Al Spector and Warren Cook: The list is well done.

Holly Braun: Can we have more time to give feedback on the one-pager?

Hannah Cruz: Yes. We can discuss more at the June meeting.

Holly Braun: Will we update the operating principles based on the draft meeting guidance document?

Hannah Cruz: Council members asked to add more guidance to the operating principles. Going forward, the operating principles and meeting guidance document will guide staff and the council.

Holly Braun: I missed the February meeting when the operating principles was discussed. I could use more time to review. If we eventually incorporate the new page into our operating principles, we don't need to finalize by June. I'd like to review more finely. It sounds like you're open to that.

Hannah Cruz: Yes, I will add this to the June agenda.

Lisa McGarity: Another thing to add is that since this was a new exercise. It should include a check-in to see how it's working. It could be halfway through the year or at the beginning of next year.

Alan Meyer: Excellent exercise. We came out with a common understanding of why we're here. Over time, we had come up with different ideas. It's good to pull it back together again.

4. Preliminary Changes to 2019 Budget Development Schedule

Director of Operations Steve Lacey presented a high-level overview of draft changes to the development and engagement schedule for the upcoming 2019 budget process, which begins in summer 2018. Steve noted staff is taking into account feedback received from the council over the past several months and proposing incremental improvements to the 2019 budget process.

Warren Cook: This approach eliminates the previous pinch point of having to get a draft budget out to the Conservation Advisory Council and Renewable Energy Advisory Council early in October that won't be same as what the board sees in November.

Amber Cole: Everyone will get a better, fuller picture by looking at the same material at the new board workshop in mid-October where the advisory councils and others are encouraged to attend.

Steve Lacey: It will be a more engaging process for the board.

Holly Braun: If the packet comes out on October 10, we'll have a week to review it before the workshop. A week is good, we just have to stick to it. The workshop helps flesh out questions, and then we have two more weeks to comment.

Amber Cole: This timing is experimental. We can get you a detailed schedule so you can plan and set time aside.

5. Public Comment

There were no public comments.

6. Meeting Adjournment

The meeting adjourned at 4:00 p.m. The next Conservation Advisory Council meeting is Wednesday, June 20, 2018.