

Commercial Advisory Committee (CAC)
Thursday, May 9, 2019
NEEA Office, Portland, OR



Committee Attendees:

In Person:

Michelle Lichtenfels – Bonneville Power Administration
Oliver Kesting – Energy Trust of Oregon
Mark Lensen – Puget Sound Energy
Nancy Goddard – Pacific Power

On Phone:

Katie Pegan – Idaho Office of Energy & Mineral Resources

Mattias Jarvegren – Clallam County PUD
Lorri Kirstein – Avista Utilities
Shelley Martin – Idaho Power
Joe Fernandi – Seattle City Light
Deb Martin Young – Northwestern Energy
Tucker Kramer – Northwestern Energy
Natasha Houldson – Tacoma Power
Bill Hibbs – Clark PUD
Sheree Willhite – Idaho Power

NEEA Staff: Emily Moore, Alisyn Maggiora, Maria Alexandra Ramirez, Elaine Miller, Maria Murphy, Debbie Driscoll, Anne Curran, Warren Fish, John Jennings, Bing Liu

Guests: Neil Bulger, Principal, [Red Car Analytics](#)

Resources

- **Packet link on neea.org:** <https://neea.org/advisory-committee-documents/cac-q2-2019-packet>
- **Slides link on neea.org:** <https://neea.org/advisory-committee-documents/q2-2019-cac-slides>
- **Meeting Recording:** <http://neea.adobeconnect.com/ps0s4pepyb86/>

Welcome, Introductions, and Housekeeping Items

Maria Alexandra Ramirez (NEEA) introduced the meeting and provided the overview. Refer to [slides 2-4](#) and page 2 in the [packet](#) for greater detail. If you have questions about the meeting, logistics, or general thoughts, please contact Maria Alexandra (MARamirez@neea.org).

- A. Welcome
- B. Meeting [packet](#) review; see page 2 for links to newsletters and past meeting notes
 - 1) CAC Conference Coordination p.14
 - 2) Advisory Committee Streamlining– Streamlining discussion underway at RPAC May 21, with recommendations going forward to the board June 4; talk to your RPAC member if you have questions, in particular between May 14-20. Considerations include opportunities for efficiencies while maintaining advising role, getting the right people involved in the right discussions at the right times, and transitioning from sector groups to product groups.
 - a) There was additional discussion about the importance and benefit of funder coordination to help funder program managers stay on top of NEEA activities; it was assured that this is a critical consideration and the ultimate intention is to ensure that our approach going forward is as efficient and effective as possible.

Portfolio Overview Updates

Emily Moore (NEEA) provided the overview, which included highlights on the commercial portfolio and the 2019 workplan for impending program milestone votes. *The desired outcome is for committee members to be aware of key updates on commercial programs and planning for NEEA's Cycle 6. Refer to [slides 5-15](#) and pages 3-6 in the [packet](#) for greater detail. If you have questions about this presentation please contact Emily (EMoore@neea.org).*

Overview Topics w/ Key Discussion Points, Action Items & Decisions:

- A. Commercial Portfolio Highlights
 - 1) Staff Updates:
 - a) Natalie Fish officially in program management role for Commercial Real Estate and Window Attachments
 - b) Amanda Showers new program coordinator; was NEEA admin previously
 - 2) Portfolio Highlights:
 - a) Reduced Wattage moving to Transition Complete this quarter; Elaine will discuss later in the meeting
 - b) NEW: Commodity LEDs and Midstream Lighting – Elaine will discuss later in meeting
 - 3) Initiative Highlights:
 - a) See slides and packet for greater detail
 - b) Attachments Energy Rating Council (AERC) and Windows – now dedicating more focus on commercial products, in particular Secondary Glazing Systems and Low-e Storm Windows. Also seeing more manufacturers at the table. Expect to see an in-depth update on this initiative in Q3.
 - c) Extended Motor Products: Data collection complete and case study opportunities emerged in the process of completing the pumps savings validation research; you may hear from us in the near future on program coordination points; pumps research results will be shared with the XMP Technical Workgroup in Q3 (webinar scheduled for July 22); we are testing a market shift strategy based on the Hydraulic Institute Energy Rating Label this year with four participating pump distributors.
 - d) Technical contractor on board for High-Performance HVAC program
 - e) Luminaire Level Lighting Controls (LLLC): Focus on rolling out 1 day training in partnership with Lighting Design Level and hosting utilities
 - f) Top Tier Trade Ally: First NXT Level 2 designee on board
 - g) Commercial Real Estate (CRE): Program ending this year; tools and resources will be transition to the BetterBricks platform going forward. It's likely there will be an update discussion on this topic in Q3.
 - h) C&I Strategic Energy Management (SEM): Expect to have a proposed budget/scope with participating funders by the end of the month, stipulating how this work will move forward in Cycle 6 (2020-2024). Debbie will host a session at Efficiency Exchange on SEM focused on planning efforts for the program.
- B. Reminder of key areas for collaboration (slide 14)

Reduced Wattage Lamp Replacement (RWLR) Transition Complete Milestone

Elaine Miller (NEEA) provided the overview. *The desired outcome is to inform the Committee on final outcomes of RWLR, awareness of RWLR transition to Long-term Monitoring and Tracking and Distributor Platform leverage opportunities. Refer to [slides](#) 16-32 and pages 7-8 in the [packet](#) for greater detail. If you have questions about this presentation, please contact Elaine (EMiller@neea.org).*

Overview Topics w/ Key Discussion Points, Action Items & Decisions:

- A. ILC refresh/reminder – What does it mean to Transition Complete (TC)?
 - 1) NEEA Directors approved this transition last week; RPAC and Board will have opportunity for input/feedback in coming weeks.
 - 2) TC = End of active market intervention phase of program; program has met our exit criteria (at this point) and engagement shifts to data collection and market monitoring
- B. Overview

- 1) At Q1 2019, at 53% market share among participating distributors; estimate total market share could be 35-45%, maybe even higher, hard to know.
 - 2) TLED take-off in 2015 thanks to significant utility incentives
 - 3) Have 23 partners now spanning a breadth of distribution models
 - 4) Regional Equity: Strong for more rural utilities; see major shifts in adoption b/w 2017 and 2018 – many utilities dropped TLED incentives in 2018 at midstream level, likely reducing the competition and boosting sales on the low-watts.
 - 5) Overall volume on lamp sales has declined, so chipping away at smaller and smaller pieces of the pie – reason for transitioning this program sooner than anticipated (end 2020).
- C. RWLR Timeline Review
- D. Accomplishments and Challenges
- E. Learnings
- 1) Data feedback loops with distributors were instrumental for understanding at a regional level what the market was doing, as well as to create better visibility into opportunities they couldn't see otherwise.
 - 2) Corporate-mandated conversions drove large increases in market penetration; was never able to get Grainger on board.
- F. What's Next
- 1) Transition Market Progress Evaluation Report (MPER) will be available in June
 - 2) Distributor Platform
 - a) Continued engagement enabling vast data collection with coordinated effort, significantly reducing costs
 - b) Supporting midstream pilots with Seattle City Light and Snohomish PUD
 - c) Inform utilities on regional opportunities, leverage experience across other NEEA programs (i.e. LLLC and XMP)
 - 3) Achieving some of the most cost-effective, cheap savings
- G. Questions and Feedback
- 1) NorthWestern interested in monitoring as time goes along; concerned about small rural markets becoming dumping ground for less efficient products.
 - 2) This will be shared with RPAC on May 21; if you want to offer any observations, etc to your RPAC member, please do so by that time.

Utility Share-outs/Round Robin

Committee members shared out current activities within their organizations since last meeting. Key highlights or announcements that may impact the region included:

- A. Energy Trust looking to hire a couple program coordinators on the commercial side, seeking admin and data management experience. Would be a contract position. If you know of anyone, send them Oliver's way.
- B. BPA updated measures for new implementation manual on their website (effective Oct 1); going to a rate period lighting calculator.
- C. Idaho Office of Energy & Mineral Resources holding public hearings in June and Aug; expect to get final legislative sign-off by end of year to get 2018 code implemented in 2020.
- D. Tacoma Power concerned about impact Washington HB1257 will have on commercial buildings >50k sqft in their territory; may shift how they need to work with these customers on energy efficiency. Utilities will pay incentives. There will be some overlap with existing legislation.

High Performance HVAC Initiative Update

Maria Murphy and John Jennings (NEEA) provided the overview and status updates. Guest presenter, Neil Bulger of Red Car, presented economic analysis scenarios. *The desired outcome is to build an understanding*

of progress to-date and current program activities. Refer to [slides 42-60](#) and pages 9-11 in the [packet](#) for greater detail. If you have questions about this presentation please contact Maria (MMurphy@neea.org).

Overview Topics w/ Key Discussion Points, Action Items & Decisions:

- A. Refresher of Very High Efficiency (VHE) Dedicated Outside Air Systems (DOAS)
 - 1) Couples High Efficiency (HE) Heat Recovery Ventilation (HRV) with HE heating and cooling; the secret to the savings is the system approach.
 - 2) Separating heating/cooling from ventilation allows for optimization of each function and substantial downsizing of htg/cooling system because ventilation can be approximately 30% of load. Linchpin to high savings in VHE HRV though, which limits or eliminates (depending on climate) supplemental heating and cooling of the ventilation air.
 - 3) Seeking to get additional qualifying HRV products into the market; currently only manufacturer is Ventacity.
 - 4) MT Goal: VHE DOAS is common practice for energy efficiency and indoor air quality in existing and new small and medium commercial buildings in the Northwest
- B. Status Updates
 - 1) Pilot projects (8)
 - a) Five are complete, with published case studies, technical report with analysis and two page system overview on BetterBricks:
 - i.) [Immix case study](#) in Portland, OR
 - ii.) [Ecotope case study](#) in Seattle, WA
 - iii.) [Oregon Dept of Fish and Wildlife case study](#) in Corvallis, OR
 - iv.) [American Dream Pizza case study](#) in Corvallis, OR
 - v.) [King County Airport case study](#) in Seattle, WA
 - vi.) [Pilot Project Summary Report](#)
 - vii.) [Very High Efficiency DOAS system overview](#)
 - b) Seeing approximately 40% whole building savings on these, and approximately 60% HVAC savings.
 - 2) Market characterization Update
 - a) Key Findings
 - i.) There is a spectrum between planned and emergency replacements (emergency replacements comprise about 60% of replacements)
 - ii.) First cost is a driver, but not the only one
 - iii.) Market actors are aware that high efficiency HVAC exists, but it's unclear how to define it
 - iv.) Inertia is prevalent in the HVAC market; education, training, in-field support are key to overcoming it
- C. Economic Analysis of DOAS scenarios (cost and savings) (Neil Bulger)
 - 1) Objective: Analyze costs and benefits of a range of HVAC configurations at varying efficiency levels including VHE DOAS
 - 2) Will distinguish between gas and electric savings going forward
 - 3) Findings
 - a) VHE DOAS and Mid-Tier DOAS were found to have a positive net present value (NPV) over the life of the equipment (20 yrs).
 - b) VHE DOAS compared with Mid-Tier DOAS has higher annual energy cost savings and reaches positive net present value one to three years faster, depending on climate and building type.
 - c) Medium efficiency heat recovery ventilator equipment in the Mid-Tier is often lower efficiency equipment with add-on components. These are less frequently specified and marketed, leading to low market adoption.

D. Next steps

- 1) Revise Economic Analysis report and make available to CAC and their technical staff.
- 2) Localized strategy design and testing ready early next year
- 3) Continuing to gather data - if you have leads please send them to Maria

Codes & Standards Update:

Bing Liu (NEEA) provided an overview of current commercial market strategy efforts. *The desired outcome is to inform Committee members about key updates on codes and standards work. Refer to [slides 62-68](#) and [pages 12-13](#) in the [packet](#) for greater detail. If you have questions about this presentation please contact Bing (BLiu@neea.org).*

Overview Topics w/ Key Discussion Points, Action Items & Decisions:

- A. Team Overview
- B. Codes = Buildings; building energy codes set the minimum energy performance for building components
 - 1) Goals:
 - a) Support regional efforts to enhance energy codes and lock-in market transformational measures in residential and commercial buildings
 - b) Develop new test rating method to truly measure energy savings in the field
 - 2) Additional codes work: code change proposals to the International Energy Code Council (IECC), state code adoption, education, training, technical support, new test rating methods, code compliance evaluation
- C. Standards = appliances and equipment; equipment and appliance standards are regulated by DOE, including over 65 products through the regulatory rulemaking process.
 - 1) Goals:
 - a) Supporting standards development and adoption is one of NEEA's key strategies in its efforts to increase market adoption of energy-efficient products.
 - b) NEEA collaborates with stakeholders to develop strategies for advancing higher standards for appliances and equipment at the federal level.
- D. Commercial Code Enhancement
 - 1) WA: Total System Performance Ratio - Washington utilities have expressed interest in exploring TSPR as a way to incentivize efficient commercial HVAC systems.
 - 2) OR: Data sharing
 - 3) ID: Case study
 - 4) MT: Best practices
 - 5) Commercial code compliance documentation [portal](#)
- E. Key Discussion Points / Decisions / Action Items
 - 1) Washington Commercial Code Evaluation study coming up; this research is being conducted to understand how new commercial buildings are being affected by code. NEEA staff will be in contact with building managers.
 - 2) **BPA interested in a more in depth codes and standards overview for their staff; Bing to follow up with Michelle.**

Wrap up/Feedback on Meeting

- A. Public Comments: None
- B. Committee Feedback:
 - 1) Appreciated education on codes and standards
- C. Next meeting: Q3 2019 CAC scheduled for August 6, 2019 at SeaTac.