



RETAC Q1 2023 Meeting Notes

March 30, 2023

9:00 a.m. – 11:45 a.m. (Pacific)

Microsoft Teams Webinar

Meeting Attendees

Todd Greenwell, Idaho Power

Josh Quinnell, MN CEE

Jack Zeiger, City of Tacoma

Andrew Pultorak, Puget Sound Energy (PSE)

Kenji Spielman, Energy Trust Oregon (ETO)

Matt Iris, Avista

Kevin Smit, NW Power & Conservation Council
(NWPCC)

Keshmira McVey, Bonneville Power

Administration (BPA)

Tom Osborn, Bonneville Power Administration
(BPA)

Ron Welch, Avista

Suzanne Frew, Snohomish PUD

NEEA Staff: Eric Olson, Mark Rehley, Geoff Wickes, Lynne Mosley, Kathryn Bae

Resources

- Agenda and Packet Materials: [Northwest Energy Efficiency Alliance \(NEEA\) | Q1 2023 RETAC Packet](#)
- Slide Deck: [Northwest Energy Efficiency Alliance \(NEEA\) | Q1 2023 RETAC Slide Deck](#)
- Q1 Emerging Technology Newsletter: [Northwest Energy Efficiency Alliance \(NEEA\) | Q1 2023 Emerging...](#)

Welcome, Announcements

2023 Meeting Dates:

- Q1 – Thursday, March 30
- Q2 – Tuesday, June 27
- Q3 – Thursday, September 21
- Q4 – Thursday, December 14

Upcoming conferences:

April:

4/11 - 4/13 – Washington, D.C. – [Better Buildings, Better Plants Summit](#)

4/19 – 4/20 – Nashville, TN – [EPRI Heat Pump Symposium](#)

4/24 - 4/28 – Arlington, VA – [Building Technology Office Peer Review](#)

May:

5/2 - 5/3 – Portland, OR – [Efficiency Exchange](#)

5/10 – 5/12 – Minneapolis, MN – [Getting to Zero Forum](#)

5/15 – 5/18 – Chicago, IL – [IEA Heat Pump Conference](#)

5/21 – 5/23 – New York, NY – [Light Fair 2023](#)

June:

6/8 - 6/9 – Boston, MA – [CEE Summer Session](#)

Product Council

Do you have a topic you would like to see NEEA cover in an upcoming Product Council? Visit [Northwest Energy Efficiency Alliance \(NEEA\) | Product Council Submit...](#) to submit your idea, or contact productcouncil@neea.org.

Upcoming Sessions: *(Tuesdays, 10:30 a.m. – 12:00 p.m. PDT, unless otherwise noted)*

- We are in processing of confirming several sessions now; these will be announced via website soon.

Emerging Technology Update – Slipstream [\(slides 13-57\)](#)

- Slipstream is a non-profit, based in the Midwest that specializes in energy efficiency programs, project financing, stakeholder education and research and innovation. Funding sources are largely from federal, state, and municipal governments.
- Research Group provides a variety of services across both residential and commercial sectors, with focus largely EE, but expanding into more grid-flex work now.
- Deep bench in analysis and market research, as well as energy modeling and field measurement.
- **Residential electrification** is a big research focus currently, including contractor engagement, training, and market transformation, as well as supplemental field research; in addition, looking ahead to impact of full electrification through the lenses of equity and economics.
 - o Just completed 120V Heat Pump Water Heater (HPWH) pilot (Midwest) and will be conducting a multi-state study to demonstrate in the field, beginning September 2023.
 - o Studying affordable housing with a view to lower energy burdens in areas of design/construction, and manufactured housing, and the non-energy impacts
 - o Study of Passiv Haus vs EnergyStar with ComEd; side-by-side comparison in multifamily new construction with disaggregated impacts in electrification, air tightness, envelope, etc. Led to development of an Affordable Housing New Construction program for ComEd.
- Extensive work in **Commercial Electrification**, to include small, medium (VRF, HP, dual fuel RTUs) and large commercial (central air-to-water HPs, strategic electrification), Grid-interactive Efficient Buildings and SMART buildings and homes.
- **Switched Reluctance Motors Project:**
 - o With more rotor poles vs stator poles, the HR-SRM provides improved efficiency, reduced torque ripple, and enhanced controllability.
 - o Efficiency + Control + Visibility = 61% (+/- 9) annual kWh saved.
 - o RTUs Study: Find the RTUs with high runtimes.
 - o Conducted interviews regarding installation and found:
 - Installation is different, but not harder – no qualifications beyond typical HVAC retrofit
 - Three-to-four hours of training online, and most felt proficient after first couple of installations.
 - Extra labor needs were mostly for motor controller and calibration.
 - Data visualizations help to do remote diagnostics.
- **Smart Valve Project Summary:**
 - o Smart Valves are pressure-dependent control valves that can accurately and stably control air handling unit supply air temperature via superior variable flow control.

- Additional sensors and cloud-based software platform provide real-time intelligence, optimization, energy analytics, and fault detection.
- Primary energy savings by increasing Delta T, which increased water flow rate and reduces pumping energy; tuning Delta T and flow rate leads to more precise leaving air temperature at the AHU's coil and reduces overcooling, saving chiller energy, and increasing Delta T increases return water temperature, improving overall chiller efficiency.
- Used these in a retrofit of one wing of a hospital that had expanded over time and was still experiencing Low Delta T, even after a significant retrofit of the chiller plant. Following Smart Valve installation, saw approximate savings of about 16% on chilled water system energy and at \$0.08/kWh, approximately \$50,000 annual savings on utility bill.

Product Council Tour & Demonstration ([slides 60-63](#))

- Originally created as a forum for stakeholders and manufacturers, among others, to share ideas, lab and testing results and to ask questions of experts.
- Process for submitting ideas to Product Councils was a multi-step process, often requiring several conversations between requestor and product team; schedule was not readily accessible, and materials from completed sessions were stored on internal servers, which required authorization to access. It was not a convenient process, and we subsequently saw submissions for new ideas decrease and frustration levels for participants increase.
- This past year, we revamped our submissions process and increased the public visibility of both the schedule and materials from completed sessions.
 - [Northwest Energy Efficiency Alliance \(NEEA\) | Product Council](#) – dedicated web page on neea.org where the schedule of upcoming sessions can be found, along with materials from past sessions.
 - [Northwest Energy Efficiency Alliance \(NEEA\) | Product Council Submit...](#) - online request form where anyone can request a topic for product council – just fill in the information you have and submit, and the team will follow-up on specifics and to schedule.
 - Can email productcouncil@neea.org with questions at any time.
 - Typically, sessions are held on Tuesdays, from 10:30 a.m. – 12:00 p.m. (PDT), but if needed, this timing can be adjusted, if sufficient lead time is provided with the request.
- Topic suggestions:
 - Advanced Exterior Lighting Controls
 - DOE Connected Communities
 - Heat Pumps and Industrial Applications
- We welcome suggestions anytime, even if you're not sure if your idea is suitable for a Product Council. We can work with you to determine the best course of action.

Closing Comments/Poll Results

Thank you for your feedback on our poll questions! Here are key points from each question:

- 1) What's one thing you appreciated about this meeting?**
 - a. Unhurried approach to agenda
 - b. Outside perspective on work conducted outside of region
 - c. Introduction to Smart Valves by Slipstream
 - d. Jack Zeiger – his presence, his engagement
- 2) What would you like to see at a future meeting?**
 - a. Flexible Load practices
 - b. Demand response and decarbonization
- 3) What's got you curious right now in the realm of energy efficiency?**
 - a. Nexus of EE and Flexible Load management
 - b. Federal funds and how we can leverage them.
 - c. Potential changes to efficiency metrics in response to decarbonization and emissions goals
- 4) What is your preference on in-person vs. virtual meetings moving forward?**
 - a. 45% - stay virtual.
 - b. 27% - move to hybrid/in-person.
 - c. 27% - no preference
 - d. Write-in suggestion to do one in-person per year, with rest online.

