

Integrated Systems Coordinating Committee Q4 2023

Day 1

Date	Monday & Tuesday, November 6 th & 7 th
Location	Webinar Only
Time	12:30pm – 4:15pm/ 8:30 – 12:00pm Pacific Standard Time
Webinar	MS Teams – See link in calendar invite or register here

OBJECTIVE + DESIRED OUTCOME: Collaboration on coordination and optimization of NEEA programs and related activities by (1) identifying and managing through potential implementation challenges between NEEA and local utility activities, and (2) identifying and seizing leveraging opportunities that can drive amplified market influence.

AGENDA (ALL TIMES PACIFIC)

Page #

12:30 – 1:20 pm	Welcome, Agenda, Packet Review, Housekeeping, Introductions	Anouksha Gardner	1-3
1:20 – 1:30 pm	ISCC Annual Workplan Check-in <i>2024 annual planning session Tomorrow (November 7th)</i> <i>Desired Outcome: Committee members are aware of plan and understand how to best engage.</i>	Alisyn Maggiora	7
1:30 – 2:05 pm	Topic Advanced Heat Pumps <i>Program updates post RPAC Vote, Apprise Committee of Stakeholder input, and 2024 planned program activities.</i> <i>Desired Outcome: NEEA PM to share on program updates.</i>	Suzi Asmus	5
2:05 – 2:15 pm	BREAK		
2:15 – 3:30 pm	Regional Roundtable <i>Committee members and NEEA program staff share program and organization updates, highlight areas of possible interest and coordination with others.</i> <i>Desired Outcome: All are updated on each other's activities and better understand what's happening across the region.</i>	All	--
3:30 – 3:35 pm	BREAK		
3:35 – 4:05 pm	Topic High-Performance HVAC <ul style="list-style-type: none"> An overview of PSE, BPA, and Energy Trust's measure, target applications, and, where applicable, market uptake <i>Desired Outcome: Learn and gain insights on DOAS-related Utility offerings</i>	Maria Murphy	6
4:05 – 4:15 pm	Recap, Next Steps, Adjourn	Anouksha Gardner	--

Integrated Systems Coordinating Committee Q4 2023

Day 2 – 2024 Annual Topic Planning

AGENDA (*All Times Pacific*)

8:30 – 8:45 am	Welcome & Orientation to Annual Planning Process
8:45 – 9:45 am	Luminaire Level Lighting Controls
9:45 – 10:30 am	High-Performance HVAC (VHE DOAS)
10:30 – 10:40 am	<i>BREAK</i>
10:40 – 11:30 am	Extended Motor Products – Pumps & Circulators
11:30 – 12:00 pm	Efficient Fans

Memorandum- *Agenda Items*

October 24, 2023

TO: Integrated Systems Coordinating Committee (ISCC)

FROM: Anouksha Gardner, Stakeholder Relations Manager

SUBJECT: Meeting Packet Agenda Items, Informational Updates and Additional Information

MEETING PACKET APPROACH

This packet continues the “tiered” approach:

- Tier-1 memos for active agenda items
- Tier-2 memos for informational updates on items not currently requiring agenda time.
- Tier-3 materials provided as additional detail for those interested, accessible via links in the Tier 1 and Tier-2 memos. All other Tier 3 materials are listed below.

AGENDA ITEMS (Tier 1)

- Page 1-2: Meeting Agenda
- Page 3: Meeting Packet Informational Updates
- Page 4: Meeting Topic Preparation Highlights
- Page 5: Memo: Regional Priority Topic - Advanced Heat Pumps (formerly Variable Speed Heat Pumps)
- Page 6: Memo: Regional Priority Topic - Conversation Re: DOAS-Related Utility Offerings
- Page 7: Memo: Annual Planning Process

UPDATES (Tier 2)

- Page 8: Memo: Program Swap for PCC & ISCC

SEMI ANNUAL PROGRAM ACTIVITY REPORTS

- Page 11-14: High-Performance Windows
- Page 15-18: High-Performance HVAC
- Page 19-23: Luminaire Level Lighting Control
- Page 24-27: Advanced Heat Pumps
- Page 28-31: BetterBricks

ADDITIONAL LINKS (Tier 3)

- [Q3 ISCC Meeting Notes](#)
- [2023 ISCC Workplan](#)
- [Q3 ISCC Agenda Packet](#), and [slides](#)
- [Q2 2023 Market Research and Evaluation Newsletter](#)
- [Q3 2023 Emerging Technology Newsletter](#)
- [Q2 2023 Codes, Standards and New Construction Newsletter](#)

ISCC Q4 2023 – Meeting Topic Preparation Highlights



Preparation for All Committee Items:

- Review packet, including agenda, informational updates and all memos. See additional preparation for specific agenda items below.

DAY 1

➤ **REGIONAL PRIORITY TOPIC - Advanced Heat Pumps**

Topic format is expected to be a share out by Program Manager Suzi Asmus regarding program changes since Q2.

Review Tier 1 memo on p.5 and **come prepared to receive an overview of:**

- (1) program updates post-RPAC vote;
- (2) an overview of stakeholder input received leading up to the vote; and
- (3) a preview of planned near term program activities.

➤ **ROUNDTABLE**

Committee Members & NEEA Program Managers will share highlights from their work, programs and/or organization since the June meeting.

Specific topics for Committee Members to consider highlighting include:

- a. Questions/thoughts on NEEA program activity reports
- b. Program and organizational updates
- c. Any questions of your peers?

➤ **REGIONAL PRIORITY TOPIC – High-Performance HVAC**

Topic format is expected to be shareout by PSE, BPA and Energy Trust regarding their DOAS-Related Utility Offerings

Review Tier 1 memo on p.6 and related measure files provided previously; **come prepared to hear and discuss:**

- (1) An overview of PSE, BPA, and Energy Trust’s measure, target applications, and, where applicable, market uptake;
- (2) Invite others in your organization who may work more closely with this effort and can contribute to/benefit from the topic.

DAY 2

➤ **Annual Planning Session**

The annual planning session will take place on the 2nd day of the Coordinating Committee Q4 meeting.

Review the survey results emailed with this packet, and the Tier 1 memo on p.6, and **come prepared on day 2 to:**

- (1) Engage in brainstorming discussions using Mural board. (No pre-engagement needed on Mural board, just follow along during the meeting)
- (2) Discuss annual planning survey answers
 - ✓ Assist with deciding which topics rank high in 2024
 - ✓ Discuss any additional topics mentioned in the survey

Memorandum – Agenda Item (Tier 1)

October 24, 2023

TO: Integrated Systems Coordinating Committee (ISCC)
 FROM: Suzi Asmus, Senior Program Manager
 SUBJECT: Advanced Heat Pumps (formerly Variable Speed Heat Pumps)

Our Ask of You:

Come to the November 6 meeting to hear details about the program changes since Q2. No other preparation is required.

Brief Overview:

For the Q2 committee meeting, the Tier 2 memo for the Advanced Heat Pump (formerly Variable Speed Heat Pump) provided notification to this committee of the August 29 Regional Portfolio Advisory Committee (RPAC) vote seeking to advance this program from the “Program Development” phase into “Market Development” (see Lifecycle map below) The RPAC voted in favor of the program advancement. At the November 6 meeting, Senior Program Manager, Suzi Asmus will provide an overview of the program as approved by the RPAC, an overview of Stakeholder input, and a preview of planned near term program activities.

Going forward, for 2024, the Advanced Heat Pump Program will be moving out of the Integrated Systems Coordinating Committee and into the Products Coordinating Committee to better align with committee membership roles and responsibilities.

Please contact [Suzi Asmus sasmus@neea.org](mailto:sasmus@neea.org) if you have questions about this memo.

PROGRAM LIFECYCLE STATUS



Memorandum – *Agenda Item (Tier 1)*

October 24, 2023

TO: Integrated Systems Coordinating Committee (ISCC)

FROM: Maria Murphy, Senior Program Manager

SUBJECT: Conversation Re: DOAS-Related Utility Offerings

Our Ask of You:

- Please review the files listed below, provided via email by Anouksha Gardner on 9/27/23 & 10/11/23, with your internal team and come to the meeting with any questions/comments.
 - BPA’s E/HRV measure (4 files)
 - Energy Trust’s VRF+ DOAS measure (1 file)
 - PSE’s VRF+ DOAS measure (2 files)

Context:

In Q1 2023, the NEEA team requested clarification on how the committee would like to address the following topic: *Regional sharing & leveraging of different approaches to define code baseline for this technology (Red Car Analysis)*. Based on committee feedback members opted to have NEEA convene a session to discuss DOAS-related incentive offerings available throughout the region. The conversation, originally scheduled for the Q3 ISCC meeting, was postponed to Q4 due to scheduling conflicts and/or lack of staff bandwidth from PSE, BPA and EnergyTrust, whose measures were to be discussed.

What to Expect/Prepare for Q4 ISCC Meeting:

In anticipation for this conversation in Q4’s meeting, those organizations provided their measure documentation to NEEA for distribution to committee members to review and provide feedback/questions prior to the meeting. Because committee members did not provide questions/feedback ahead of time, NEEA has asked PSE, BPA and Energy Trust to come with a 3-5 minute overview of their measure, target applications, and, where applicable, market uptake.

Please contact [Maria Murphy](#) if you have questions about this memo.

Memorandum – Agenda Item (Tier 1)



October 24, 2023

TO: Products & Integrated Systems Coordinating Committee Members
FROM: Anouksha Gardner and Alisyn Maggiora, Stakeholder Relations Team
SUBJECT: Nov 7 (ISCC) & Nov 16 (PCC) Annual Planning Sessions

The annual planning sessions to develop 2024 regional priority topics will take place on the second day of the Q4 2023 Coordinating Committee meetings. [The 2023 Annual Workplan](#).

What to Expect:

We will use the Mural board platform again to discuss and finalize topics; however, based on feedback from last year, this time Committee Members will not need to familiarize themselves with Mural in advance, nor will they need to do any activities on the Mural board during the session. NEEA staff will capture the necessary details on the board. **Our ask is that you follow along, engage in brainstorming discussions and help align on final topics for the 2024 workplan. You are welcome to include any program/product subject matter experts from your organization in the sessions.**

Process:

NEEA staff will pre-populate the mural board with the topic rankings and any additional topic ideas from the survey results. Each program will have allotted time for discussion, schedule below. We will start with NEEA suggested topics based on the survey rankings and create space to discuss any additional suggested topics offered in the survey. We may follow up with committee members about additional suggested topics before the sessions.

Please note: *The XMP Pumps & Circulators and Efficient Fans Programs (commercial/industrial focus) will be covered in the ISCC annual planning session; likewise, the Advanced Heat Pumps and High-Performance Windows (residential focus) will be covered in the PCC annual planning session.*

Schedule:

ISCC – Tuesday, Nov 7 (8:30am – 12pm Pacific)

TIME	TOPIC / PROGRAM
8:30 – 8:45	Welcome & Orientation to Process
8:45 – 9:45	Luminaire Level Lighting Controls
9:45 – 10:30	High-Performance HVAC (VHE DOAS)
10:30 – 10:40	Break
10:40 – 11:30	Extended Motor Products - Pumps & Circulators
11:30 – 12:00	Efficient Fans

PCC – Thursday, Nov 16 (8:30am – 12pm Pacific)

TIME	TOPIC / PROGRAM
8:30 – 8:45	Welcome & Orientation to Process
8:45 – 9:15	Consumer Products: Retail Products Portfolio
9:15 – 10:25	Heat Pump Water Heaters
10:25 – 10:35	Break
10:35 – 11:30	Advanced Heat Pumps
11:30 – 12:00	High-Performance Windows

Please contact the Stakeholder Relations Team [Anouksha Gardner](#) and [Alisyn Maggiora](#) if you have questions about the annual planning sessions.

Memorandum – *Informational Update (Tier 2)*

October 24th, 2023

TO: Integrated Systems and Products Coordinating Committee Members
FROM: Anouksha Gardner and Alisyn Maggiora, Stakeholder Relations Team
SUBJECT: Program Swap for PCC and ISCC: Residential and Commercial Program Alignment

What you need to know:

Advanced Heat Pumps and High-Performance Windows programs (residential focus) will move to the Products Coordinating Committee (PCC). The Extended Motor Products Pumps and Circulators (XMP), and Efficient Fans programs (commercial/industrial focus) will move to the Integrated Systems Coordinating Committee (ISCC), starting with 2024 topic planning.

Context:

In 2019 NEEA embarked on a streamlining process¹ for our committees to help reduce redundancy in roles and forums (advising & coordinating/work groups). At that time, NEEA also reorganized itself and its primary engagement strategies to better align with the market – thus creating “Products Groups” around which NEEA programs were organized. Three sector advisory committees (Residential/Commercial/Industrial) were then merged into two coordinating committees, organized by NEEA’s new product group categories: Products (standalone widgets) and Integrated Systems (technologies/systems that are interdependent). These product groups contain both residential and commercial/industrial programs. Most previous sector advisory committee members transferred to respective coordinating committees, and largely the ISCC became comprised of commercial/industrial focused stakeholder staff, and the PCC, residential stakeholder staff, respectively. Over the past four years, external coordination for the residential programs in the ISCC, and likewise, the commercial/industrial programs in the PCC, has been challenging for both NEEA program staff and committee members.

Based on the feedback received from the Coordinating Committee members and NEEA program managers, to better align with committee members’ sector-based composition (for the most part), we are reassigning our residential focused programs (Advanced Heat Pumps and High-Performance Windows) to the Products Coordinating Committee, and our commercial/industrial focused programs [Extended Motor Products Pumps and Circulators (XMP), and Efficient Fans] programs to Integrated Systems Coordinating Committee in 2024. We believe this will help improve coordination and engagement for the programs noted above.

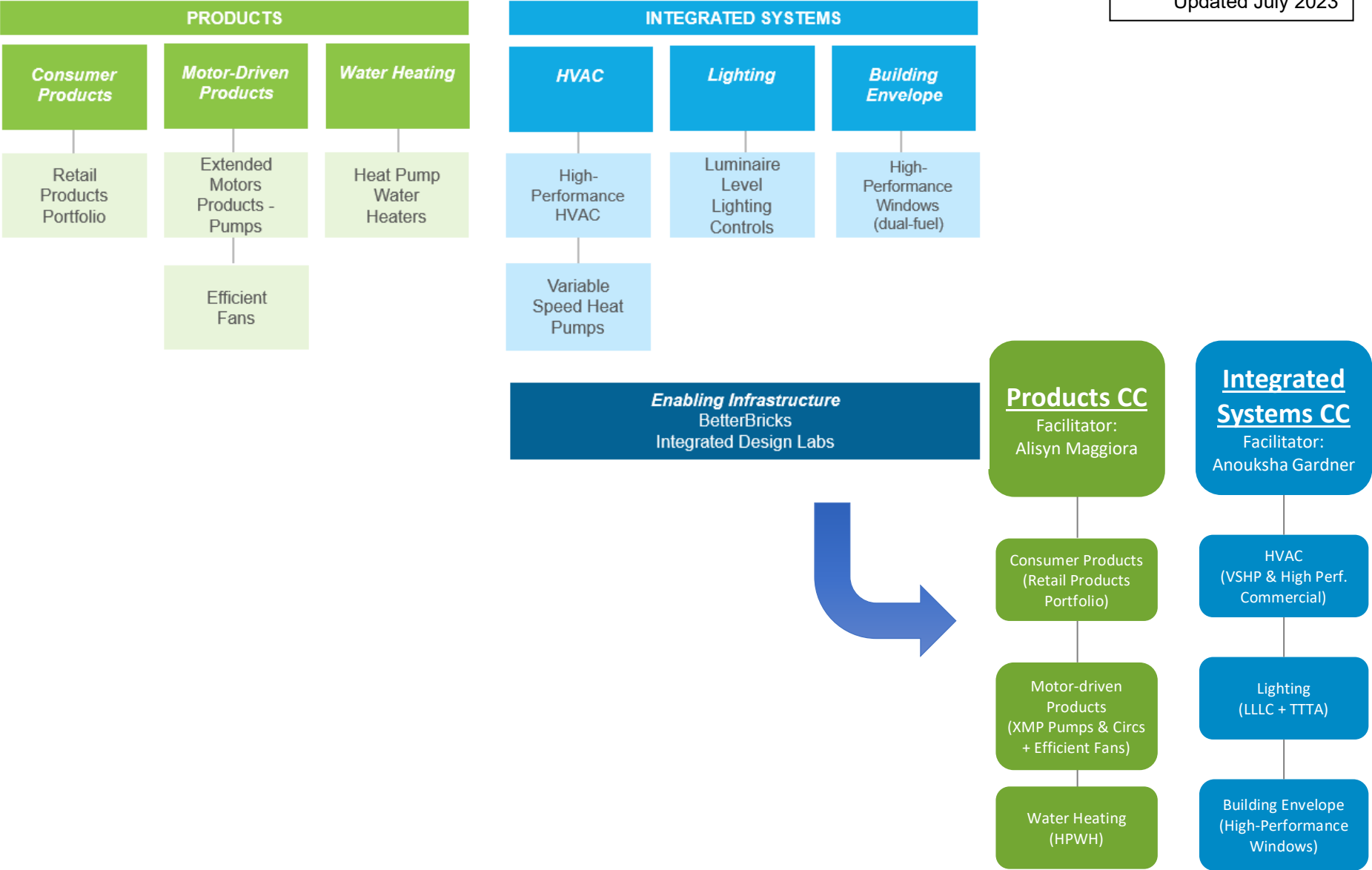
The swapped programs will participate in the new committee structure starting with 2024 annual topic planning process (day 2 of each Q4 2023 coordinating committee meeting), and all ISCC & PCC meetings in 2024 will maintain this revised structure.

Please contact [Anouksha Gardner](#) if you have questions.

¹ Streamlining process RPAC memo: <https://neea.org/img/documents/Q4-2019-RPAC-Packet.pdf#page=7>

NEEA's Product Groups and Coordinating Committees Structure

Updated July 2023



ISCC 2023 Annual Workplan Updated 9/21/23

Reminder: 75% of Agenda is dedicated to Priority 1 topics, 25% to Priority 2 topics

	Q1 2023 Feb 13 1-4p (Virtual)	Q2 2023 - Day 1 May 15 (virtual)	Q2 2023 - Day 2 May 16 (Day 2 canceled)	Q3 2023 Aug 14 (virtual)	Q4 2023 - Day 1 Nov 6 (virtual)	Q4 2023 - Day 2 Nov 7 (virtual)	
PRIORITY 1 TOPICS 75% of agenda time	<p>RES WINDOWS: High Perf Windows Topic A: Convene & Collaborate Panel Session with guest speakers; Leverage IRA funding to understand new opportunities for DOE funds. **TBD pending outcomes from federal funding workshop</p> <p>Topic D: Lessons Learned Panel Discussion: <i>Engaging with Multi-Family projects</i> Desired Outcome: Committee collectively shares lessons learned to further understand approaches to multi-family projects, the decision-making process and any equity lens offerings on retrofit projects</p>	<p>COMM LIGHTING: Luminaire Level Lighting Controls Topic C: Review current LLLC training approaches/ topics which ISCC is already implementing/ planning</p> <p>COMMERCIAL HVAC: High Perf HVAC Topic E: Discuss leveraging and negotiating NEEA's QPL → Address in Q3</p>	<p>RES HVAC: Advanced Heat Pumps (formerly Variable Speed HPs) Topic A: Regional cross-sharing: <i>Understand & align incentive requirements to leverage IRA funding. **Check with NEEA's Policy team → Hold on this; RPAC Federal Funding Coordination work group formed</i></p> <p>or</p> <p>Topic C: Regional sharing & leveraging of diff approaches to define baseline, address capacity issues/other benefits / programs → Address in Q4</p>	<p>RES WINDOWS: High Perf Windows Topic A: Leverage IRA funding to understand new opportunities for DOE funds → TBD pending Federal Funding Coordination workgroup</p> <p>COMMERCIAL HVAC: High Perf HVAC Topic A: Regional sharing & leveraging of diff approaches to define code baseline for this technology. There was broad agreement that NEEA would facilitate a utility roundtable to share out of how each of you were approaching cost-effectiveness and defining baseline for this technology. → Address in Q4</p>	<p>RES HVAC: Advanced Heat Pumps Program updates post RPAC Vote. Apprise Committee of Stakeholder Input and 2024 planned program activities.</p> <p>COMMERCIAL HVAC: High Perf HVAC Utility roundtable discussion on development of DOAS-related measures.</p>	Annual Planning	<p>LIST OF 2023 PRIORITY 1 TOPICS (In order of highest ranking, per survey)</p> <p>Res Building Envelope: High Performance Windows (HPWs) Topic D: Engaging with Multi-Family projects to understand approaches to multi-family projects, the decision-making process and any equity lens offerings on retrofit projects Topic A: Leverage IRA funding to understand new opportunities for DOE funds</p> <p>Commercial Lighting: Luminaire Level Lighting Controls (LLLCs) Topic C: Review current LLLC training approaches/ topics which ISCC is already implementing/ planning Topic E: Share learning by utilities from LLLC projects & key takeaways from LLLC MPE/R12</p> <p>Residential HVAC: Advanced Heat Pumps (AHPs) Topic B: Understand & align incentive requirements to leverage IRA funding Topic A: Understand new fed test stds & diff products in market / prog delivery Topic D: Regional sharing & leveraging of diff approaches to define baseline, address capacity issues/ other benefits / programs Topic C: Explore how to improve management of suppl heat in CC</p> <p>LIST OF 2023 PRIORITY 2 TOPICS (In order of highest ranking within each product group, per survey)</p> <p>Commercial HVAC: High Performance HVAC (VHE DOAS) Committee did not align on any Priority 2 Topics. NEEA's recommendation is to review the Priority 2 topics during main agenda time as shown on the left: Topic A: Local utility prog & MT regional prog share out on key findings (program and technical or market research); Recapping the year's coordination and looking toward 2024 Topic C: Lever fed, state, local funding (IRA, BIA, ES&ER) to promote syst approaches Topic B: Reg sharing & leveraging of diff approaches to define code baseline for this tech (Red Car Analysis) Topic E: Discuss capacity issues & shared learnings/ approaches to quantifying benefits & applying CE calc Topic D: Leverage/navigate NEEA's QPL</p>
PRIORITY 2 TOPICS 25% agenda	Overview and discussion of Priority 2 topics & their timeline for Q2-Q4	Hold time for Priority 1+2 topics (~30 min)		Hold time for Priority 2 Topics (~30 min)		Hold time for Priority 2 topics (~30 min)	
ROUNDTABLE TOPICS	<p>LLLCs: <i>Are utilities getting any traction with LLLC in the market?</i></p> <p>HPWs: <i>What are you doing to prepare market actors for E*v7?</i></p>						
KEY PROGRAM HIGHLIGHTS		Advanced Heat Pumps (AHPs) Potential Milestone Advancement into Market Development Q2 or Q3 2023 RPAC Vote			High Performance Windows (HPWs) Potential Milestone Advancement into Market Development Q4 2023 or Q1 2024 RPAC Vote		
PORTFOLIO UPDATES		Program Activity Reports			Program Activity Reports 2024 NEEA Ops Plan Highlights		
OTHER *Meeting dates, utility related announcements, etc..	EFX dates / registration	EFX Recap		NEEA Ops Plan webinar for RPAC	EFX topic solicitation Leadership Awards Confirm 2024 meeting dates		
					<p>Res. Building Envelope: High Performance Windows (HPWs) Topic E: Savings/ CE barriers Topic B: Review new E* V7 spec to understand opportunities re: NEEA's MT practice & utility prog strategies Topic F: Cross-sharing experiences from local + NEEA perspectives Topic C: Discuss product avail challenges in rural areas/ bulk purchase opportunity "Buyers Club"</p> <p>Commercial Lighting: Luminaire Level Lighting Controls (LLLCs) Topic D: Share summarized LLLC utility project data to gain insights on adoption of LLLC Topic B: Discuss utilities' experience & opportunities to expand advance controls to exterior applications Topic A: Review approaches for reporting LLLC energy savings, and RTF & utility methodologies Topic F: Discuss challenges with incentivizing LLLC, including CE</p> <p>HVAC Residential: Advanced Heat Pumps (AHPs) Topic E: Sharing on supply chain constraints & labor barriers</p>		

2023 Integrated Systems Coordinating Committee Annual Workplan

NEEA IDENTIFIED COORDINATION & LEVERAGING OPPORTUNITIES SUMMARY:

- ❖ Consider direct involvement in Partnership for Advanced Window Solutions (PAWS) utilities working group if you have a strong interest in windows measures at your utility; working group provides connection to other utility program staff and access to program design resources. If you are interested, contact Rick Dunn at rdunn@neea.org.

KEY UPDATES:

- **PROGRAM:**
The program is continuing the volume builder pilot in 2023 with three different builders than from 2022, to get builders used to installing High-Performance Windows and to encourage builders to choose High-Performance Windows for their standard offering in new homes in the Northwest.
- **ENERGY STAR®:**
[Version 7.0 spec update](#) went into effect October 23, 2023. Update will lower the northern climate zone specification to U-Factor 0.22. Manufacturers are prepared for this change.
- **EVALUATION:**
NEEA's [High-Performance Windows Baseline Review](#) is now on neea.org.

RESOURCES FOR UTILITIES:

- [Habitat for Humanity Case Study](#)
- [Triple-Pane Windows Flyer](#)
- [Partnership for Advanced Windows \(PAWS\) website](#)
- [PAWS Utility Playbook](#)
- [Storm Window and Insulating Panel Utility Playbook](#)
- [Now is the Time for Advanced Window Solutions](#)

Program Overview	
Program Manager	Tamara Anderson
Product Group	Building Envelope
MT Goal	Over 50% of windows sold in the Northwest have a U-Factor of 0.22 or less.
Program Status	Program Development
Product Description	High performance windows (HPW) are residential primary windows with two or more panes, a U-Factor of 0.22 or less, and a width and weight akin to standard double pane windows, making them easy to install in standard window sash and wall designs.
Sector(s)	Residential
Target Market(s)	New construction, existing homes, single family, multifamily, manufactured homes
Key Market Actors	<ul style="list-style-type: none"> • Primary window manufacturers • Glass/IGU manufacturers • Residential builders • Window suppliers, distributors, and retailers • Window installers
Implementation Contractors	<ul style="list-style-type: none"> • TRC Engineers, Inc. (field testing with builders)
Program Partners	<ul style="list-style-type: none"> • Partnership for Advanced Window Solutions (PAWS) • National Fenestration Rating Council (NFRC) • Lawrence Berkeley National Lab (LBNL)

The overall Market Transformation theory focuses first on stimulating national builder and consumer demand for HPWs, which will motivate manufacturers to then meet that demand with scaled production and subsequent price declines. In addition, pushing the ENERGY STAR specification to HPW performance levels will serve as the longer-term diffusion mechanism to reach the large existing home and multi-family window replacement market. Over time, the program will push for HPW performance levels to be included in building codes with the long-term goal of over 50% of windows sold in the Northwest at 0.22 U-Factor or less.

GOAL 1: Engage with builders in a pilot to increase their use of HPW as a standard offering in new homes.

Target: Three builders grow their use of HPW as standard offering in new homes in the Northwest by Q4.

Recent Progress	What’s Ahead	Coordination & Leveraging Opportunities
<p>Two of the four builders who participated in the volume builder pilot in 2022 have committed to continue their use of High-Performance Windows in future builds, as documented in the exit interviews from the project and the 2022 final report. The other two builders who participated in the volume builder pilot for 2022 will continue to consider High-Performance Windows as a path to energy efficient homes.</p>	<p>The program continued the volume builder pilot in 2023 with three different builders and have confidence that at least one more builder will continue their use of High-Performance Windows when building new homes in the Northwest.</p>	<p>NEEA will be sharing case studies from the projects with the Confederated Tribes of Grand Ronde and with Lennar soon on BetterBricks^{NW}.</p>

Goal 2: Engage with manufacturers to co-create strategies for scaling future supply of HPW to meet growing demand.

Target: Two leading manufacturers supplying the Northwest develop roadmap to scale production of HPW by Q2.

Recent Progress	What’s Ahead	Coordination & Leveraging Opportunities
<p>Seven large window companies dominate sales in the Northwest and are also active in California and Canada. Currently, triple pane windows are available and scalable to meet demand from Andersen, Marvin, Milgard, Pella, PlyGem and Prime (the latter two are brands owned by Cornerstone Building Brands).</p>	<p>A national manufacturer with regional manufacturing capacity is nearing commercial launch of its thin triple window.</p>	<p>None at this time.</p>

Goal 3: Finalize key intervention strategies and transition to Market Development.

Target: Program Advancement presented to RPAC and NGAC by Q4 of 2023, no later than Q2 2024

Recent Progress

The High-Performance Windows program is in the Program Development phase and is currently uncertain of the path forward to Market Development. Using currently available data—not including non-energy benefits—the High-Performance Windows program does not meet NEEA’s Benefit/Cost Ratio threshold of >1 at the measure level now, nor will it in the near future.

What’s Ahead

The program will remain in in the Program Development phase, with limited scope and resourcing in 2024. The High-Performance Windows program is not planning any new activities in 2024 (e.g., further recruitment for Volume Builder Project, scaling up market channel activities with manufacturer engagement) to develop the program or prepare for a transition to Market Development.

Coordination & Leveraging Opportunities

None at this time.

Program Lifecycle



MARKET ACTORS AND TIMING

		Market Actors									Utility Role
		Manufacturers	Manuf Reps/ Sales Agencies	Distributors / Window Suppliers	Retailers	Developers/ Builders	Contractors/ Installers	Architects/ Engineers	Designers/ Specifiers	End Use Customers/ Building Owners & Managers	
Key Program Activities	Lab & Field Testing				Q1-Q4						
	Data Collection & Assessment	Q2-Q4		Q2-Q4	Q1-Q4					Q2-Q4	
	Incentives				Q1-Q4						
	Market Channel Dev				Q1-Q4						
	Market Evaluation										
	Market Research										
	Marketing			Q2-Q4		Q2-Q4					
	Technical Support	Q1-Q4				Q1-Q4					
	Training										
	Technical Research										
	Other (specify)										

■ = Potential Coordination Opportunities (see Coordination & Leveraging Opportunities on p.2-3 for details)

Utility/Program Administrator Related Activities			
Check the box under the activities you are currently implementing			
Training	Incentives	Marketing	Other
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Notes:			

ISCC Q4 2023 HIGH-PERFORMANCE HVAC ACTIVITY REPORT

NEEA IDENTIFIED COORDINATION & LEVERAGING OPPORTUNITIES SUMMARY (SEE PP. 2-4 FOR DETAILS):

- ❖ NEEA technical support still available to encourage VHE DOAS on potential HVAC upgrades
- ❖ [Technical analysis](#) from product definition work available to inform potential alliance partner E/HRV incentive development
- ❖ Leverage growing number of program materials and coordinate on updates/additions

KEY UPDATES:

- ❖ **PROGRAM:**
- **Updated!:** [Very high efficiency DOAS system requirements](#) revised to include minor clarifications on several requirement elements & ‘Compliant’ heat/energy recovery equipment list² (pg 7) includes *six manufacturers and over 60 qualifying products*.

ADDT’L RESOURCES FOR UTILITIES:

- [Very High Efficiency DOAS Comprehensive Design Guide](#) revised to integrate last two years of market and technical learnings.
- [Energy Modeling Guide for Very High Efficiency DOAS](#) provides a resource for energy analysts and design consultants to address gaps to more accurately represent gaps in annual energy modeling
- [Calibrated Energy Savings for Very High Efficiency DOAS in Multi-Family Housing](#) report provides an initial investigation of the energy benefits of using this system approach in multi-family building applications
- [ACEEE 2022 Summer Study Paper](#) which provides performance summary of all 12 demonstration projects completed within NEEA’s target market(s)
- [Report on COVID-19 Risk Reduction Strategies and HVAC System Energy Impact](#)
- [VHE DOAS Introduction](#) and [2-page fact sheet](#)
- [Short animated video](#) about very high efficiency DOAS - How it works and why it matters

Program Overview	
Program Manager	Maria Murphy
Product Group	HVAC
MT Goal	The majority of eligible buildings will use very high efficiency DOAS system approach in both new construction and renovation projects.
Program Status	<ul style="list-style-type: none"> • Market Development (August 2022) – see p. 4
Product Description	Very high efficiency DOAS is an approach that pairs a very high efficiency heat/energy recovery ventilator (HRV/ERV) type of DOAS with a high efficiency heating and cooling system, while following set design principles that optimize efficiency.
Sector(s)	Commercial
Target Market(s)	Existing Buildings and New Construction; specifically, Schools, Offices and Retail
Key Market Actors	<ul style="list-style-type: none"> • HVAC manufacturers • HVAC vendors (Manufacturer’s Representatives/Distributors) • HVAC designers (architects, engineers, design build firms, etc.) • Building owners and managers
Implementation Contractors	<ul style="list-style-type: none"> • Cadeo Group, HRV/ERV Manufacturer outreach and Supply Chain Teams implementation • Energy 350, Lead contractor on technical support • New!: Limited RFP for outreach support being issued in late April

² Equipment on the *compliant* list has been independently tested, and those units on the *pending compliance* list are awaiting independent testing but have been validated using manufacturer-provided data.

* *Based on current project commitments, the program team estimates meeting the threshold of two projects by Q2 2023 versus originally targeted four. More detail provided in ‘Recent Progress’*

KEY 2023 OPERATIONS PLAN ACTIVITIES – click [here](#) for link to current Operations Plan (p 51-55)

The High-Performance HVAC program is focusing on informing design of market intervention activities associated with its first area of focus- an HVAC systems approach called very high efficiency DOAS. Key areas of focus for 2023 include (1) ramping up market engagement through NEEA’s midstream incentive strategy with manufacturer’s reps/distributors and HVAC design team participants more generally (2) Continuing to grow the E/HRV Complaint Products List (CPL) and (3) continue generating market and performance data to inform codes.

GOAL 1) Educate and motivate early adopter manufacturer’s reps/distributors to promote the system approach
Target: Six agreements in place with manufacturer’s rep/distributor of compliant E/HRVs by Q2 2023

Recent Progress	What’s Ahead	Coordination & Leveraging Opportunities
<ul style="list-style-type: none"> All six agreements signed by end of Q1 2023 & held initial kick off meeting with all participants Program team working to determine and potential pipeline of projects 	<ul style="list-style-type: none"> TBD support for participant events and/or activities 	<ul style="list-style-type: none"> TBD. NEEA’s agreements are structured to support mid-stream incentives and proposals from manufacturer’s reps/distributors to integrate support for the system approach into their work. If/where there the NEEA team sees an opportunity to include local utility partners, Maria Murphy will reach out.

GOAL 2) Raise supply chain and end-user awareness of the system approach, and its significant cost savings and non-energy benefits
Target: 8 featured events in collaboration with alliance partners, key industry and/or professional/ trade organizations

Recent Progress	What’s Ahead	Coordination & Leveraging Opportunities
<ul style="list-style-type: none"> Presentation for North Carolina State Agency Energy Managers- 5/25 Engineers for a Sustainable Future- 5/9 Washington Association of School Business Officials (WASBO)- 5/5 Miller Hayashi Design Workshop for Local Gov’t Building- 8/22 Miller Hayashi Presentation on Multiple Whole Building Efficiency Strategies- 9/20 ASHRAE Puget Sound Chapter Meeting- 9/21 	<ul style="list-style-type: none"> Washington Association of Maintenance and Operation Administrators (WAMOA) Annual Conference- 10/4 ASHRAE Spokane Chapter Meeting- 10/12 ASHRAE Boise Chapter Meeting- 11/8 AEE Columbia River Chapter Meeting- 11/16 	<ul style="list-style-type: none"> The Program team will coordinate with utility partners through NEEA’s BetterBricks relationships where applicable. For program-specific partnership opportunities, Maria Murphy will coordinate with local utility partners.

GOAL 3) Increase availability of qualifying E/HRVs

Target: At least 2 new capacities, 2 new price points or 2 new manufacturers with eligible equipment

<p>Recent Progress</p> <ul style="list-style-type: none"> Program team included the first lower-cost ventilation model in NEEA's compliant product list in Q1 2023 	<p>What's Ahead</p> <ul style="list-style-type: none"> Team will continue engaging with manufacturers to build the compliant products list 	<p>Coordination & Leveraging Opportunities</p> <ul style="list-style-type: none"> ❖ N/A
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GOAL 4) Provide market data and evidence to influence the advancement of local, state and federal codes

Target: 1 revised code change proposal submitted for ASHRAE 90.1-2025 development process

<p>Recent Progress</p> <ul style="list-style-type: none"> Informed whole box E/HRV test procedure development being done with Canadian Standards Association (CSA) with results from NEEA-sponsored lab-testing. 	<p>What's Ahead</p> <ul style="list-style-type: none"> Team will monitor progress of test procedure development 	<p>Coordination & Leveraging Opportunities</p> <ul style="list-style-type: none"> ❖ N/A
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MARKET ACTORS AND TIMING

		Market Actors									Utility Role	
		Manufacturers	Manuf Reps/ Sales Agencies	Distributors	Retailers	Builders/ Developers	Contractors/ Installers	Architects/ Engineers	Designers/ Specifiers	End Use Customers/ Building Owners & Managers		Other (specify)
Key Program Activities	Lab & Field Testing											
	Data Collection & Assessment											
	Incentives		Q1-Q4	Q1-Q4								
	Market Channel Dev	Q1-Q4	Q1-Q4					Q1-Q4	Q1-Q4	Q1-Q4		Q1-Q4
	Market Evaluation											
	Market Research											
	Marketing											Q1-Q4
	Technical Support			Q1-Q4				Q1-Q4	Q1-Q4	Q1-Q4		Q1-Q4
	Training							Q1-Q4	Q1-Q4	Q1-Q4		Q1-Q4
	Technical Research											
Other (specify)										Q1-Q4 research to inform Codes		

= Potential Coordination Opportunities (see Coordination & Leveraging Opportunities on p.2-3 for details).

Utility/Program Administrator Related Activities			
Check the box under the activities you are currently implementing			
Training	Incentives	Marketing	Other
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Notes:			

NEEA IDENTIFIED COORDINATION & LEVERAGING OPPORTUNITIES SUMMARY (SEE PP. 2-5 FOR DETAILS):

- ❖ Identify opportunities for case study success stories
- ❖ Host and promote training sessions
- ❖ Distribute educational resources and leverage marketing materials
- ❖ Share market insights from utility incentive program experience
- ❖ Collaborate on event and speaking opportunities

KEY UPDATES:

- **PROGRAM:** Collaboration with manufacturers’ local sales channels to educate specifiers. Leverage of professional and trade organizations to increase LLLC acceptance. (see p. 2-3)
- **MARKET RESEARCH:** A second Market Progress and Evaluation Report will be published Q4 2023. Research on size of exterior market is expected to complete Q4 2023. A Key Assumptions Review of the energy savings model for LLLC is targeted to be completed in Q1 2024. [MRE newsletter](#) p.6
- **EMERGING TECH:** Integrated LLLC-HVAC controls study still on hold. The NEEA office installation is being studied as part of DOE’s Next Generation Lighting System work. [ET newsletter](#) p. 18

RESOURCES FOR UTILITIES:

- [LLLC Toolkit](#) for Alliance members
 - LLLC technical handout series with 10 topics
 - Customizable marketing collateral
 - Case Studies –Enumclaw High School, Southlander Business Park, Associated General Contractors of Washington, [Vision Profile Extrusions \(new\)](#)
- [BetterBricks LLLC](#) public facing hub, including Industry Voices interview series
- [LLLC Video Playlist](#) including Ask the Expert series

Program Overview	
Program Manager	Anne Curran
Product Group	Lighting
MT Goal	Adoption of LLLC becomes standard practice for commercial buildings, as the majority of lighting products come with embedded sensors and controls as the default option.
Program Status	<ul style="list-style-type: none"> • Market Development (March 2019) – see p.4 • Market Progress Evaluation Report #1 Q4 2021
Product Description	A type of wireless networked lighting control (NLC) that integrates controls and sensors into the luminaire, enabling communication with each other and transmission of data.
Sector(s)	Commercial, Industrial
Target Market(s)	Office, Schools, Healthcare, Warehouse
Key Market Actors	<ul style="list-style-type: none"> • Lighting manufacturers • Sales agencies (manufacturer representatives) • Distributors • Installation contractors • Lighting designers and engineers • Building owners and managers
Implementation Contractors	<ul style="list-style-type: none"> • Cadeo Group with Evergreen Consulting • C+C (marketing)
Program Partners	<ul style="list-style-type: none"> • Lighting Design Lab • Integrated Design Labs • Design Lights Consortium • DOE’s Integrated Lighting Campaign

KEY 2023 OPERATIONS PLAN ACTIVITIES – click [here](#) for link to current Operations Plan (p 63-68)

The LLLC program uses a multi-faceted approach incorporating specification development, market awareness building, training, utility program support, supply chain interventions, and integration with energy codes to transform the market so that LLLC systems become standard practice for commercial buildings.

GOAL 1) Increase promotion of LLLC through key manufacturer sales channels.
Target: 12 strategic engagements with specifiers via manufacturers' sales channels completed.

Recent Progress	What's Ahead	Coordination & Leveraging Opportunities
<ul style="list-style-type: none"> • The team has partnered year to date with local manufacturing representative agencies on 15 strategic engagements with specifiers. These include collaboration on both private lunch and learns and public events. 	<ul style="list-style-type: none"> • Continued engagement of manufacturers and their priority local representative agencies and distributors to ensure they are well positioned to champion LLLC • Continued collaboration with manufacturer representative agencies to motivate specifiers to consider LLLC for their projects 	<ul style="list-style-type: none"> ❖ Identify manufacturer reps and distributors that you would like to see prioritized ❖ LLLC program will reach out as local opportunities arise

GOAL 2) Influence leading specifiers who focus on key target markets to include LLLC in their ongoing business practices
Target: 10 lighting specifier educational offerings (resources or events) completed

Recent Progress	What's Ahead	Coordination & Leveraging Opportunities
<ul style="list-style-type: none"> • LLLC featured at industry forums: <ul style="list-style-type: none"> ○ LightFair, in collaboration with Pacific Northwest National Labs (PNNL) manufacturers Trane and Avion. ○ BOMA International Conference, in collaboration with DOE's Integrated Lighting Campaign ○ Idaho chapter of BOMA, in partnership with Idaho Power ○ DOE's Better Building Summit 	<ul style="list-style-type: none"> • Partner with leading lighting specifiers to serve as role models who are benefiting from including LLLC into how they serve their clients <ul style="list-style-type: none"> ○ Continue to seek market actors to feature in Influential Voices campaign • Feature early adopters in resources, earned media and awareness building with professional organizations <ul style="list-style-type: none"> ○ In collaboration with Snohomish PUD, continue promotion of case study on Vision Profile Extrusions and rollout new case study on Novanta ○ Explore additional case studies in collaboration with utilities • Support for training events being hosted by Trade Ally Network Northwest and Energy Trust of Oregon. 	<ul style="list-style-type: none"> ❖ Identify opportunities for additional case studies and Industry Voices spotlights ❖ Host an educational webinar for your trade allies and customers ❖ Borrow LLLC demonstration boards for events and training ❖ Promote <u>NXT Level</u> and host a jump start session for your trade allies ❖ Distribute educational resources included in <u>LLLC Toolkit</u> and in the <u>LLLC Video Playlist</u> ❖ Collaborate on event opportunities as they arise

- Northwest Facilities Expo
- Oregon School Facility Managers Conference
- Seattle 2030 featured LLLC case study on Associated General Contractors of Washington in their newsletter
- Collaboration with Lighting Controls Association to further distribute videos - Selling LLLC for Retrofits and Finding LLLC Solutions for Projects
- Completion of one additional demonstration board, for a total of 7
- Collaboration with utilities on their trade ally training events, including BPA Trade Ally Network NW, Pacific Power, Idaho Power and Energy Trust of Oregon
- Strong earned media coverage:
 - LEDs Magazine featured a story from Influential Voices campaign about a lighting engineer who embraced LLLC as a solution for her clients
 - Rollout of a second Influential Voices campaign resulted in articles about a nationally known lighting designer in LEDs Magazine and on Lighting Controls Association website
 - ECM published article on What to Consider When Finding and Selling LLLC Solutions for Retrofits

- Planning underway with utilities for 2024 trade ally training collaborations
- Production of two additional demonstration boards planned
- Development, in collaboration with Lutron, of an additional online training module
- Leverage professional organizations' events and resources events to reach target audiences
 - Joint Engineers Conference in MT, with NorthWestern Energy
 - Illuminating Engineering Society (IES) Oregon chapter, with Energy Trust
 - International Brotherhood of Electrical Workers (IBEW) Eastern Washington chapter, with Pacific Power and BPA's Trade Ally Network NW
 - Washington Association of Maintenance and Operations Administrators (WAMOA) in Yakima

GOAL 3) Increase visibility and demand for LLLC through strategic engagements

Target: Alignment with 5 partner organizations on LLLC focus

Recent Progress

- Consultations with Minnesota's Center for Energy Efficiency (CEE) as they develop their plans to launch a market transformation effort for LLLC.
- Discussions with Ameren Illinois on their plans to launch a market transformation effort for LLLC.
- Illuminating Engineering Society (IES) committee processes are underway to add LLLC to its Recommended Practices documents for offices (RP-1), libraries (RP-3) and educational facilities (RP-4) and to its Lighting Practices document (LP-6). This will increase visibility and credibility of LLLC as a solution among specifying engineers.
- Discussions with Design Light Consortium (DLC) on their tool development for streamlining networked lighting controls in small to mid-sized buildings.

What's Ahead

- Continued collaboration with MN CEE and Ameren Illinois so that respective market transformation efforts stay aligned and joint leverage opportunities are identified
- Continued participation in IES committee processes to incorporate LLLC in recommended practices.
 - Recommended Practices update for offices (RP-1) expected to be finalized late 2023 or early 2024.
 - Recommended Practices updates for Libraries (RP-3) and Education facilities (RP-4) expected in early to mid-2024
 - Lighting Practices document update (LP-6) expected to happen in early to mid-2024.
- Discussions with Design Light Consortium (DLC) on exterior LLLC

Coordination & Leveraging Opportunities


- ❖ Participate in Design Light Consortium (DLC) member meetings and committees. Contact Anne Curran if interested in getting more involved.
- ❖ Join an IES committee to help influence recommended practices. Contact Chris Wolgamott if interested in getting more involved.
- ❖ Work with your LLLC customers to get recognition for their projects from DOE's Integrated Lighting Campaign.

Program Lifecycle



MARKET ACTORS AND TIMING

		Market Actors									Utility Role	
		Manufacturers	Manuf. Reps/ Sales Agencies	Distributors	Retailers	Builders/ Developers	Contractors/ Installers	Architects/ Engineers	Designers/ Specifiers	End Use Customers/ Building Owners & Managers		Other (specify)
Key Program Activities	Lab & Field Testing											
	Data Collection & Assessment	Q1-Q4										Q1
	Incentives											Q1-Q4
	Market Channel Dev	Q1-Q4	Q1-Q4	Q1-Q4						Q1-Q4		
	Market Evaluation	Q1-Q2	Q1-Q2	Q1-Q2			Q1-Q2	Q1-Q2	Q1-Q2	Q2-Q3		
	Market Research	Q1-Q2	Q1-Q2	Q1-Q2			Q1-Q2	Q1-Q2	Q1-Q2	Q2-Q3		
	Marketing		Q1-Q4	Q1-Q4		Q1-Q4	Q1-Q4	Q1-Q4	Q1-Q4	Q1-Q4		Q1-Q4
	Technical Support											
	Training		Q1-Q4	Q1-Q4			Q1-Q4	Q1-Q4	Q1-Q4			Q1-Q4
	Technical Research											
	Other (specify)											

 = Potential Coordination Opportunities (see Coordination & Leveraging Opportunities on p.2-3 for details)

Utility/Program Administrator Related Activities			
Check the box under the activities you are currently implementing			
Training	Incentives	Marketing	Other
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Notes:			

ISCC Q4 2023 ADVANCED HEAT PUMP ACTIVITY REPORT

NEEA IDENTIFIED COORDINATION & LEVERAGING OPPORTUNITIES SUMMARY (SEE P. 2-3 FOR DETAILS)

- ❖ Please reach out to Program Manager Suzi Asmus with updates on any of your utility’s existing or planned residential HVAC field research or data analysis. NEEA is interested in any regional data to contribute to ongoing program validation.
- ❖ Join Advanced Heat Pump Coalition link and attend the December 20th webinar at noon Pacific. To hear presentations on projects the group will consider collaborating on.
- ❖ On November 17, join NEEA and other regional residential heat pump program managers and subject matter experts for an all day, in person design charette focused on current and future residential heat pump measure needs and possibilities for the NW region. Contact Program Manager Suzi Asmus to find out more.

KEY UPDATES:

- **PROGRAM:** On August 29 the Regional Portfolio Advisory Committee voted in support of the program formerly known as the Variable Speed Heat Pump Program to move from the Program Development phase of NEEA’s Program Lifecycle, into Market Development.
- **PROGRAM:** Throughout the summer NEEA staff participated in development of updates to the Residential Heat Pump test procedure and rating standard hosted by AHRI’s Unitary Small Equipment Standards Technical Committee (USE STC). The meetings addressed multiple near-term and long-term changes to the test procedure that will result in substantially more representative ratings and likely lead to improved efficiency.

RESOURCES FOR UTILITIES:

- [NEEP Cold Climate ASHP Product List](#)
- July and August Product Council recorded [presentations](#) on Advanced Heat Pump updates.
- NEEA’s heat pump research reports on [NEEA.org/resources-reports](#)

Program Overview	
Program Manager	Suzi Asmus
Product Group	HVAC
MT Goal	By 2030 the average residential and small commercial HVAC system installed in NW is 30% more energy efficient than the average system installed in 2020 through improved standards, ratings, and EnergyStar specifications, and through new product improvements that reduce dependence on contractor practices.
Program Status	Market Development (August 2023)
Product Description	Air source heat pumps with both compressors and fans that can vary their speed to meet heating and cooling demand (2 or more speed compressor, multispeed fans), available in several system configurations: central forced air, ductless, whole home multi split, micro, manufactured home packaged, packaged terminal and dual fuel. Systems must: 1) Meet EPA ENERGY STAR v6.1 certification requirements for heat pumps 2) Include one or more efficiency improvement
Sector(s) Target Market(s)	Residential All residential heat pump sales ≤65,000Btu
Key Market Actors	<ul style="list-style-type: none"> • HVAC manufacturers • HVAC distributors • National and other extra-regional efficiency partners
Implementation Contractors	<ul style="list-style-type: none"> • None at this time
Program Partners	<ul style="list-style-type: none"> • AHRI, BC Hydro, CEE, CSA, DOE, EnergyStar, EPA, Lincoln Electric System, Mass Save, MEEA, MN CEE, NEEP, NRCAN, NYSERDA, ORNL, PG&E, PNNL, Purdue University, Southern California Edison, UL, Xcel Energy

KEY 2023 OPERATIONS PLAN ACTIVITIES – click [here](#) for link to current Operations Plan (p 57-60)

In 2023, the program team is continuing its focus on improving standards and ratings, working with manufacturers to build in product improvements to increase installed efficiency, and reduce reliance on contractor practice. The program team is continuing validation work on identified improvements and building national alignment around identification, differentiation, and wider adoption of these advanced heat pumps.

GOAL 1) Improve test procedure and metrics to better differentiate product performance
Target: Complete Ratings representativeness project by Q4

Recent Progress	What's Ahead	Coordination & Leveraging Opportunities
<ul style="list-style-type: none"> Residential Heat Pump Rating Representativeness project issued the Phase 1 report and conducted Phase 2 lab testing. NEEA presented updates on this work at an August 15 Product Council. The recording is available here. Throughout the summer NEEA staff participated in development of updates to the Residential Heat Pump test procedure and rating standard hosted by AHRI's Unitary Small Equipment Standards Technical Committee (USE STC). The meetings addressed multiple near-term and long-term changes to the test procedure that will result in substantially more representative ratings and likely lead to improved efficiency. 	<ul style="list-style-type: none"> The Rating Representativeness Phase 2 lab testing report is expected by the end of 2023. The US Department of Energy is expected to use the resulting AHRI draft standard as the basis for a presumed federal rule making that will likely occur in early 2024. Work with utility, EE partners and the Regional Technical Forum to identify regional priorities for residential heat pump measures. Continue to work with utility and EE partners to gain alignment between CEE heat pump Tiers and EPA ENERGY STAR Most Efficient specifications 	<ul style="list-style-type: none"> On November 17, join NEEA and other regional residential heat pump program managers and subject matter experts for an all day, in person design charette focused on current and future residential heat pump measure needs and possibilities for the NW region. Contact Program Manager Suzi Asmus to find out more.

GOAL 2) Identify highest value product improvements for efficiency
Target: Complete product specification for at least 4 high value improvements

Recent Progress	What's Ahead	Coordination & Leveraging Opportunities
<ul style="list-style-type: none"> Finalized technical reviews and developed proposed workplans for three high value improvements: low load efficient (LLE), cold climate capable (CCC), and connected commissioning (CCX). 	<ul style="list-style-type: none"> NEEA plans to conduct additional validation research for low load efficient heat pumps with possible launch as early as Q4 2023. NEEA will continue gathering data and validating baseline and savings for full list of improvements. 	<ul style="list-style-type: none"> Schedule time with the program team to discuss any heat pump research or pilot projects your utility is currently conducting or planning, to identify points of coordination. Contact Program Manager Suzi Asmus.

GOAL 3) Increase market partner (both EE and industry) adoption of highest value improvements
Target: Three high value improvements gain manufacturer support (adopt or indicate plan to adopt)

Recent Progress

- In September, at the Consortium for Energy Efficiency Industry Partners Meeting, NEEA hosted a round table discussion with heat pump manufacturers to discuss connected commissioning systems and reporting to begin building industry support for this improvement.
- With NEEA's influence, AHRI's Unitary Small Equipment Standards Technical Committee (USE STC) (see Goal 1 above) included in their proposed changes to the test procedure and rating standard elements that address four of NEEA's identified improvements: adaptive defrost, standby losses, crankcase heater and low load efficiency. This committee includes major manufacturers.

What's Ahead

- NEEA is collaborating with Air Conditioning Contractors of American (ACCA) to form a technical working group to define what a sufficient connected commissioning system should include and what a commissioning report should provide.

Coordination & Leveraging Opportunities

- [Join](#) the Advanced Heat Pump Coalition and attend the December 20th at noon Pacific to hear presentations on projects the group will consider collaborating on.
- Reach out to NEEA to learn more about how these product improvements can benefit your 2024 program goals



MARKET ACTORS AND TIMING

		Market Actors									Utility Role	
		Manufacturers	Manuf Reps/ Sales Agencies	Distributors	Retailers	Builders/ Developers	Contractors/ Installers	Architects/ Engineers	Designers/ Specifiers	End Use Customers/ Building Owners & Managers		Other (EE orgs, DOE, EPA, etc.)
Key Program Activities	Lab & Field Testing	Q1-Q4									Q1-Q4	Q1-Q4
	Data Collection & Assessment	Q1-Q4	Q1-Q4	Q1-Q4							Q1-Q4	
	Incentives											
	Market Channel Dev	Q1-Q4		Q1-Q4								
	Market Evaluation											
	Market Research										Q1-Q4	
	Marketing											
	Technical Support	Q1-Q4										
	Training											
	Technical Research	Q1-Q4		Q1-Q4							Q1-Q4	Q1-Q4
Other (specify)												

= Potential Coordination Opportunities (see Coordination & Leveraging Opportunities on p.2 for details)

Utility/Program Administrator Related Activities			
Check the box under the activities you are currently implementing			
Training	Incentives	Marketing	Other
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Notes:			

ISCC Q4 2023 BETTERBRICKS ACTIVITY REPORT

NEEA IDENTIFIED COORDINATION & LEVERAGING OPPORTUNITIES SUMMARY:

- Share and amplify content; provide relevant topic suggestions
- Identify opportunities for case study success stories
- Provide content and/or participate in case studies
- Highlight key events and cross-promote when applicable
- Collaborate on event and speaking opportunities

KEY UPDATES:

- **Partnerships:** 2023 Partnership outreach and agreements in-process (see sidebar).
- **Resources:** BetterBricks updated and repackaged outdated resources to create a new Building Renewal Series of educational articles on the BetterBricks website (see below).
- **Market Intelligence Scan:** This is in progress and will propose strategic and innovative EE activities to better serve stakeholders in the Pacific Northwest to reach clean building targets.

RESOURCES FOR UTILITIES:

- [BetterBricks.com](https://www.betterbricks.com)
- Lighting Solutions [YouTube playlist](#)
- [LLC utility toolkit page](#)
- [XMP Smart Pump video](#)
- CRTU Field Study [final report](#)
- Building Renewal article series:
- [What is Building Renewal?](#), [Funding Your Building Renewal](#), [Importance of Measurement and Verification](#), [Recognizing and Mitigating Pitfalls](#), [Operations and Maintenance](#), [Marketing a High-Performance Building](#)

Program Overview	
Infrastructure Lead	Josh Pelham, Market Channel Manager, Building Professionals and Trades
Product Group	Enabling Infrastructure
Description	BetterBricks supports the alliance’s commercial and industrial programs by fostering market relationships and providing tools and resources to help raise market awareness and capability for energy-efficient products, services, and practices.
Sector(s)	Commercial, Industrial
Target Market Actors	<ul style="list-style-type: none"> • Architects and building designers • Engineers • Building owners and managers • Specifiers/system designers
Implementation Contractors	Cyclops (BetterBricks marketing)
Program Partners	Program Partners <ul style="list-style-type: none"> • U.S. Department of Energy: Better Buildings Initiative • Integrated Design Labs • BOMA OR • AIA OR • AIA Seattle • NEEC • Seattle 2030 • New Buildings Institute

KEY 2023 OPERATIONS PLAN ACTIVITIES – click [here](#) for link to current Operations Plan (pp. 101-104)

GOAL 1: Create new market engagement opportunities and develop deeper market understanding to support current and future MT efforts.

Target: Identify and partner with 3 influential market leaders to engage and educate commercial building market

Recent Progress	What's Ahead	Coordination & Leveraging Opportunities
<ul style="list-style-type: none"> BetterBricks continues to engage with key partners, including Seattle 2030, BOMA Oregon and NEEC. These conversations have provided salient market intelligence on the topic of building performance standards and are helping shape plans to support the market. BetterBricks expanded market engagements by sponsoring, exhibiting and presenting at the Smart Buildings Exchange Conference in Seattle, WA. BetterBricks sponsored AIA Montana's 2023 Design Awards and partnered with the local Montana State University Integrated Design Lab to give opening remarks. 	<ul style="list-style-type: none"> BetterBricks will be co-presenting on Building Performance Standards and solutions to meeting them with NEEC at the WAMOA Fall Workshop in October. BetterBricks will continue to monitor and track potential partner organizations to partner with new influential market leaders to engage and educate the commercial building market. Exploring partnerships with additional BOMA and AIA chapters across the region. BetterBricks will be using information gained in the market inventorying work to identify target partners with whom we have not previously or recently engaged. 	<ul style="list-style-type: none"> Recommend potential market partners and collaborations, as well as introductions via utility relationships. Share and amplify BetterBricks content and communications. Share tradeshow booth space and/or attend industry events together. Identify, flag and/or participate in success stories for potential case studies. Make us aware of your content and tools to which BetterBricks.com can help drive traffic. Link to and leverage BetterBricks.com as appropriate in your work. Partner with BetterBricks and/or program teams on trainings (identifying training opportunities, delivering trainings, promoting trainings, etc.). Provide info on your trainings and events for BetterBricks to amplify through its owned channels.

GOAL 2: Increase awareness, access, relevance, and utilization of BetterBricks resources to move the market toward higher performing buildings.

Target: Partner with program teams and/or market leaders to develop 7 new resources specific to whole building efficiency or integrated design

Recent Progress	What's Ahead	Coordination & Leveraging Opportunities
<ul style="list-style-type: none"> BetterBricks created and published 7 new resources, including: 1) four blog posts covering strategic energy management, pumps, and secondary windows, 2) two case studies, including a video case study featuring an LLLC installation in an industrial facility in Everett, WA, and 3) one new resource showcasing smart pumps. BetterBricks rolled out its new visual identity across existing materials and owned marketing channels. The new logo was also shared with market partners who help promote BetterBricks through their channels. 	<ul style="list-style-type: none"> The Alliance is deep into research design and planning to better understand decision-making processes and influencers for whole-building upgrades. BetterBricks will attend the several upcoming partner events, including the AIA Seattle Honor Awards, the AIA Oregon Architecture Awards, and the Joint Engineering Conference in Montana. BetterBricks continues to develop content related to whole building efficiency and integrated design to publish throughout 2023. 	<ul style="list-style-type: none"> We would welcome and appreciate suggestions about possible market partners and collaborations, as well as introductions via utility relationships Share BetterBricks communications to help boost attendance at speaking sessions/trainings Share tradeshow booth space and/or attend industry events together as possible Consider collaborating and sharing time at individual speaking engagements Consider collaborating on upcoming BetterBricks webinar series by participating and sharing information on available programs and incentives We are still interested in increasing collaborations in ID and MT. Please reach out with any ideas or contacts. Providing information/plans around utility partner E&T efforts can inform our best practice and inventorying work, adding more opportunities for collaboration

MARKET ACTORS AND TIMING

		Market Actors									Utility Role
		Manufacturers	Manuf Reps/ Sales Agencies	Distributors	Retailers	Builders/ Developers	Contractors/ Installers	Architects/ Engineers	Designers/ Specifiers	End Use Customers/ Building Owners & Managers	
Key Program Activities	Lab & Field Testing										
	Data Collection & Assessment										
	Incentives										
	Market Channel Dev						Q1-Q4	Q1-Q4	Q1-Q4	Q1-Q4	Q1-Q4
	Market Evaluation										
	Market Research										
	Marketing						Q1-Q4	Q2-Q4	Q2-Q4	Q2-Q4	Q2-Q4
	Technical Support										
	Training										
	Technical Research										
Other (specify)											

= Potential Coordination Opportunities (see Coordination & Leveraging Opportunities on p.2-4 for details)

Utility/Program Administrator Related Activities			
Check the box under the activities you are currently <u>implementing</u>			
Training	Incentives	Marketing	Other
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Notes:			