Advanced Heat Pump Coalition

All Member Webinar, November 17, 2026

TOPIC: AHPC Workgroup Updates

Agenda

General Information 10 minutes

- Advanced HP Coalition Intro
- Highlights

Workgroup Updates 60 Minutes

- WG#5 Commissioning
- WG#8 Dual Fuel
- CalMTA Room Heat Pump Collaborative

Webinar Objective: Increase collaboration and awareness of energy efficient heat pump market development, technologies, industry, and standards

A “Coalition of the Willing”

Goal

To increase research collaboration among energy efficiency organizations that are working to accelerate market adoption of advanced heat pumps

Membership

- ACTIVE = Participate in workgroups, guide and fund collaborative activities
- PASSIVE = attend webinars, help socialize what we learn

General Info

- Steering committee guides collaboration
  (Work Group Leads)
- NEEA provides administrative support
- NEEP provides cold climate heat pump performance database
- MEEA maintains website
  The Advanced Heat Pump Coalition

Brightest heat pump minds
from organizations such as these:



Workgroups

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2	**Roadmap and OEM Engagement**	Active	Christopher Dymond Lauren Eagan	Bi-monthly	Identifying and communicating shared utility priorities/needs to OEM community
3	**Contractor Best Practices**	Complete	Matt Christie Ben Schoenbauer	N/A	Identifying best practices to help program managers improve savings and satisfaction of heat pumps
4	**Heat Pump Only Homes**	Active	Matt Christie Mike Hedlund	Bi-monthly	Design criteria, HP spec, information campaign, polar vortex, quantifying peak demand
5	**Commissioning**	Active	Justin Margolies Rick Olson- Huddle Aaron Kwon	3-4x per year	Embedded commissioning, third party smart HVAC diagnostic tools, RTU SMART controls
6	**Load Flexibility**	Pending		n/a	Load shifting, HVAC command stack, (OpenADR, EcoPort), limit to 100A load
7	**Refrigerants**	DOE already has working groups to address this		n/a	Next transition to ultra-low GWP, limiting leakage, policy and code impacts
8	**Dual Fuel HP**	Active	Ben Schoenbauer Noe Contreras	Monthly	Existing furnaces with HP coil? What is the best HP for dual fuel? What are the controls and design recommendations?
9	**Multi-Head Systems**	Pending		n/a	What is the true performance of multi-head systems, how best to optimize, when to go ductless,
10	**Program Managers**	Active	Stephen O'Guin Jackie Albanese	3x per year	Share information about program approaches and best practices, find areas of collaboration

Workgroup #5
Connected Diagnostics for Commissioning

Co-Leads of Workgroup

Justin Margolies, Slipstream
Rick Olson-Huddle, Resource Innovations
Aaron Kwon, TRC

WG#5 – Description

Objective and Purpose

- Promote tools and equipment that use **connected diagnostics for commissioning** with emphasis on install quality, verification reporting, and value proposition and usability.
- Knowledge sharing among 3 areas:
  - Embedded commissioning capable heat pumps
  - Third party smart tools for commissioning
  - RTU SMART controls
- Identify opportunities for collaboration on:
  - Market research and field studies
  - Case studies
  - Program planning

2026 Activities

- 2026 Q1 NEEA Product Council demo
- Met 3 times

WG#5 Embedded Commissioning Updates

Embedded Commissioning

- Name change & published spec v.10 on BetterBuiltNW
- Two manufacturers awarded CEE Integrated Home Competition awards for their embedded commissioning systems at Industry Partners meeting
- Finalizing certification process (NLR) and working towards building QPL available for utility programs in 2027
- PNNL “round robin” testing with technicians to take place in Q2 of 2027 with strong emphasis on usability
- Conducting case studies to support value proposition



https://betterbuiltnw.com/assets/uploads/global-images/NEEA-BetterBuilt-AHP-ECX-Fact-Sheet_WEB.pdf

WG#5 Third Party Smart HVAC Diagnostic Tools Updates

Smart HVAC Diagnostic Tools

- Minnesota field study and Wisconsin market research
- Guide developed by Midwest Heating & Cooling Collaborative (MEEA) on the opportunity for contractors



https://mwcollab.org



RTU SMART Controls Collaborative

Rick Olson-Huddle, PE

Nov 17, 2026

CalMTA is a program of the California Public Utilities Commission and is administered by Resource Innovations.

Problem, Goals, and Objective



Improper economizer setup wastes 11%-34% cooling energy
- PG&E 2021

Honeywell Jade economizer

Prevalence of improper setup:

- "Economizers **failed to perform as intended in over 60%** of installations"- Jacobs 2004
- "**27% of economizers were not functioning-** even on newly-installed systems"- CPUC 2017
- **"Only 3 of 26 units were setup properly**." - PG&E 2021



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91% of RTUs in the field are dealing with 1or more significant faults

Cowen, 2004



Poor maintenance wastes 10-30%

– Katipamula, 2004

What if…

Day 1: We could make sure units were installed properly

Ongoing: When things went wrong, someone knew about it

Ongoing: Technicians could call in from off-site to troubleshoot and order parts before they rolled a truck

Ongoing: Utilities could connect directly to RTUs to reduce demand



“SMART” RTUs- what are they?



Start-up using an application on your device

Monitoring and **A**nalytics: when things go wrong, the RTU self-diagnoses

Remote **T**echnologies to let someone know there’s an issue, and to respond to **demand signals**

- SMART RTUs ship from the factory with these capabilities
- BMS not required, but allowed



Why a working group?

Build awareness about the need and availability of SMART RTUs

Build consensus (manufacturers, labs, EE orgs) about what's important to include in SMART RTUs

Develop spec that utilities can point to

Following in the footsteps of the AHPC residential team!

A **national** collaboration shows manufacturers the market potential

Long-term Goals

- Improve startup quality
- Increase insights into how the RTU is performing
- Support preventative maintenance
- Enable easier demand response

Added benefits

- Increase equipment lifetime
- Increased customer satisfaction

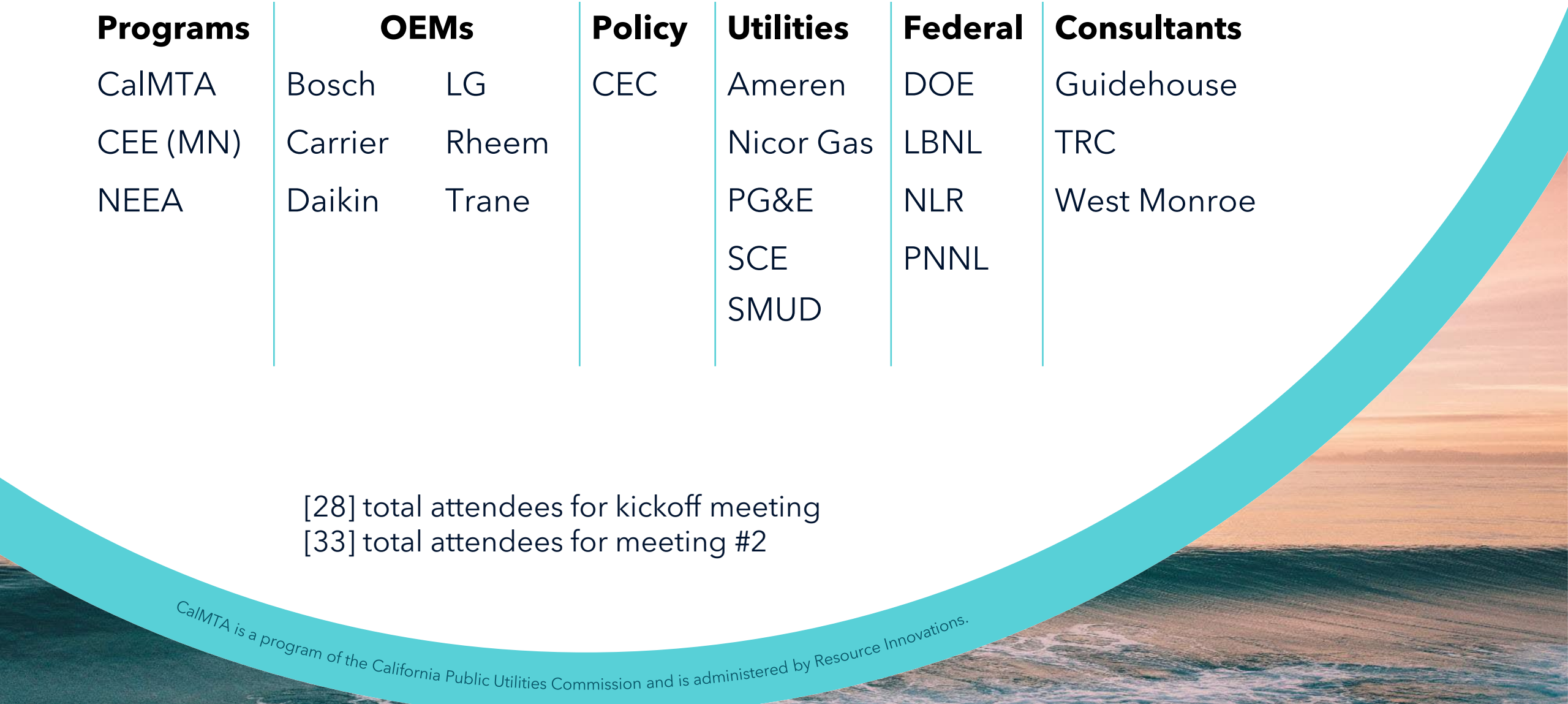


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List of organizations attending latest session

Programs	OEMs		Policy	Utilities	Federal	Consultants
CalMTA	Bosch	LG	CEC	Ameren	DOE	Guidehouse
CEE (MN)	Carrier	Rheem		Nicor Gas	LBNL	TRC
NEEA	Daikin	Trane		PG&E	NLR	West Monroe
				SCE	PNNL	
				SMUD		

[28] total attendees for kickoff meeting
[33] total attendees for meeting #2



Status of meetings



Kickoff meeting:

- Overview, objectives, goals

1st working session:

- Scope of RTUs

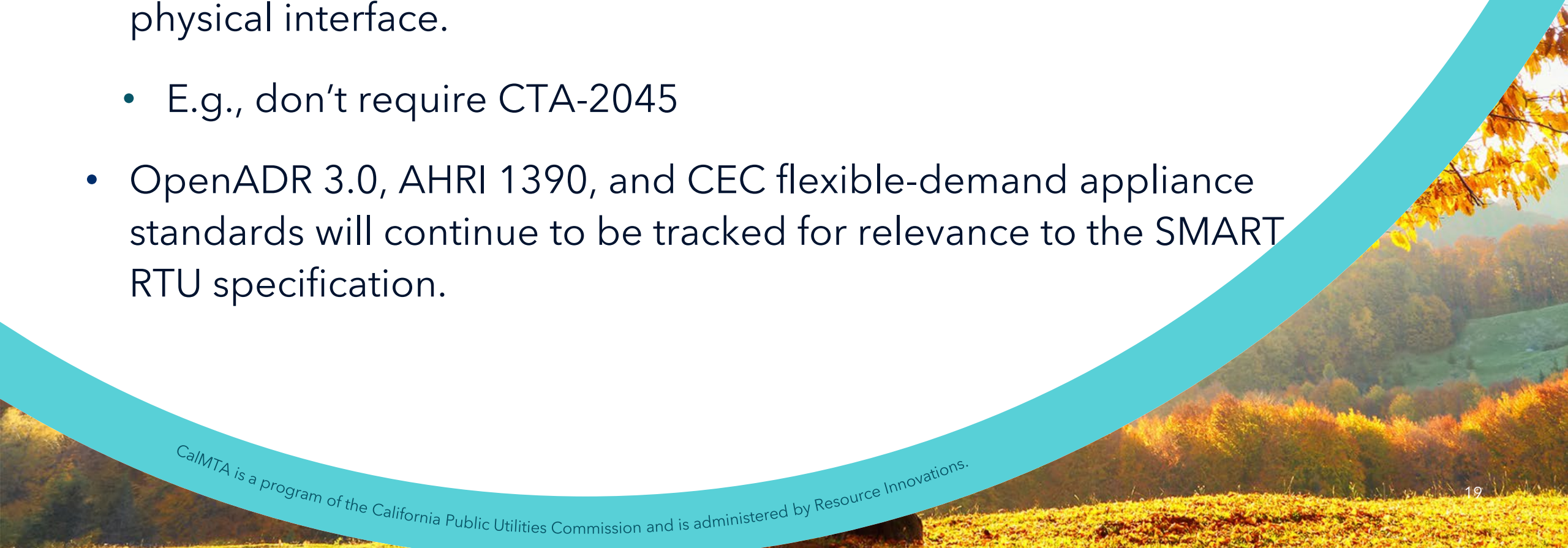
2nd working session:

- Overview of existing standards

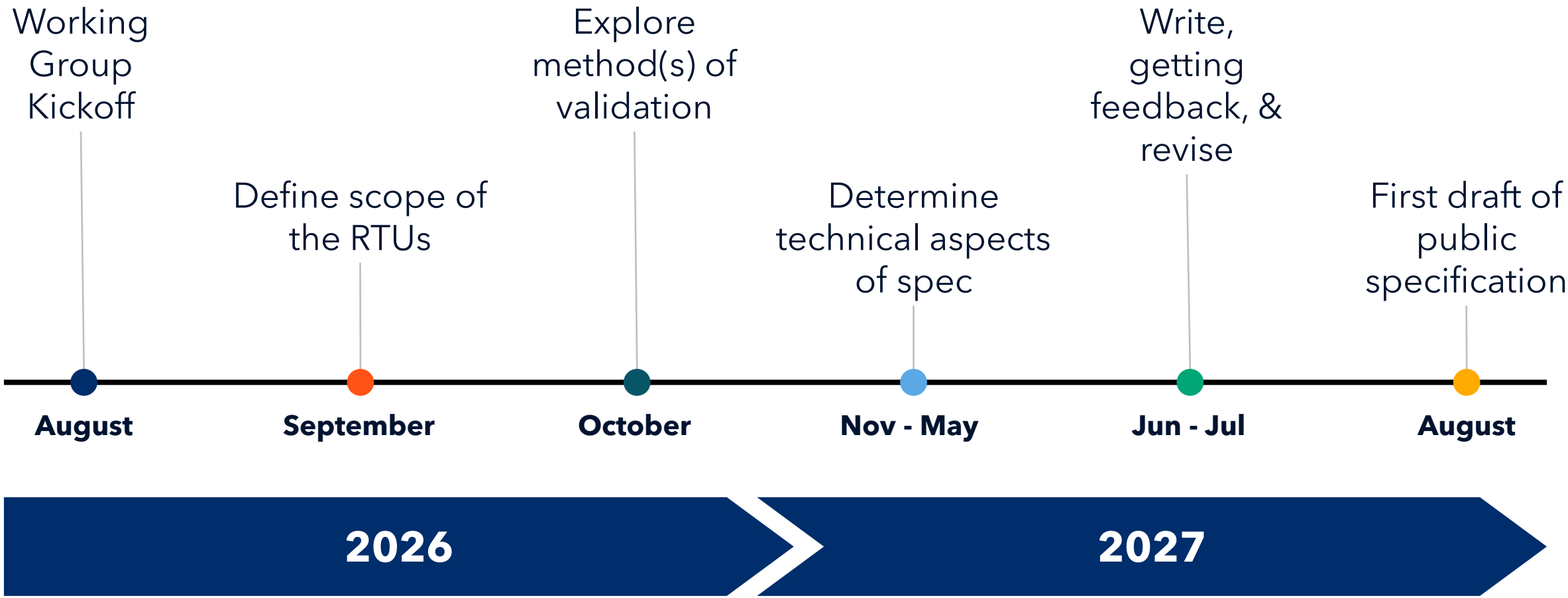
Individual meetings with manufacturers, AHRI, and national labs

Feedback from standards review meeting

- Focus on an outcome-based approach that identifies required capabilities without prescribing a single technology, protocol, or physical interface.
  - E.g., don’t require CTA-2045
- OpenADR 3.0, AHRI 1390, and CEC flexible-demand appliance standards will continue to be tracked for relevance to the SMART RTU specification.



Steps to a specification



WG#5 – Next Steps

- Meet quarterly & share updates

Workgroup #8
Dual Fuel

Co-Leads of Workgroup

Ben Schoenbauer, Center for Energy and Environment
Noe Contreras, NEEA

WG#8 – Description

Objective and Purpose

The working group includes heat pump systems with any backup fuel except solely electric. We will initially work on knowledge sharing about residential centrally ducted systems, focusing on currently available equipment and actionable topics. Future work may include best practices, guidelines, and/or recommendations around the first phase topic areas, such as ratings and metric, optimization of systems, controls, and field evaluations. We are open to considering beyond residential and beyond forced air in the future.

Timeline & Schedule

- Phase 1 (2024-2026): Expert led discussions
- Phase 2 (2026-2027): Definition standardization
- Historically: Monthly meetings on the 2nd Wednesday at 2:00 PM ET

Actions and Deliverables

- Fall 2027: Consensus-based definitions for dual fuel heat pump terminology

Team Scope Discussions

- **Market Adoption & Customer Value**
- **Products & OEM Strategy**
- **Controls, Demand Response & Grid Integration**
- **Standards & Industry Alignment**
- **Performance & Field Evidence**
- **Utility Programs & Market Acceleration**
- **Definitions**

WG#8 – Update: Definitions

There are many stakeholders for the dual fuel heat pump market. These stakeholders came to DFHPs from different pathways with a variety of historical knowledge. This has created an industrial with a lot of terminology and definitions with overlaps and inconsistencies. This lack of clarity leads to gaps in communication and standardization of best practices.

Goal

- Create a list of terminology relevant to DF HPs.
- Understand the definitions as currently used by stakeholders and where overlap and confusion is most impactful
- Decide of standardized definitions

Examples of language used

- **Different expressions around setback/recovery**
  - Setback Recovery
  - Adaptive Recovery
  - Aggressive Recovery
  - Smart Recovery
  - Upstage Timer
  - High Heat Latch
- **Various terms around the deadband**
  - Deadband
  - Drift
  - Threshold
  - Droop
  - Interstage Differential

WG#8 – Update: External Working Groups

Dual fuel heat pumps are seeing an uptick of standards, programs, committees and initiatives. The category of DFHPs can refer to a range of systems and a variety of installation goals. With all this activity and priorities tracking this work can be difficult.

Goals:

- Identify relevant working groups, programs, standards, etc
- Identify participants that can report back to AHPC
- Track activites and share out with interested AHPC members

WG#8 – Next Steps

Next Steps:

- Determine new reoccurring meeting time and frequency
- Definitions
  - Finalize our terminology list
  - Search for existing definitions
  - Discuss and decide on final definitions
- External Working Groups
  - Finalize the list of relevant standards, metrics, and working groups
  - Track progress and status

ROOM HEAT PUMP
Collaborative

RHP Collaborative Update for Advanced Heat Pump Coalition

November 17, 2026

CalMTA
CEE SM
Consortium for Energy Efficiency
neea
NEW YORK STATE
NYSERDA

What is a Room Heat Pump?

- Kind of a moving target and varies by partner/climate
  - Include plug-in window and portable form factors
  - Fan speed is adjustable (“variable speed”)
  - Provide heating and cooling (“reverse cycle”)
  - Can condition rooms that are 400-1,000 ft^2
  - **120V plug-in**
  - Install without certified HVAC technician or electrician, thus more affordable than alternative HP solutions



RHP Collaborative

Goals:

- Provide a forum for stakeholder alignment, information sharing, scale availability and affordability of qualified products
- Shares research findings, support measure development efforts, program design, and development of consumer labels and messaging
- Serves as a central forum to engage with manufacturers and align on future product needs

Started in 2025, meets quarterly and up to 130 members

Updates and Next Steps

- Launched Website and links to key deliverables:
  - About the Collaborative | The Room Heat Pump Collaborative
  - Product List and Research List
- Two Workgroups launched
  - Measure development
  - Products labeling, messaging and marketing

RHPs MTI early market updates

Product choice is transforming

- **~4 → 45+ RHP products; 2 → 11+ manufacturers on the products list** – a 10x expansion in choice since launch

Manufacturers are building new form factors

- **2 MOUs signed, 2 more in advanced talks** – developing slider-window units for multifamily, filling a product gap in the market today

CalMTA's Implementation activities are starting in earnest

- **Implementation team will be engaging directly with market actors** – manufacturers, building owners, retail/distributors, and programs – over the next year

Upcoming RHP Events

- ## Cold Climate Room Heat Pump Field Test Results
  - **December 1, 2026, 10:30 AM PST**
  - WSU Researchers conducted field test of 26 cold climate, 9kBTU variable capacity window-mountable room heat pumps from two different manufacturers.
- ## Next RHP Collaborative Q4 Meeting
  - December 1, 2026, 12:00 PM PST
  - Covering pilot project overview from Boston, Minnesota pilot interim overview, Member updates and WG updates
- ## CEE Winter Meeting
  - January 13–14, 2026 session in Los Angeles, CA

Closing Details

Want to join a WG?
Send an email one of the co-leads

1	Test Procedure & Ratings	David Lis Mvuala Suami	djlis@NEEP.org mvuala.suami@nrcan-rncan.gc.ca
2	OEM Engagement	Christopher Dymond Lauren Eagan (Morlino)	cdymond@neea.org lauren.eagan@evergreen.energy
4	Heat Pump Only Homes	Matt Christie Mike Hedlund	mchristie@trccompanies.com mike@swift-strategy.com
5	Commissioning	Justin Margolies Rick Olson-Huddle Aaron Kwon	jmargolies@slipstreaminc.org rhuddle@resource-innovations.com AKwon@trccompanies.com
8	Dual Fuel	Ben Schoenbauer Noe Contreras	bschoenbauer@mncee.org nconteras@neea.org
10	HP Program Managers	Stephen O'Guin Jackie Albansese	soguin@neea.org jalbanese@trccompanies.com

For More Information

Membership Information

- Stephen O'Guin, SOguin@neea.org

Website

- https://www.mwalliance.org/advanced-heat-pump-coalition

Primary Conferences & Events

• 2027 AHRExpo	January 25-27	Chicago, IL
• 2027 ACEEE Hot Air Forum	March 23-25	Nashville, TN
• Regional Symposiums & Forums		
◦ NEEP – Heating Electrification Workshop 2027	October 27	City TBD, VT
▪ NEEP Webinar on ccASHP Spec Update	Dec 8	Webinar
◦ MEEA – 2027 Midwest Energy Solutions	Feb 2-4	Chicago, IL
◦ NEEA – 2027 Efficiency Exchange	May 18-19	Wenatchee, WA

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Thank You!

Special thanks Midwest Energy Efficiency Alliance for hosting the AHPC website