



**August 18, 2026
RTF Meeting Minutes**

Welcome, Agenda Review and Meeting Minutes

Kevin Smit, RTF Chair, began the meeting at 9:00am. Laura Thomas, RTF Manager, took attendance counting 16 voting members.

Mark Jerome, CLEAResult, moved to approve the day's agenda. Rick Knori, Lower Valley Electric, seconded. The agenda was approved unanimously.

Eric Miller, independent, moved to approve the July 21, 2026 minutes. Dave Baylon, independent, seconded. The minutes were approved unanimously.

Management Update

Laura Thomas, RTF Manager [Presentation](#)

Staff presented a series of updates, and responded to the RTF questions on the timeline to discuss heat pump.

Baylon noticed that there were no heat pump discussions coming up [Slide 3.] He asked when this topic will come up.

- Thomas: Dave Bopp, RTF Contract Analyst (CAT) is out, but we'll be discussing this when he returns. December could be very heat pump heavy.
- Baylon: Keep us informed.
- Thomas: I will. There may be subcommittees between now and then.
- Baylon: Is there a schedule that would require us to be more aggressive?
- Thomas: Let's circle back to this.

Update Planning, Proven UES: Residential Heat Pump Water Heaters and Consumer Heat Pump Water Heater in Commercial Applications

Ryan Firestone, RTF Contract Analyst (CAT) [Presentation](#)

Staff presented updates. The RTF discussed data strategies and measure eligibility before approving the item.

Baylon asked about expectations around federal standards going forward given the current political environment [Slide 5].

- Smit: That concern is part of the reason we left most of the potential for this resource in the Plan as conservation potential. It's not clear that resource will be acquired through standards.

David Tripamer, BPA, asked if the electric resistance cases in the HEMS data were the mostly older, less-high-tier units [Slide 8.]

- Ryan Firestone, RTF CAT: The HEMS data included Tier 1 and 2 but was mostly Tier 3 and 4. We'll have a graph later that we can zoom in on to see which tiers were most represented in the high-electric resistance group.

Tripamer confirmed that, for commercial, staff take the residential numbers and multiply it by some factor [Slide 14]. He asked if there are other data sources for this like ComStock.

- Firestone: Part of the challenge is that we're specifically talking about commercial buildings with residential-style water heaters. Other data sources don't necessarily speak to that niche.
- Tripamer: ComStock does support some breakdowns like by water heater tank size.
- Firestone: We haven't looked at that.

Tripamer then asked if there is any data on the portion of the market that circumvents the standard, or if it is just an assumption.

- Firestone: It's just an assumption in the current measure, but we have data for the proposed update.

Jamie Anthony, BPA, asked where the 700W cut-off on [Slide 17] comes from.

- Ben Larson, Larson Energy Research: In the data, all of the heat pump compressors run at less than 700W. Most are lower than that. The separation is very clear in the data.

Baylon asked if the water heater load estimate is an assumption based on occupancy [Slide 21].

- Firestone: In SEEM, yes. The number of occupants dictates the draw pattern. That was the first thing I tried in HEMS. I matched HEMS sites to SEEM runs for the occupancy indicated in the HEMS data. Things lined up pretty well. But we wanted to check something more specific in the comparison: how total energy consumption from HEMS homes and SEEM models compared for given thermal load.

Baylon then asked how we could get an estimate of 80% or 90% electric resistance operation. He wondered if the fraction of electric resistance is based on observed energy on a minute-by-minute kW of gallons per minute?

- Firestone: It's kW data. We don't have gallons per minute data.

Andrew Grant, Cadmus, asked if staff know tank sizes for HEMS along with whether the unit is in conditioned versus unconditioned space.

- Firestone: Yes.
- Grant: Did your modelling take those variables into account?
- Firestone: Yes. The data attrition I mentioned earlier included screening for that data availability.

Larson noted that there's a lot of diversity in the HEMS sample, given all the variables at play. He noted heating zone, heat pump water heater tier, installation location, etc. as examples. Larson said that's great but admitted the downside is that it's easy to slice this data too thin and get too small a sample to make conclusions.

Tripamer confirmed that HEMS isn't weighted, asking if there is more the region could do to estimate how big a problem electric resistance-only mode is in the broader population. He

wondered if it is mostly older units or something else, asking if there could be some kind of weighting process.

- Firestone: Right. There are no weights in the HEMS data. This analysis just compares things case by case.
- Josh Rushton, RTF CAT: HEMS data collection never attempted to be representative. The recruitment emphasized getting homes with prioritized electric appliances. There's really no way to say how many regional homes are represented by a given HEMS site. You could turn the crank on the math and get an answer, but you wouldn't know what kind of errors you're exposed to. That's why we basically take it as a collection of case studies.
- Thomas: We have been discussing with NEEA if they could consider broaching this question about weighting for HEMs.
- Firestone: Anecdotally, we've heard from other studies that 10% of heat pump water heaters operating in electric resistance mode sounds about right.

Grant asked if staff explored the percentage of electric resistance by seasonality [Slide 22] wondering if it changes between summer and winter [Slide 22].

- Firestone: No. And we aren't proposing load shape changes, so you won't see that kind of feature (if it exists) captured there.
- Thomas: We will be looking to possibly update load and savings shapes based on HEMS and would bring that back as a separate decision at a later meeting, and this measure is on the list for reviewing. So, we will ultimately capture that effect if it shows up in the HEMS data.

Samantha Taylor, CLEAResult, asked if the load shares and calculations use residential or commercial assumptions.

- Firestone: Our SEEM models are water heaters installed in residential buildings, with residential draw patterns. From the model runs for varying numbers of occupants, we can construct a model of percent electric resistance versus thermal load. Ultimately, it's the thermal load that we're matching to the HEMs data.

Bob Davis, independent, asked what staff know about nominal size and capacity [Slide 25]. He wondered if these look more like commercial water heaters.

- Firestone: These are small, Tier 4 heat pump water heaters, installed in-unit.

Tripamer addressed the 10% of equipment operating in electric resistance mode, noting that the graphs on [Slide 29] show a number of units operating in 80-90% electric resistance.

- Firestone: The criterion was 90%+ electric resistance usage.
- Tripamer: Why not use the actual fraction of electric resistance instead of rounding?
- Firestone: A representative percentage electric resistance for the sample would be tricky. That would be specific to an efficiency tier, water heater size, heating zone, and install location. We can't slice the data that thinly.
- Tripamer: But we're essentially doing that anyway with the 10%
- Firestone: We heard anecdotally across other studies that a similar percentage of heat pump water heaters were found to operate mostly or entirely in electric resistance. We can handle that well analytically.

Baylon stated that [Slide 30] suggests heat pump water heater sales saturation is around 7%. He asked if the RBSA tells us anything about the stock saturation. Baylon then asked if there was a check on whether the two data sources are consistent.

- Firestone: I haven't checked that. These current practice estimates are intended to reflect only purchases that would be eligible for the measure. That means not new construction used for code compliance. The NEEA data was sufficient to develop those estimates.
- Baylon: This is the closest thing to saturation that we have. I'm curious to know how it stacks up to other sources.
- Firestone: We could look into that and follow up with you

Anthony asked if the installation locations impact energy consumption [Slide 31].

- Firestone: Yes. It affects ambient tank losses and HVAC interaction.
- Anthony: Is location a measure identifier with differentiated savings for garage versus inside, etc.?
- Firestone: For Commercial and for new homes, we only have "any" location. For existing homes, install location is a measure identifier.
- Anthony: Why is that?
- Firestone: I'm not sure. We can revisit that if we need to.

Grant suggested looking at SIW labor rates and estimate plumber hours calling it a good benchmark for the DOE estimates that he suspected are too low [Slide 34].

- Firestone: We can look at that.
- Grant: Maybe just for the next update.

Grant agreed that this is a light touch [Slide 40]. He questioned the percentage electric resistance versus heat pump operation. Grant thought that just porting residential assumptions over to commercial applications ignores a lot, like operating patterns or the presence of dishwasher booster heaters. Still, he didn't have data sources to suggest.

- Firestone: I agree it's an area of uncertainty.
- Thomas: We can give this more emphasis in future measure work. That could include checking CBSA for clues.

Anthony asked for confirmation that staff are not excluding new construction applications from eligibility [Slide 42].

- Firestone: No.
- Baylon: In WA, this would mean that essentially no new heat pump water heaters are included.
- Firestone: Maybe effectively, but that's not technically true. There are ways to meet code with electric resistance water heaters in WA.
- Baylon: But that would be a crazy way to meet code, so effectively this is just for new homes in ID and MT.
- Firestone: Perhaps. But as far as measure eligibility is concerned, the line is this: Any heat pump water heater in any NW state that wasn't required for code compliance and isn't being claimed through a new home program is eligible.
- Tripamer: This happens. I know of one program in Oregon that wants this and doesn't want to go through new homes protocol.

Grant noted that the 9th Plan shows heat pump water heaters as cost-effective [Slide 51]. He thought updates with the new Plan cost-effectiveness parameters there would be a lot more cost-effective applications here.

- Smit: I think that's correct.

Tripamer asked if the replaced, existing water heater must be electric [Slide 58]. He wondered if that requirement is necessary in an electrification scenario.

- Thomas: Under the Power Act, fuel-switching is not considered conservation.
- Firestone: In an electrification program, would a program consider installing an electric resistance water heater?
- Tripamer: Good point

Baylon proposed the scenario when someone in WA state has a gas water heater that breaks and they put in a heat pump water heater.

- Firestone: The requirement is that if you're replacing an existing water heater, the existing water heater must be electric, so that scenario wouldn't be eligible. The key fact here is that electric resistance would almost never be used in the electrification scenario for water heating.
- Baylon: I thought the Council's guidance was that the assumption is the customer's fuel decision comes ahead of the measure. So, the existing equipment isn't relevant.
- Smit: Yeah, we do sometimes use that logic. There are cases where that makes sense.
- Baylon: It seems like we should track this better if for no other reason than to provide an estimate for electrification programs.
- Thomas: We should put that aside for now. We can bring the history of this specific question in the water heater context back the RTF for a dedicated discussion. It's a good point. We won't let the issue just drop; we'll bring it back when we find a gap in a future meeting agenda.
- Tripamer: I agree with Baylon that there are some electrification cases we want to cover.
- Smit: Let's table that for now.

Kenji Spielman, Energy Trust of Oregon, clarified that replacing an existing water heater versus installing one in new construction does not impact savings.

- Firestone: It doesn't impact savings relative to an electric baseline.

Anthony moved back to [Slide 51] confirming that this is retrofit (replacement) application.

- Firestone: Right.
- Anthony: The reason these values vary is because savings varies, especially with install location. So, it seems like there's real value in having that location identifier. We should add that identifier to new construction
- Firestone: New construction results are very similar to existing home results. The simplest path of just calling it all residential (instead of differentiating new versus existing) might be ok.

Tripamer thought that the HVAC interaction effect has a higher penalty in existing than in new homes.

- Firestone: It's really the incremental effect of the water heater on the HVAC system that's important. And it turns out there's not much difference in impact, according to SEEM, if the home is tighter or less tight.

MOTION

I, Jamie Anthony, approve the updates to the Residential Heat Pump Water Heaters UES and the Consumer Heat Pump Water Heater in Commercial Applications UES measures as presented with the following changes: Use the existing homes analysis and measure applications for new construction as well. Combine the two measures into a single measure titled Heat Pump Water Heaters, Under 120 Gallons, Change the status from “Under Review” to “Active,” Change the categories from “Planning” and “Proven” to “Planning,” Set the sunset date to December 31, 2027.

Baylon seconded.

Grant asked if the current practice estimates include new construction sales [Slide 30].

- Firestone: No, I had to take data from market progress reports to tease that out. My objective was to estimate the current practice specifically for cases that are eligible for the measure.
- Grant: So, is this meant to be current practice or the saturation of existing stock? It would be good to get a better estimate from NEEA.
- Firestone: The former. I *did* get a thumbs-up from NEEA for the way I was interpreting things
- Grant: The estimate strikes me as low.

Vote on the motion. The motion carries. (17 yes, 0 no, 2 abstain)

BREAK

Update Demand Response Product: Residential Hot Water Heaters

Josh Rushton, RTF CAT [Presentation](#)

Staff presented work on the Residential Hot Water Heaters DR Product workbook. The RTF discussed who would use this work, the quality of the data, and analysis approach. As the RTF was short on time, this product will be brought back to the RTF for decision at the September 2026 meeting.

Baylon said he’s not seeing when the region might use a DR measure in running the grid [Slide 6]. He asked if that is part of any discussion in the DR workbooks.

- Rushton: Our primary objective is to inform integrated resource planners on what kind of resource can this be. They need to apply our work to their problems.
- Thomas: We’re trying to develop planning estimates. The RTF PAC has made clear that they don’t need evaluation guidance. Our work informs the Power Plan and we’re supporting how DR is looked at on the grid. We’re looking more granularly at grid impacts of our measure, but we’re not power planners.
- Joe Walderman, NWPCC: This type of analysis helps us (Power Planners) understand how much equipment is out there and how it behaves. Utilities get similar benefits from this work.

Baylon stated that the “take” would almost never be max or min value [Slide 13]. He asked if there is a feedback loop where the size of the take is determined. Baylon clarified that if you want to take the water heater offline, does a feedback loop allow you to assess what the real time “take” is.

- Rushton: Yes! You can query it. The DR aggregator can query each water heater individually at any time. It’s a very handful variable.
- Baylon: I agree.

Davis joked that the reason the peak is evening is because there are too many heat pump water heaters and they take forever to heat up [Slide 26].

Guncha Mandal, Puget Sound Energy suggested that the differences may be due to pre/post COVID usages.

- Rushton: Could be. Note that it looks like people are getting up later post COVID. We don't have a way to explain the "why." This emphasizes that the better you know your baseline, the better you can know your potential impacts.

Davis explored opportunities for shed seasonally [Slide 35], asking if it's because we have less water lift in summer.

- Rushton: I'm not sure of a particular data source. Maybe that, plus people enjoy longer showers in winter.
- Grant: And ambient air temperature is lower in winter.
- Davis: Right, there's higher jacket losses

Thomas noted that this item will be brought back at the September meeting for decision and pointed to materials for August's meeting for review. She asked that feedback between now and September comes in advance of the September meeting, promising to make changes to the slide deck clear.

Smit ended the meeting at 1:00pm.

Voting Record: August 18, 2026

Motion Language	Yea	Nea	Abs	Motion Passes?	Percent of Yea Votes		Number of Voting Members Present
					RTF Voting Members (40% min)	Members Voting (60% min)	
Motion: Approve the agenda for the August 18, 2026 meeting (Knori/Jerome)	16	0	0	Yes	55%	100%	16
Motion: Approve the minutes from the July 21, 2026 meeting. (Miller/Baylon)	16	0	0	Yes	55%	100%	16
Motion: Approve the updates to the Residential Heat Pump Water Heaters UES and the Consumer Heat Pump Water Heater in Commercial Applications UES measures with the following changes: • Use the existing homes analysis and measure application for new construction as well	17	0	2	Yes	59%	100%	19

• Combine the two measures into a single measure titled Heat Pump Water Heaters, Under 120 Gallons • Change the status from “Under Review” to “Active” • Change the categories from “Planning” and “Proven” to “Planning” • Set the sunset date to December 31, 2027 (Anthony/Baylon)							
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August 18, 2026, Meeting Attendance

* Designates Voting Member

Name	Affiliation
Jamie Anthony*	BPA
David Baylon*	Independent
Chris Boroughs	PSE
Frank Brown	BPA
Kyle Chase*	Jefferson PUD
Noe Contreras*	NEEA
Bob Davis*	independent
Joshua Dennis	WA UTC
Logan Douglass	RTF Contract Analyst
Ryan Firestone	RTF Contract Analyst
Wesley Franks	WA UTC
Lisa Gartland*	ODOE
Kevin Geraghty*	independent
Andrew Grant*	Cadmus
Neil Grigsby	NEEA
Saurabh Harohalli	Seattle City Light
Michael Hoch*	Energy Trust of Oregon
Zachary Horvath	Cadmus
Haixiao Huang	NW Natural
David Jagger	Energy Solutions
Mattias Jarvegren*	Clallam PUD
Mark Jerome*	CLEAResult
Chris Johnson	Benton PUD
Phillip Kelsven*	BPA
Leah Kim	Tacoma Power
Rick Knori*	Lower Valley Electric
Ben Larson	Larson Energy Research
Sam Larson	Larson Energy Research

Denis Livchak	RTF Contract Analyst
Thea Loeser	BPA
Guncha Mandal	Puget Sound Energy
Rob Marks*	Snohomish County PUD
Eric Miller*	Independent
Ken Morgan	Gensco
Andi Nix*	Energy Trust of Oregon
Jesal Parekh	TRC Companies
Andrew Paul*	Avista Corp
Julia Petersen	OTEC
Joe Prijyanonda	ICF International
John Purvis	Clallam PUD
Laney Ralph*	NW Natural
Jes Rivas*	Swift Strategy
Samuel Rosenberg*	Pacific Northwest National Lab
Josh Rushton	RTF Contract Analyst
Tim Runyan	NEEA
Paul Sklar	RTF Contract Analyst
Kevin Smit	RTF Chair
Susie Snyder	OTEC
Kenji Spielman	Energy Trust of Oregon
John Stalnaker	BPA
Christina Steinhoff	NEEA
Kelly Stocker Chan	Puget Sound Energy
Samantha Taylor	CLEAResult
Laura Thomas	RTF Manager
David Tripamer	BPA
Garrett Valenzuela	C Plus C
Joe Walderman	NPWCC
Jim White*	Chelan County PUD
Alysa Wyrick	Avista Corp
Marilla Yaggie	BrightLine Group