September 15-16, 2026
RTF Meeting Minutes

Welcome, Agenda Review and Meeting Minutes
Kevin Smit, RTF Chair, began the meeting at 9:00am. He noted that the Draft 9th Plan has been released for comment. Christian Douglass, RTF Vice Chair, took attendance counting 21 voting members.

Eric Miller, independent, moved to adopt the agenda for the two-day meeting. Kyle Chase, Jefferson PUD, seconded. The agenda was adopted unanimously.

Mark Jerome, CLEAResult, moved to adopt the minutes from the August 18, 2026 RTF meeting. David Baylon, independent, seconded. The minutes were adopted unanimously.

Management Update
Laura Thomas, RTF Manager Presentation
Staff presented the update, answering a few questions about ProCost updates.

Ben Mabee, BPA, noted there was an update of ProCost values associated with the 2021 Plan [Slide 8]. He asked when to expect new ProCost updates.

- Smit: It depends on when the final Plan is approved. The goal is to have the Plan out by end of the year, and then we'd start doing what you're suggesting in January. But we don't know the timeline. Once the Plan is approved, we'll present the updated ProCost assumptions and then update all of our measures to the new assumptions to determine cost-effectiveness.
- Thomas: If we have the 9th Plan by the end of the year, we hope to update all of the measures by the end of Q1 2027.

Sunset Date Extension: Residential Dryers
Laura Thomas, RTF Manager Presentation
After hearing the presentation, the RTF approved the Sunset Date Extension.

MOTION
I, Eric Miller, move that the RTF extend the sunset date for the Residential Dryers UES to October 31, 2026.
Douglass seconded.

Vote on the motion. The motion carries. (19 yes, 0 no, 0 abstain)

Sunset Date Extension: Non-Residential Lighting Code Complaint
Laura Thomas, RTF Manager Presentation
Staff presented the agenda item. The extension was approved.

MOTION
I, Andrew Grant, Cadmus, move that the RTF extend the sunset date for Non-Residential Lighting Code Compliant Standard Protocol to December 31, 2026.
Chase seconded.

Vote on the motion. The motion carries. (21 yes, 0 no, 0 abstain)

Update Demand Response Product: Residential Hot Water Heaters
Josh Rushton, RTF Contract Analyst Presentation
During the presentation, the RTF questioned study results, asked about opt-outs, and baselines. The RTF discussed the uncertainty in the analysis and study results informing the work, but the short sunset date allows for added work to review the work with the region and explore outstanding questions. The RTF approved the updates to the analysis and set an 18 month sunset date.

Jes Rivas, Swift Strategy, suggested looking at the Tacoma and BPA study [Slide 8]. She thought the data looked cleaner than it should because Tacoma calibrated their results to BPA. Rivas then called the controller telemetry data problematic. She added that it's not a good truth set, as it's mostly constructed and not measured. Rivas explained that she has heard this concern this in several states saying there is a reason to be skeptical of this data.

- Baylon: I might agree on that point. This seems to ignore the input temperature from the public water system. Or if not ignored, it's not clear how you're getting large differences in percentages from similar studies. Does this consider the water mains temperature? Is it just assessing idealized use patterns in the home?
- Rushton: The BPA report had 280 prototype CTA controllers in homes. Their evaluation data was primarily CTA-queried kW, but they also did some conformance testing. They found that some units responded to the queries with actual kW while some responded with a made-up number. For units that transmitted made-up kW values, they mapped made-up to tabulated kW values based on the conformance testing. So, in that sense, it is constructed data. But it isn't modeled data in the sense your question is worried about. It's actual people using actual water heating in the field, and researchers querying water heat kW. Some is very reliable data, some is not. For the baseline we have CTA-based kW values from non-event days, and we can estimate impacts relative to this using CTA-based kW from event days. In Tacoma, they also used controller telemetry, not metered kW. Rivas is raising the issue of accuracy of the kW reported from telemetry. In answer to your specific question though, the run time would be impacted by inlet water temperature, so that would naturally be captured in telemetry data.

Baylon wondered why there are differences in BPA winter data versus the other two. He asked if it was due to analyst interpretation of the small sample size or a variation. Baylon again asked how there is a 40-percentage point difference in the winter between BPA and the other two.

- Rushton: I don't know. I don't have a full baseline shape for BPA, but it looks like they are AM peakers, versus Tacoma which are PM peakers. So, they have different baseline patterns. Winter is higher load for all. This could just be a residual error, a variation I can't explain. So, to your question, yes, some points are above the line, some are below.
- Baylon: So, you're saying this could just be random variation?
- Rushton: Yes. And it is important to know that when I looked at PGE with its very large sample size, I still saw variation in impact from day to day. So, there's a limit to how firm the resource is.

Kevin Geraghty, independent, was fuzzy on what the baseline is. He said the data shows that water heater use is seasonal, theorizing that it may be the input temperature or may be more showers. Geraghty said it doesn't matter as we know the pattern and the baseline reflects that. Geraghty then asked about the absolute reduction, wondering if it's the same winter and summer.

- Rushton: If you look at the slides from August, absolute reduction was my first check. It was all over the place. No pattern. But then I noticed that BPA baseline consumption was much higher than Tacoma. So, it turns out baseline consumption is an important predictor of impact. And I only have access to aggregate consumption, not site by site.

Rivas asked if baseline data mixes telemetry and AMI data.

- Rushton: No. Let me present [Slide 8].

Rivas noted that earlier, Rushton said that even the PGE data is volatile. Rivas said she thought the AMI estimates were pretty tight, but the telemetry data bounced all over.

Greg Brown, Tierra Resource Consultants, asked how opt-out is handled on the y-axis of [Slide 10]. He guessed a lot of opt-out's occur mid-event, wondering if it's more likely to be during peak usage, shower time, or something else.

- Rushton: Results generally include enough information to know that they're removing opt-outs. This is impact per controlled device.
- Brown: So, if an event is called while the customer is using a lot of hot water and the water heater kicks on, are they considered opt-out?
- Rushton: No, see [Slide 8].
- Brown: That makes sense. If customer comfort engages through the event, they're still included, even though their water heater is running.
- Rushton: Yes, if that wasn't the case, all of the savings on [Slide 10] would be 100%, because we'd only be counting the units that saved 100% of power.

Chase stated that EE measures also have capacity savings associated with them [Slide 12]. He wanted to make sure that this analysis is congruent with the EE measure.

- Thomas: That's a good point. We're putting a short sunset date on this so that we can look at it at the same time as the measure. And we're planning to look closer at capacity savings in our EE measures.

Geraghty called this work [Slide 34] a peak shaving application to reduce electricity. He said there's another, much simpler product that sheds load right away, wondering if there's any interest in that or just interest in the application that doesn't push too hard and avoids discomfort.

- Rushton: Yes, it's been discussed. With the CTA controller, you have more options than just daily shed. You have emergency shed command, which AHRI is very clear about. It means "stop using power." That could also use a home as we dive deeper into demand response.

Rivas asked. How staff are feeling about this, given all of the red text. She thought there was cause to review.

- Rushton: That's a question for Thomas: Do we try to do that now? Do that for the next update next year? Or call an audible now on what to change?
- Thomas: The ability of Rushton to do something is different than the RTF's ability. RTF meetings are booked through February unless we push something else. All Rushton has done in the past year on DR and there are only a couple of established DR programs in the NW. This product feels like a good pause point. In the next few months, we can work with the DR subcommittee, NEEA, and others to spread awareness of what the RTF is doing. Let's get this document out there and tested regionally so we can see if the format works. We do need to update the Heat Pump Water Heater EE measure next year, so we can revisit DR at that time. Also, we can review the ACEEE Summery Study proceedings for other data. In summary, I suggest RTF approves this now and consider improvements for next year.
- Rushton: In that case, I suggest adding a summary tab to the work product with highlights from today's discussion [added "but add text to summary tab that emphasizes that impact rates are based on telemetry data and may over-estimate impacts" to proposed motion].
- Rivas: This addition looks pretty close.

Noe Contreras, NEEA, pointed to the workbook, noting that it says, "this is for ordinary shed event." He asked why critical peak and grid emergency are not included.

- Rushton: There are three different types of CTA 2045 events: shed (daily), critical peak (AHRI: avoid using electrical energy to a greater degree, intended for occasional use), grid emergency (stop using power). We haven't found a home for these other event types. You could extract the impact you want from our workbook for the grid emergency. For critical peak shed, I don't have data on this one. There's nothing to tell us how much larger the impact would be. And, aside from how well we can estimate these, they add extra value and they should have a home somewhere.

MOTION

I, Greg Brown, move that the RTF approves the Residential Water Heating Demand Response Product workbook, as presented, and set the review date to December 31, 2027, but add text to summary tab that emphasizes that impact rates are based on telemetry data and may over-estimate impacts.
Jerome seconded.

Brown noted the 15-month sunset date saying there is a lot of uncertainty in this work product and throughout the country. He said this all seems appropriate but was curious about PGE being for Multifamily. Brown thought there may be differences there to look into.

Vote on the motion. The motion carries. (21 yes, 0 no, 0 abstain).

BREAK

Update Planning UES: Connected Thermostats
David Bopp, RTF Contract Analyst Presentation
Staff presented the item. There was vigorous discussion around savings, sampling, and bias. After wrestling with including electric savings from gas forced air furnace and measure life, the RTF approved the measure.

Michael Blasnik, Renew Home, asked if staff are only counting some of savings while excluding some savings that were well established in Northwest studies [Slide 8].

- David Bopp, RTF CAT: No, we're not concerned about whether they're there or not. If they're quantified in evaluation, we count it. For example, we're not saying if it came from Nest seasonal savings or not, or how many users used Seasonal Savings.

Blasnik pointed to all of the demographic differences between Nest buyers and non-Nest buyers, saying that future comparison group controls for some of this [Slide 12]. He stated that the Energy Trust of Oregon study showed positive savings. Blasnik admitted that they are not statistically significant but said it does show there's bias. He said billing analyses is proving to be kind of impossible to prove savings.

- Bopp: That's correct. Energy Trust tried non-participant and future participant control groups and didn't find a statistically significant difference.
- Blasnik: The absence of a difference doesn't mean they're the same.
- Bopp: That's correct. They used the non-participant group going forward because they had more data. That's what we're using, but we show what things could look like using future participants. We do recommend using NREL guidelines for addressing bias.
- Blasnik: This is a big problem, it causes bias. And it's not addressed in your evaluation. Just using the non-participation group because it's a larger dataset isn't right to do. It's biased. Even future participant control has bias.
- Bopp: Noted.

Baylon thought that it sounds like, in the future comparison group, the sign was different than conventional control group. He asked if that is true.

- Bopp: In just a small subset of electric forced air furnace homes, which are a small portion of the sample.
- Blasnik: It's the only electric forced air furnace group.
- Baylon: I'd be surprised if you could ever get a signal here.

Geraghty thought it odd to get savings from gas furnace homes and not electric homes, thinking it might be due to using billing data where gas has cleaner data with fewer end-uses. He doubted that there is a difference, a priori. Geraghty agreed that this a messy evaluation problem and didn't trust any of it. Still, he agreed that it's weird that there's a difference between electric and gas.

- Bopp: We'll talk about that later today.

Blasnik addressed RECS data on [Slide 16] saying people getting smart thermostat are not a random sample of the population. He said savings diminishing over time suggests either usage is less efficient (the ENERGY STAR score doesn't suggest that) or the people adopting thermostats are more efficient, with more setback in the baseline, than earlier adopters. Blasnik said that the RECS data doesn't suggest that and wondered why staff says that savings have diminished. Blasnik said this is addressed in the Nest whitepaper, noting that he provided RECS data specific to the NW. Blasnik then addressed bias saying that there are more HVAC installed coincident with a smart thermostat. He said some back-of-the-envelope calculations of thermostat savings versus HVAC finds that, in Massachusetts, many people didn't have central air, 20% of new thermostats went in with new HVAC, and 3% were adding HVAC that didn't exist before. Blasnik said this is similar in NW where people are much more likely to have a baby, add an addition, or add other smart devices. He pointed to overwhelming evidence that energy use is increasing for these customers. Because of this Blasnik said it's hard to overstate savings, pointing to an assessment in the slides that looked at RBSA.

- Bopp: Yes, we looked at RBSA for homes with connected or smart thermostats asking if they are more likely to have EVs, solar, other smart/connected equipment, or younger children. In general, the findings line up with what NREL calls out for best practices in evaluating thermostats. Yes, they're more likely to have solar, EVs, etc.
- Blasnik: But the way that data is presented "most homes don't have EVs." As if that's not mitigating. RECS data says smart thermostat homes are six times more likely to have an EV. In a Californian study, 9% of participants bought an EV during the study, 2% of the control group did. That's the same magnitude as the savings.
- Bopp: Yes, this is an issue. Bias is a problem, and we need evaluations that address this. We don't have that to date.
- Blasnik: EVs are already an issue. It's 100s of kWh of bias.
- Bopp: I agree.

Blasnik stated that the 2016 Energy Trust study used experimental design, while others didn't use as rigorous a design [Slide 19].

- Bopp: Yes, that's an issue. We have pilots first and then we move on to larger programs.

Bruce Manclark, Earth Advantage, addressed Centrally Ducted Heat Pump evaluations, asking if staff know if they were single speed versus variable speed [Slide 34].

- Bopp: No.
- Manclark: Many years ago, we did a small study of Nest. It works well on single stage heat pumps but could make variable speed heat pumps perform worse.
- Bopp: Noted.

Brown asked about the prevalence of electric forced air furnaces in region, relative to other heating types.

- Bopp: It's low. I don't know off hand.
- Baylon: It's 6%.

Blasnik addressed electricity savings in gas heated homes. He said the Energy Trust 2025 study found 27 kWh/year. Recurve/Energy Trust 2015-17 analysis found larger savings in gas homes. Blasnik asked if this was considered, adding that fan savings go along with gas savings. He concluded by saying Recurve suggests some of the savings came from cooling as well.

- Bopp: I don't recall why we didn't consider that previously. I didn't add it back in now for this analysis, but the RTF could weigh in on that.
- Smit: That's going in the parking lot.
- Blasnik: Looking at Nest thermostat activations in the Northwest in past year: 1/3 of all heat pump installs were dual fuel. How are those evaluated? On the gas side? On the electricity side? Excluded?
- Bopp: I'm not sure how Energy Trust handled that. I don't think 30% is representative of the base in the NW. I don't know how Energy Trust would select a primary fuel type for dual fuel heat pump.

Blasnik said the lifetime study from California was 9.4 years [Slide 39].

- Bopp: We used that in the past, but the RTF felt that five years was more likely.
- Blasnik: The study showing nine years includes all of the issues you identify. They were considered "dead" when were no longer online. That includes lost connection, product failure, and replacement with new product. There's no evidence of people using thermostats less efficiently over time. Additional services mostly boost savings later in life. It's one of the only measures that can heal itself later on. I don't get how you went from nine to seven to five years. That's just conjecture.
- Smit: Good point. We'll put this in the parking lot and come back to it at the end.

Baylon was most bothered by not addressing heat pump size relative to the load in the evaluations [Slide 42]. He insisted that should be collected at a minimum and protocols don't address this. Baylon reiterated his concern with size, asking if the RTF is evaluating heat pumps that might or might not be sized to outdoor temperature.

- Blasnik: To the extent that Baylon is interested in leading such a project, we have lots of data on when a single stage heat pump compressor is running. If asked, I could pull that data together. It's assessing relative sizing to load: for example, can the compressor handle all of the load when Outdoor Air Temperature is 20°F?

Grant called this a great presentation. He didn't believe electric forced air furnace savings are zero or negative, but understood what analysts were working with. Grant pointed to [Slide 22] saying the electric forced air furnace is 15,000 kWh and the heat pump is almost identical. He asked why these values are so close, wondering if it is baseline home use or just HVAC.

- Bopp: This is the full home, not HVAC. We convert to savings percentage of heating. We've seen this before. There's not a big difference in total home kWh from electric forced air furnace versus HP homes. There's something different that electric forced air furnace owners do because they're expensive to run.

Grant asked why staff used RBSA 2017 data for gas consumption.

- Bopp: That's what we have used.
- Grant: I recommend you have this ready for the next time you update this measure to reflect all of the differences like climate, and home performance, since then.

Grant then addressed zero savings, asking why the RTF shouldn't deactivate the measure. He wondered if this is a strategy for future uses.

- Thomas: We want to keep this on books because we know heat pumps and connected thermostats get paired together. But we'll develop a new measure for this package when we develop the heat pump measure. For electric forced air furnaces, we're saying, yes, you can include a thermostat in your program, but the savings are zero.
- Grant: It's weird that the evaluation says negative savings, and then you say zero. Maybe it's better to leave it negative. Also, did you look at RBSA electric forced air furnace home baseline thermostat types? Manual, programmable, and Wi-Fi?
- Bopp: No, I didn't do this by HVAC type.

Grant noted that Bopp mentioned that this is a pre-conditions measure. Grant thought this data would help tell the story and help explain evaluation results. Still, he didn't believe the presented results but guessed that the RTF is going to go with it, as with centrally ducted heat pumps.

- Bopp: No evaluations provide us with pre-conditions. It's either equipment type of thermostat or its settings.

Brian Kooiman, Ad Hoc Group: Smart Thermostat Collective, called the presentation helpful in understanding RTF perspective. He called it premature to set electric forced air furnace savings to zero. Kooiman offered to start a conversation on all of the benefits to all of the HVAC types. He also offered to help codevelop regional studies to get to the bottom savings, while addressing biases. Kooiman said smart thermostats have evolved, adding that customers with smart thermostat are way less likely to keep a constant temperature setpoint than non-smart-thermostat users. Kooiman insisted that it was definitely not appropriate to deactivate the measure. Kooiman concluded by pointing to the Demand Response capabilities of these products. He said removing the EE measures means doing the analysis all over again. Kooiman thought it might be more efficient to look at EE and DR benefits holistically together. He stated that the Smart Thermostat Coalition is very keen to continue the dialogue.

- Bopp: Yes, we also considered keeping these measures on the books. If these are put in for DR, then it's clear what the additional EE benefit is.

PARKING LOT
Douglass pointed to two Parking Lot issues:

- Include electric savings (e.g. fan, cooling) for gas forced air furnace applications?
- Is a five-year lifetime appropriate?
- Smit: Speak up if you'd like to address these items.

Brown agreed with the sentiment that there doesn't seem to be data or reason for a five-year measure life versus something larger. He thought a seven or nine-year lifetime seemed more realistic than the arbitrary decision to move to five previously.

Brown then addressed gas forced air furnaces, wondering if it makes sense to include electric savings. He asked if the CAT has data for that, wondering if they could bring that value back as a management update.

- Bopp: I'd have to look. Energy Trust of Oregon does have this analysis. They found 27 to 107 kWh savings per year, but it's not statistically significant.

Smit said the decision will have to wait until tomorrow as the RTF ran out of time. He asked Bopp to look into electric savings in gas homes and measure life briefly before then.

- Bopp I can give that some thought.
- Baylon: I suggest the motion remove any reference to centrally ducted heat pumps from this measure pending future centrally ducted heat pump discussion.
- Smit: We'll come back to this tomorrow. We're at a hard stop right now, it's 1pm.

Smit ended the meeting at 1:00pm.

Adjourn Day One

Intro and Welcome Day 2
Kevin Smit, RTF Chair
Smit welcomed the RTF back at 9:00 am. Douglass took roll, counting 20 members.

Update Planning UES: Connected Thermostats (Continued)
David Bopp, RTF Contract Analyst Presentation
After hearing new information, the RTF chose to deactivate the measure application for centrally ducted heat pumps and change the EUL to seven years before approving the update.

Brown thanked Bopp for putting extra work together overnight. He addressed useful life, agreeing that a new study should be done. Based on the data available, Brown thought five years seemed overly conservative. He called degradation of savings due to an algorithm shift speculative, suggesting going back to seven years.

Brown then said it was not surprising that statistical methods won't pick up electric savings on gas forced air furnaces. Because of this he thought the engineering approach reasonable. Brown thought it would be nice to have this now but understood if it's just on the to-do list for the next update.

MOTION
I, David Baylon, move that the RTF approve the Connected Thermostat UES as presented, and: Deactivate the applications for CDHP, Change the name to Residential connected Thermostats, Set savings for eFAF retail and direct install applications to zero, Keep the Category of Planning for all applications, Keep the Status as Active, Set the sunset date to September 30, 2029.
Manclark seconded.

Baylon said he made the change to the motion on the grounds that we'll have a much better chance of getting a clear assessment of this when we do the centrally ducted heat pumps, whenever that might be.

Bopp noted that the change means, when staff develop the centrally ducted heat pump measure, the thermostat would have to be a very specific application, and not a "hand out thermostats willy nilly to centrally ducted heat pump owners." Bopp said without this measure application, the region has nothing to tell programs that we don't think there are savings from the willy nilly approach.

- Baylon: If we're going to depend on the occupant setting up the thermostat however they want, then we should expect any impact.
- Bopp: I agree. But I think we should keep it on the books to communicate that.
- Baylon: I think it's more important to let this go for now. Theoretically, a retrofit with a centrally ducted heat pump could become a measure. Zero seems like a reasonable guess, but not an acceptable guess for a centrally ducted heat pump.
- Geraghty: The savings from a smart thermostat is a sneaky setback, interacting with a sophisticated and opaque heat pump control system seems like a bad idea. I don't have a strong opinion. Setting savings to zero is fine.

Amendment
Grant proposes a Friendly Amendment to increase EUL to seven years.
Manclark seconded.

- Baylon accepts friendly amendment,
- Smit: The Chair calls for vote.

Vote on the Amendment. The Amendment carries (18 yes, 2 no, 1 abstain)

Jim White, Chelan County PUD thought that removing applications for centrally ducted heat pumps sends a stronger message to manufacturers. He was in favor of dropping them.

Brown asked if setting savings to zero versus deactivation causes more headaches for centrally ducted heat pumps later on.

- Thomas: No, it's more about what we want to signal. It doesn't impact anything procedurally. It could be an implementation challenge for programs to have two different measures for the same technology.

White called the name change confusing, as residential could be retail.

- Bopp: Our "retail" application is for residential applications. Programs need to track how many retail thermostats go to residential applications. Retail is the sales channel not the building type.

Final Amended Motion
I, David Baylon, move that the RTF approve the Connected Thermostat UES as presented, and: Deactivate the applications for CDHP, Change the name to Residential connected Thermostats, Set savings for eFAF retail and direct install applications to zero, Set the EUL to 7 years, Keep the Category of Planning for all applications, Keep the Status as Active, Set the sunset date to September 30, 2029.

Vote on the motion. The motion carries. (20 yes, 1 no, 0 abstain)

Update Small Saver UES: Level 2 Electric Vehicle Chargers
Denis Livchak, RTF Contract Analyst Presentation
After hearing the update, the RTF approved the measure.

Baylon asked about the fraction of commercial chargers as a function of all chargers when a fraction of chargers (residential and commercial) is networked [Slide 26].

- Denis Livchak, RTF CAT: We don't know the commercial charger share. Commercial chargers are well documented, residential chargers are not. We do know that 70-to-80% of charging is at home, the rest at commercial chargers. Looking at networked versus non-networked: non-networked is less than 10% of chargers, maybe even less than 5%. Almost all commercial public chargers are networked. I don't know about fleet and employee charging. You might not need network connectivity for a fleet. Load shifting could be done at the charger or at the vehicle, so you could do DR via the vehicle, even if the charger isn't networked.
- Baylon: OK. Savings are small, but we'll need to make assumptions about networked versus non-networked.
- Livchak: Those are different measure applications.
- Baylon: But you could add those measures together.
- Livchak: I assumed 5% or 10% non-networked for regional potential. For residential, I found 30 networked products, five or six non-networked. Typically, portable products are not networked.

Contreras recalled the presentation, saying load shifting is possible on the vehicle side. He asked how many vehicles are capable of received these types of signals.

- Livchak: My understanding is that almost all new vehicles should be capable of receiving DR signals through an app or connectivity.

- Rushton: Yes, we assume all vehicles could enroll via one of those channels.

MOTION
I, David Baylon, move that the RTF update the Level 2 EV Charger as presented and: Keep the Category as Small Saver, Keep the status as Active, Set the sunset date to September 30, 2031.
Miller seconded.

Vote on the motion. The motion carries. (20 yes, 0 no, 1 abstain)

Final Draft 2027 RTF Work Plan
Laura Thomas, RTF Manager Presentation
The RTF discussed allocation of resources between existing and new measures, and how the body can work towards minimizing updates of certain measures to allow more time to prioritize new measure. The RTF discussed the challenge of identifying new measures, and agreed on the need to effectively use resources and to continue to find ways to move through measure updates more quickly. The RTF approved the 2027 Work Plan with recommendation to the Council to adopt.

Baylon asked for clarification around DR for data centers [Slide 8].

- Thomas: I don't think we have more to learn than what we have from our existing market characterization. Data centers do their own DR based on price signals. They don't go through programs. Typically, the information on data centers is confidential and/or expensive data to collect.
- Baylon: DR for this kind of load might be a utility question, not a customer question. We have plenty of servers in the region. Utilities could test this.
- Thomas: I don't disagree. I just don't see a clear opportunity for the RTF to do anything more.
- Baylon: I agree. But we could help utilities think of creative solutions to this challenge.

Jamie Anthony, BPA, looked at the existing measure budget on [Slide 9] saying that BPA provided feedback and this number may be too high. He pointed to the list of measures versus potential for new measures and thought that new measures might be more valuable for the region. Anthony asked if how many aMW these measure could bring in could be taken into consideration, and if programs are implementing them. Anthony said BPA would prefer to focus on new measures with high technical potential, rather than, say, floating controls on refrigeration.

- Thomas: The cadence of updating measures is dictated by the Guidelines, not potential. I'm trying to think through and manage opportunities versus time spent. We're trying not to update everything in a measure every time only that areas we have new data to inform and we always focus on the significant changes and things that address uncertainty. It's good input if people tell us in advance that a measure is small and not worth a big update. I suggest you engage with us early. Our list of upcoming measures is regularly presented during the management update on what measures are coming in

the next three months. But the Guidelines dictate when we do updates. I'm happy to scope measures down or up based on data availability and other criteria, but the work plan budget isn't that granular; this is an average across measures. Additionally, I would note that the RTF will sometimes make judgment calls about doing further work on a measure at the time of decision.

- Anthony: So, we're bound by the Guidelines. We need to update the Guidelines to have that ability to prioritize measures.
- Thomas: Yes, we are planning to update the Guidelines within the next year. But keep in mind, just because one program doesn't see much potential, doesn't mean other don't.
- Anthony: Without prioritizing which measures get updated, I advocate for reducing funding for existing measure updates.

Grant spoke to Anthony's point of allocating hours to efforts based on technical potential. Grant suggested a New Measures Subcommittee for the new measures, calling it helpful to give RTF staff direction.

- Thomas: That subcommittee will happen, hopefully in Q4 of this year.

Thomas then pointed to the six new measures saying they are big and there not a lot of small measures available.

- Douglass: It's 23% of budget to maintain a huge library of existing measures versus 20% to six, big-lift new measures. This definitely leans towards new measures.

Baylon agreed that the RTF should spend more on new measures. He asked if an analyst would work on the commercial building EE based on engineering practices in building design and operation.

- Thomas: I'm planning to put an analyst on the whole building concept, design, and commissioning. There are different measures within the whole building space and I think we need to give more time to the concept of "whole buildings." I hope to dedicate one person to this next year.
- Baylon: We're not in 2015 anymore, when there was extremely limited information. Not anymore, especially in Portland and Seattle. Buildings are now documents. Maybe not reviewed, but there's quite a resource and it's not an easy resource to use.

Baylon then asked what efficiencies are out there. He pointed to a lot of data from the last decade on this which would allow inspection in some detail using overall energy use. Baylon thought that this is more than one person worth of effort.

- Thomas: I agree. I will bring in other resources as needed, but it's valuable to have a consistent person who's in the loop on all of this.

Tripamer moved to Douglass's earlier point about 23% of the budget going to existing measures not being a lot, given how many measures need to be maintained. But, looking at the specific slate of measures, he thought there may be not much to update. Tripamer then pointed to the incremental value of new measures that require a lot of work and have a lot more potential

upside for the region. He said staff don't need to spend time on green motor rewinds or efficient portable spas.

- Thomas: Got it. There are other things, like the RTF asked us to redesign voltage optimization, same with Single Family/Manufacture Home Duct Sealing. When we look at the 2028 workplan, with the new CAT structure, there should be less meeting time. Budgets should be spent more effectively and allow us to get through measures more quickly. But there are two nuances: 1) lack of granularity in advance to fine tune the work plan and 2) my work behind the scenes to get through our work and ensure that our work is reliable. I hear all of this feedback and am working on us reflecting that.

Tripamer said that a lot of organizations are not allowed to use Excel macros, noting all the workarounds they had to do to use ProCost [Slide 10]. He asked if a non-macro version is in the cards.

- Firestone: We use macros to compute cost-effectiveness. We could talk offline about ways around that.

Baylon addressed EUI approaches and an EPA portfolio manager, saying it would be of great use if a more consistent commercial dataset was developed for EUIs and overall electric loads. In some form. He said it does already exist, but not in a form that is generalized to the region. Baylon thought that the CBSA seems to be heading in that direction. He thought it likely that for the CBSA group, there will be much better energy use information than in the past.

- Smit: Look at the 2021 Plan and the 9th Plan. That recommendation is in there. And I think NEEA is thinking about this as well.
- Baylon: I think that the RTF, in the absence of consistency from anyone else, is a good place to tackle this.

Grant asked where the SIW falls in this.

- Thomas: The "standardization" category.
- Grant: It might be worth considering times to revisit data inputs. Some, like labor rates, are used heavily. It would be useful to set timelines.
- Thomas: I will add that to my list. The SIW is a strange thing to manage.

MOTION

I, Mark Jerome, move that the RTF adopt the proposed 2027 work plan and business plan, with recommendation to the Council for approval
Rivas seconded

Amendment

Anthony initially proposed changing the existing measure budget from 23% down to 11.5% and move the excess to new measures. He revised this to moving one quarter of the budget from existing to new measures.
Baylon seconded.

Jerome did not accept this as a friendly amendment.

Rushton explained that this amendment means the RTF would have a lot of long sunsets and let a lot of things go. He said that would take a big effort.

- Anthony: The point is to be more selective of what we develop. Let's drop the bad measures that aren't being used and pick new measures that are worth maintaining.
- Brown: I agree with the sentiment, but I could imagine that's challenging to implement in the middle of a five-year cycle. I'm thinking through the number of new measures and the pipeline to developing them.
- Smit: To be clear, it would be a nightmare to do this. It's a crazy amendment.

Baylon suggested letting some measures just sunset as that would reduce workload.

- Thomas: The RTF has to do something. It could be deactivation, but it has to be something.
- Baylon: That's reasonable. We never have that discussion.
- Smit: We're saying we couldn't do any research to inform that decision.
- Baylon: Or we're saying there's not enough energy or potential to keep going with a measure.
- Smit: This group asks to go deep, even on Small Savers. It's not the nature of the RTF.
- Baylon: It would be a big change, I agree.

Anthony argued that the RTF knows how we work and that we go deep. He said this is an even bigger reason to be more selective of what we put in front of ourselves. Anthony asked what the point of this process is if we can't make changes because they'll be a "nightmare."

- Smit: This is more than an adjustment.
- Rivas: I appreciate the sentiment. But I don't see how it could be implemented this quickly. "Selecting better measures" feels fraught. Do we have the discipline to not deep dive? I don't see this as feasible to implement by next year.
- Thomas: This would be really hard for me as RTF manager given the Guidelines. The lack of engagement I get about what measures programs care about makes that tough. We start working on measures three months in advance. It's hard to guess what measures you think matter or don't until we start trying to collect data. And there are a lot of conflicting feelings, for example, some entities are frustrated that the RTF didn't approve some new measure proposals that they were interested in. I need more engagement from the region to make judgement calls. I try where I can, like pushing back on the CAT when I sense a rabbit hole.
- Anthony: I'm willing to drop this. I'm glad we've had this discussion. I'd like to engage with Thomas to prioritize measures, and I'd like to put a group together to do this.

Jerome spoke as someone who's been in the industry a long time, saying it's not like the region has a bucket of great new measures. He said there's not much left as the low-hanging fruit has already been picked. Jerome said this makes the work harder, more detailed, and challenging to be more cost effective. He said he'd like to see new measures, but asked what they are, saying they are few and far between. Jerome offered pulling in small measures like water heater setpoints from other TRMs but said that's not what the RTF wants.

Baylon appreciated the problem of not reviewing our existing measures and workplans. He noted that the RTF is warned months in advance about what needs to be done but insisted the body doesn't have to be passive about the questions. Baylon said it's up to RTF and its sponsors to allow more discipline in handling the relatively large set of measures, informed by decades of work, some of which is obsolete. He suggested encouraging the RTF to review upcoming measures and give input about what's worth just deactivating or extending sunset date at the very least.

- Grant: I appreciate this conversation. I understand the issue from doing supply curves. And the hunt for new measures is important. We can just kick the can on some measures because there's nothing new. Maybe we should set February as the sunset date for all measures and then decide which ones to push off and which ones to work on during the year. That would help members understand the process and the allocation of funding.

Vote on the Amendment. The Amendment does not carry. (3 yes, 19 no, 1 abstain)

Vote on the original motion. The motion carries. (23 yes, 0 no, 0 abstain)

Smit called this a good discussion, and I thought a lot of the RTF agrees with, in principle, shifting from existing measure work to new measure work.

BREAK

Update Research Strategy: Heat Pump Water Heaters Under 120 Gallons
Ryan Firestone, RTF Contract Analyst, Josh Rushton, RFT Contract Analyst **Presentation**
Staff presented the update research strategy. Discussion touched on different equipment settings. The RTF approved the research strategy as written.

Contreras clarified that commercial is commercial-rated products [Slide 12].

- Rushton: No, it's residential rated.
- Contreras: The testing is different for both.
- Ryan Firestone, RTF CAT: To clarify, the COP is in situ, not lab tested.

Manclark stated that there are at least three split systems asking if they are considered.

- Firestone: Yes, they're in the measure.

Contreras asked if this is only for single-unit systems, or also for groups of heat pump water heaters.

- Rushton: We didn't have groups of water heaters in parallel in mind. I'm not sure you'd use consumer heat pump water heaters for that.

Contreras then asked what kind of draws will be researched as there are lot of different types of loads.

- Rushton: We don't have a good picture of what commercial applications are common for consumer heat pump water heaters. That would be part of the research. What is the building type?
- Contreras: I think that creativity is the only limiting factor.
- Bob Davis, independent: That's a good point. There's known ambiguity. Like how you set up the piping proximity to refrigerant. It effects performance quite a bit. Plumbers aren't installing these the way we'd like.
- Rushton: Installing these in series, for example, would be a disaster.
- Davis: Recirc may be another issue in commercial. You need to consider the whole setup. In the northwest, we see a lot of systems not piped correctly.
- Rushton: Yes, Objective 2 is not simple.

Baylon was not so worried about the heat pump COP as the balance between electric resistance and the compressor, saying those could be arbitrarily adjusted by installers and users. He called this more like an auditing issue, not a metering issue, adding that we just need to know the settings and saturation of those settings. Baylon agreed that this is a weird thing for commercial spaces, adding that what we know about central water heating in commercial is based on large compressors and this is not that. He said there aren't many of these consumer heat pump water heaters in commercial setting. Baylon was more concerned with how they get installed and operated in the wild, calling those way bigger numbers than the particulars of small variation in COP over time.

- Rushton: We'll get to that.

Baylon suggested that some of the research on [Slide 13] could be done with an audit if you believe the SEEM algorithms regarding how electric resistance backup is set up. He pointed to what is out there in the wild, adding that data in the NEEA/Ecotope study is from 2012, calling it a little out of date.

Baylon then addressed newer systems, saying how much electric resistance is used and how it impacts COP is important. He voiced skepticism about how modern heat pumps are relative to 2015.

- Rushton: If we were to do an audit, not every heat pump water heater has the same settings terminology. Maybe there's something like Eco, Normal, and electric resistance mode. We'd still want to meter electricity to know what those mean in practice.
- Baylon: Yes, but that's a bigger research plan. I'm discouraged that even with heroic research plans, we get nothing. But I am curious about the settings plumbers and homeowners use.
- Douglass: I see Baylon points. I like the candidate approach. Maybe one caution is that the sample matters. If we pick a sample of convenience and there's a lot of hand holding, we're back to where we were. Getting a truly random sample is important.
- Firestone: We have seen the electric resistance/compressor balance from HEMS homes. There's a lot of variation, but it's not as huge impact on energy consumption as you might expect. The COP in situ of the compressor is not known. How does this change over time?

- Davis: In commercial settings, we see heat pump water heaters set to electric resistance mode because its quiet and reliable. It is important to understand performance of products in different settings and situations. In a previous study, we did see degradation over time due to refrigeration leaks. We didn't expect that.

Contreras asked what information is still needed. He asked if HEMS helped staff validate SEEM, adding that there is a lot of data on draw profiles.

- Rushton: This would be a first ever picture of heat pump mode COP for units that have been in the field for a while. HEMS can tell us electric resistance versus heat pump mode, but not the COP that the water heater is operating at. That's a big gap.

Contreras asked how staff plan to scale what was discovered to the measure.

- Rushton: We would update SEEM models, which include control logic for electric resistance use and for COP curves for the heat pump. Then we have models in different heating zones, installation locations, and more. Then we plan to scale up using RBSA weights.
- Baylon: It's not as simple as what's electric resistance and what's compressor. There are four settings in modern heat pump water heaters. There's heat pump and then different combinations of heat pump and resistance up to no heat pump. HEMS can't know that. That's why the audit is important.
- Rushton: You can propose an amendment to the proposed motion when it comes up.

Contreras added the following to the Webinar Chat: ASHRAE Research Project Report 1544-RP -Establishing Benchmark Levels and Patterns of Commercial Hot Water Use – Hotels.

MOTION
I, Eric Miller, move that the RTF accept the proposed Research Strategy for the UES measure Heat pump Water Heaters Under 120 Gallons as written.
Davis seconded.

Vote on the motion. The motion carries. (20 yes, 0 no, 1 abstain)

The Council and RTF Policy on Fuel Choice (Fuel Switching)
Kevin Smit, RTF Chair, Christian Douglass, RTF Vice Chair, Laura Thomas, RTF Manager
Presentation
Staff presented materials around the Council's perspective on fuel switching.

Contreras said the picture on right of [Slide 2] could have both electricity and natural gas going in. He said power venting is an efficiency solution that uses both fuels, asking how staff deal with that.

- Smit: We'll get to that later in the presentation.

Contreras acknowledged that in the past, there weren't products that used both fuels [Slide 6]. He said that today there are dual fuel furnaces and gas condensing furnaces that consume electricity. Contreras said the market has evolved enough to question these assumptions.

- Douglass: We're talking about conservation under The Act. There are things like load flex and DR, but here we're specifically talking about Conservation.
- Smit: Right, and The Act is specifically about electricity. You need to reduce electric power consumption through an increase in efficiency.

Anthony asked if "reduce electric power" is restricted to retrofits only.

- Smit: No.
- Anthony: OK, so new construction could use less than it otherwise would and that's considered conservation.
- Smit: Yes, that's it.

Anthony addressed current practice and fuel choice asking if there are separate current practices for each fuel type [Slide 8].

- Smit: Yes. For electric, it's the current practice of electric options. For gas, it's the current practice of gas options.

Contreras asked for more explanation of the 3rd bullet on the slide.

- Smit: If someone decides to go to electric from gas, we can then consider more efficient gas options

Kenji Spielman, Energy Trust of Oregon, said this feels different than the heat pump water heater discussion, requiring electric baseline. He read this as, if you switch from gas to electric, then current practice would be the baseline.

- Smit: I think you're right, but Firestone go ahead.
- Firestone: That was to prevent incentives to push gas water heater users to switch to electricity.
- Jennifer Light, NWPCC: This is also lingering from a time before the Council worked through their fuel choice policy. But with our policy, if a consumer chooses to put in electric water heating and that water heater is more efficient than the electric baseline, that's conservation. There's some cleaning up of measures that we could do now with that in mind.

Tripamer thanked staff for clarification, calling [Slide 11] reasonable.

Grant pointed to the dual fuel discussion asking about connected thermostats with dual fuel systems or weatherization.

- Thomas: We'd want to look at dual fuel systems themselves first before we look at the measures that interact with them.
- Grant: Or even something as simple as dual fuel heat pump attic weatherization?
- Thomas: That's hard. We have to start with dual fuel heat pump first.

Anthony asked for a shortcut where you have gas and you went to really good heat pump, but that strategy only saves 1000kWh relative to just an okay heat pump. He asked if you can just call it a heat pump new construction/upgrade.

- Douglass: We'd handle that from a Power Plan perspective. The savings opportunity would be the difference between the high efficiency, well installed heat pump and the current practice heat pump.

Anthony said he's running into problems at BPA because he is saying to use the new construction savings (which are an upgrade), even though it's a retrofit.

- Thomas: We already have the upgrade measure for centrally ducted heat pumps on the books. In some states, code pushes heat pumps, so current practice would look different in new construction than in retrofit. We do have the upgrade measure, and we look at current practice of the heat pump. We'd still do that.
- Anthony: To clarify, if they had a gas furnace and they put in awesome heat pump, that would be the heat pump upgrade measure.
- Smit: Yes, that's right. We'd look at incremental cost and savings relative to the current practice heat pump.
- Douglass: That's our policy. Other jurisdictions have other policies on this topic.

Smit ended the meeting at 1:00.

Voting Record: September 15-16, 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 September 15-16, 2026 meeting. (Miller/Chase)	23	0	0	Yes	79%	100%	23
Motion: Approve the Minutes for the September 15-16, 2026 meeting. (Jerome/Baylon)	22	0	0	Yes	76%	100%	22
Motion: Extend the sunset date for the Residential Dryers UES to October 31, 2026. (Miller/Douglass)	19	0	0	Yes	66%	100%	19
Motion: Extend the sunset date for the Non-residential Lighting Code Compliant Standard Protocol to December 31, 2026 (Grant/Chase)	21	0	0	Yes	72%	100%	21

Motion: Approve the Residential Water Heating Demand Response Product workbook, as presented, set a review date of December 31, 2027, and: - Add text to summary tab that impact rates are based on telemetry data and may over-estimate impacts (Brown/Jerome)	21	0	0	Yes	72%	100%	21
Motion: Approve the Connected Thermostat UES as presented, and: • Deactivate the applications for CDHP • Change the name to Residential Connected Thermostats • Set savings for eFAF retail and direct install applications to zero • Set the EUL to 7 years • Keep the Category of Planning for all applications • Keep the Status as Active • Set the sunset date to September 30, 2029 (Baylon/Manclark)	20	1	0	Yes	69%	95%	21
Amendment: Amendment: Set EUL to 7 years (Grant/Geraghty)	18	2	1	Yes	62%	90%	21
Motion: Update the Level 2 EV Chargers as presented, and: • Keep the Category as Small Saver • Keep the Status as Active • Set the sunset date to September 30, 2031 (Baylon/Miller)	20	0	1	Yes	69%	100%	21
Motion: Adopt the proposed 2027 work plan and business plan, with recommendation to the Council for approval (Jerome/Rivas)	23	0	0	Yes	79%	100%	21
Amendment: Move a quarter of budget for maintaining existing measures to developing new measures (Anthony/Baylon)	3	19	1	No	10%	14%	23
Motion: Accept the proposed Research Strategy for the UES measure Heat Pump Water Heaters Under 120 Gallons as written (Miller/Davis)	20	0	1	Yes	69%	100%	21

September 15-16, Meeting Attendance
* Designates Voting Member

Name	Affiliation
Jamie Anthony*	BPA
Kathryn Bae	NEEA
Landon Barber*	Idaho Power
David Baylon*	Independent
Michael Blasnik	Renew Home
Angelena Bohman	WA UTC
David Bopp	RTF Contract Analyst
Gregory Brown*	Tierra Resource Consultants
Ryan Brown	NEEA
Kyle Chase*	Jefferson PUD
Noe Contreras*	NEEA
Rebecca Cottrell	Idaho PUC
Bob Davis*	independent
Joshua Dennis	WA UTC
Emily Donohue	Evergreen Energy
Christian Douglass*	RTF Vice Chair
Logan Douglass	RTF Contract Analyst
Jesse Durst	Puget Sound Energy
Christopher Dymond	NEEA
Ryan Firestone	RTF Contract Analyst
Wesley Franks	WA UTC
Lisa Gartland*	ODOE
Kevin Geraghty*	independent
Andrew Grant*	Cadmus
Connor Grossman	CLEAResult
Angela Hoang	Evergreen Energy
Michael Hoch*	Energy Trust of Oregon
Aaron Ingle	NEEA
Masumi Izawa	BPA
Mark Jerome*	CLEAResult
Chris Johnson	Benton PUD
Mitt Jones	independent
Phillip Kelsven*	BPA
Rick Knori*	Lower Valley Electric
Brian Kooiman	The Ad Hoc Group
Ben Larson	Larson Energy Research

Jennifer Light*	RTF Chair
Denis Livchak	RTF Contract Analyst
Ben Mabee*	BPA
Bruce Manclark*	Earth Advantage
Guncha Mandal	Puget Sound Energy
Rob Marks*	Snohomish County PUD
Eric Miller*	Independent
Spencer Moersfelder	Energy Trust of Oregon
Ken Morgan	Gensco
Holly Mulvenon	Puget Sound Energy
Andi Nix*	Energy Trust of Oregon
Nick O'Neil*	Energy 350
Natalia Ojeda	Energy Trust of Oregon
Brian Owens	CLEAResult
Andrew Paul*	Avista Corp
Todd Poehlman	CLEAResult
Joe Prijyanonda	ICF International
John Purvis	Clallam PUD
Laney Ralph*	NW Natural
Jes Rivas*	Swift Strategy
Meredith Roberts	Generac
Leila Shokat	Energy Trust of Oregon
Paul Sklar	RTF Contract Analyst
Kevin Smit*	NWPCC
Kenji Spielman	Energy Trust of Oregon
Christina Steinhoff	NEEA
Kelly Stocker	Puget Sound Energy
Samantha Taylor	CLEAResult
Laura Thomas	RTF Manager
David Tripamer	BPA
Eva Urbatsch*	Puget Sound Energy
Garett Valenzuela	CPlusC
Joe Walderman	NPWCC
Jim White*	Chelan County PUD
Alysa Wiyrick	Avista Corp
Marilla Yaggie	BrightLine Group