



Regional Technical Forum

**June 18, 2024
Meeting Minutes**

Welcome, Agenda Review and Meeting Minutes

Jennifer Light, RTF Chair, began the meeting at 9:00am by calling for introductions. She counted 17 voting members. Eric Miller, independent, moved to adopt the day's agenda. Jackie Goss, Energy Trust of Oregon, seconded. The agenda was adopted unanimously.

Rebecca Blanton, independent, moved to approve minutes from the May meeting. Miller seconded. The minutes were adopted unanimously.

Management Update

Laura Thomas, RTF Manager [Presentation](#)

Staff reviewed upcoming meeting topics, announced scheduled subcommittee meetings, and proposed switching to an in-person December RTF meeting followed by a small event to say goodbye to the current RTF member group. RTF Contract Analyst then presented corrections to the Residential Lighting UES workbook and posted QC Updates for Residential Gas Water Heating.

David Baylon, independent, asked how we get infinite cost-effectiveness for what is essentially a current-practice unit [Slide 13]. He said this makes it seem like it's not a measure. He then wondered how the other ENERGY STAR® tanks were never cost effective and remain not cost effective.

- Ryan Firestone, RTF Contract Analyst: For the first question, that's for a specific product type that is only a bit more expensive than the baseline. The savings are small too, but the cost is very small.
- Baylon: How does ENERGY STAR 4.0 relate to federal standards as they're currently being devised? Are you confident ESTAR 4.0 will be more efficient when those standards are finalized?
- Thomas: We're tracking the standards development and will update this measure as needed when those are settled.

Review Date Extension: industrial SEM Guidance Document

Laura Thomas, RTF Manager [Presentation](#)

Staff presented an update on the timeline for the Industrial Strategic Energy Management Guidance Document review. There was no discussion.

Deactivate Small Saver UES: Floating Head Pressure Controls for Single Compressor Systems

Paul Sklar, RTF Contract Analyst (CAT) [Presentation](#)

Staff made the case to deactivate the UES. There was no discussion and the RTF approved deactivating this measure.

MOTION

I, Rebecca Blanton, move that the RTF deactivate Floating Head Pressure Control for Single Compressor Systems UES.

Mitt Jones, Cadeo Group, seconded.

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

Update Planning UES: Hot Food Holding Cabinets

Denis Livchak, RTF CAT, [Presentation](#)

Staff presented information on hot food holding cabinets. Discussion centered around school hours of operation, particularly in the summer months. The RTF approved the updates as presented and adjusting the school savings shape to distribute across 180 school days over 11 months, eliminating July.

Baylon noted that all of the savings values on [Slide 12] are based on the cabinets operating with their doors closed and full of food. He asked if savings are reduced as a result of opening or closing the doors.

- Denis Livchak, RTF CAT: These aren't savings. They're the idle energy rates.
- Baylon: OK, but there's no adjustment for operating the cabinet in real-world conditions?
- Livchak: Correct. If you were to open doors the consumption would be higher. We don't have data on door openings.

Mark Lenssen, Puget Sound Energy, asked if it is standard to eliminate operation in schools for all three summer months [Slide 18]. He wondered if the RTF does this with other measures, questioning if we should eliminate part of June, as his kids are still in school. Lenssen added that some kids go back in August.

- Light: We don't always eliminate those summer months. We think about how the building is used.
- Light to Livchak: Did you think about these shoulder months?
- Livchak: No. We could look at school schedules in more detail.
- Lenssen: I think you're pretty close with 180 days per year, but it might look a bit different than the shown distribution.
- Light: Thanks. Let's be mindful that this is a Small Saver. But yes, we could shift some of those off times to December/January.
- Livchak: For other measures, we didn't separate schools from the shape because they're a small portion of the market, we just factor them into the average. Here, we're less sure what portion of the market is schools. It could be 10%, it could be 40%, which is why we chose to separate this application.

Baylon voiced concern about having a rating for individual cases (watts) without seeing continuous operation [Slide 13]. He thought that the units with more insulation won't run the elements as much. He said when calculating the hours of operation, you use the rated wattage, but cautioned that that's not the likely average wattage.

- Livchak: Yes, they do use more energy for pre-heat. See [Slide 19]. We assume some staggering when the units are turned on.
- Baylon: My question is about the amplitude of the UEC. You're using the rated wattage for this. But don't you need to adjust for cycling on/off of elements, especially in insulated cases?
- Josh Rushton, RTF CAT: The test accounts for cycling. And opening the door doesn't matter. This is only about heat loss through the shell.
- Baylon: The test doesn't tell you what the cycling would be if you add food or open the door?
- Rushton: That doesn't matter for this measure. We're just interested in heat loss through the shell.
- Baylon: The rating doesn't tell us what we're interested in.
- Rushton: The rating doesn't tell you the max watts. It gives you the average draw, which accounts for the cycling.
- Light: We are accounting for cycling in the analysis because the rating accounts for it.

Baylon confirmed that the CAT argument is that the test derates the element wattage so you could multiply by hours of operation and get the right answer.

- Livchak: The manufacturers have designed these units to have wattage to provide the same pre-heat performance.
- Light: I think we've addressed this sufficiently. Let's move on.

Baylon asked if the delivery guidance on [Slide 34] excludes the main item that's been used by Energy Trust of Oregon.

- Livchak: Yes, that's correct.
- Baylon: So, are we saying that we should drop that? It's not saving anything.
- Light: Correct. It's adding load.

Parking Lot

Light asked if the school savings shape that cuts off June, July, and August are misrepresenting shoulder months.

- Goss: I agree that we should use a light touch approach, as every school is different. But there are a lot of holidays in November and December. You could distribute this over 11 months, drop off July, and call it good.
- Baylon: Sure. I'm doubtful that this will make any difference. The 180 days per year is the main issue because it tells us the annual savings.
- Light: But we do care about the timing of savings. We'll see that in the next presentation.
- Baylon: Given the uncertainty in what we see about school years, it's not worth the bother unless we want to do a survey. You could take Goss's recommendation. It seems as reasonable as anything else.

- Goss: I think that's fine for this measure. I know this is not our only schools measure and we may need something more repeatable in the future. If we have something more repeatable, why not use that?
- Light to Thomas: Let's be thoughtful about how we come up with the schedule.

Firestone asked if we have school operating schedules in the CBSA.

- Kevin Smit, NWPCC: I would think that we have some of that data
- Baylon: It's in CBSA I and II.
- Firestone: This could be used to get the days of the year that schools are open.
- Light: I'm going to suggest we input Goss's recommendation in the proposed measure.

Rushton noted that he did look into this recently and found that there are a lot of schools that offer hot lunch services during holidays. He didn't know how many, but said it illustrates how hard this is to pin down really well.

- Light: And this is a Small Saver.

MOTION

I, Mark Jerome, move that the RTF approve the Hot Food Holding Cabinets UES as presented, and: Remove Washington application from the measure, Exclude portable HFHCs, Keep the Status at Active, Set the Category to Small Saver, Set the sunset date to May 31, 2028, Distribute 180 school days across the year, excluding July.

Baylon seconded.

Vote on the motion. The motion carries. (18 yes, 0 no, 0 abstain)

BREAK

Capacity in ProCost and RTF Measures Ryan Firestone, RTF CAT, [Presentation](#)

Staff presented how the RTF capacity is valued in ProCost under the 2021 Power Plan.

Discussion centered around the difference between the classic version of "Peak" and Council Staff's use of "Net Coincident Peak." The RTF discussion also compared the regional results of capacity value to the individual sub-regional experience. In addition, the conversation highlighted the continued importance of the RTF's focus on savings shapes.

Baylon said [Slide 11] shows that only a limited part of kW savings—savings coincident with peak—should affect capacity. He asked what savings hours get multiplied by these numbers, reframing the question as what portion of annual savings is proportional to the capacity benefit.

- Firestone: Capacity savings use the portion of savings that occur coincident with system peak. So, it's proportional to the portion of the savings, per the measure savings shape, that's coincident with peak hours as defined by the 2021 Plan. There is more than one peak hour coming out of the Plan. There will be more on that later in the presentation.
- Light: And keep in mind that these \$/kW figures and the coincident hours themselves are subject to change with the next Power Plan.

Baylon confirmed that the new Plan may mean we drop in new values and repeat the exercise to recalculate capacity benefits.

- Light: Right.
- Baylon: I think that makes sense. As for the gas numbers, I have no idea. Those figures are probably as good as anything, but who knows.
- Light: We had a fair amount of process on the gas assumptions a while back. These numbers reflect RTF agreement coming out of that process.

Jim White, Chelan County PUD, thought that these are kW/year and not kW/month. He asked how the new Plan will upgrade this, pointing to the difference between winter and summer. He asked again how the new Plan will work into these huge increases.

- Light: The 9th Plan is scheduled to be out in about 2.5 years. One big change from the current plan is that we're working to get subregional values for some of these inputs.
- White: I just want to flag that the numbers we're currently seeing in our territory, especially for capacity, are significantly greater than what is shown here.
- Kevin Smit, NWPC: This represents \$/kW year. Folks using ProCost use their own numbers. We have to use the 2021 Plan numbers.

White asked how connected thermostats show positive capacity benefits when those tend to shift load onto ramp hours, which are typically peak periods [Slide 14].

- Firestone: Our current savings shape doesn't indicate negative savings during peak hours. That may reflect a limitation of our data. We may need to change that with the next measure update if anyone has better insights or data.
- Light: This is why we're trying to emphasis savings shapes more than did as recently as a few years ago.

Eric Mullendore, BPA, said the definition of peak weekday seems odd as it focuses on the measure's savings shape rather than the system peak [Slide 15].

- Firestone: We're going to see that this gets resolved a bit better when we compare measure savings shape to system peaks. But it may not be entirely satisfying. To some extent this is a vestige of the old peak-hour definition of morning warm-up and early evening ramp on the coldest winter days. Our peak hour assumptions look very different since the latest Power Plan, and we may need to integrate them differently in future ProCost updates. In the meantime, we've tried to bridge measure savings shape and system peak, per the Plan, in a reasonably sensible way.
- Mullendore: I haven't seen many measures where the savings shape changes by day type.
- Firestone: Correct, we don't always have that.

Baylon asked what data set is used for weather, TMY or some version of FMY.

- Firestone: We use TMY, not FMY. Specifically, the 2004-2018 TMYx format.
- Light: After the 2021 Plan, we did some analysis on this with Justin Sharp, Sharply Focused, and Ben Larson, Larson Energy Research, to understand the best weather

files to use. We decided the RTF should go forward with TMYx. We're reviewing weather assumptions going forward in the Plan process.

- Baylon: If we have two weather files, how would we resolve that with peak calculations?
- Light: We can plug you into the Advisory Committees as we look into these assumptions for the next Plan or other purposes.

Baylon asked if peak hours is set by the user or hard coded into ProCost [Slide 16].

- Firestone: It's set by the user, but for RTF products the "user" is the 2021 Power Plan.
- Baylon: So, this could change with the next Plan? Or a measure analysis could check a bunch of different potential values to see how things shift around?
- Firestone: Right.

White asked what [Slide 22] represents, adding that we don't see any kind of peak in the middle of the night.

- Firestone: This is all the measures. It represents the system and is a big shift from the previous Plans.
- White: We're not getting any solar peak in Dec/Jan.
- Light: This is what we saw in the Plan, and it might shift. The resources that could save energy at these hours were providing value to the system. They could hit at different times. Those are the hours with the most value to the system at a regional look, but it could look different.
- White: I hope it changes. Five pm to 7pm is a super peak.
- Light: We are seeing that here, 17:00 in the winter. Not in the summer though. Remember this is net coincident peak and it's for the region. Different utilities might look different, and the next Plan will look different.
- Rushton: I think part of the confusion is about the word "peak." We don't mean peak demand or peak load on the system. We mean something like peak Delta between demand and available resources.
- Light: We call it "net coincident peak."

Baylon asked if this is partly speculating on when renewables will be available.

- Light: The 2021 Plan did analysis at a regional level. These are the hours where saving energy represents a particular value to the region. And we did see value in these secondary peak hours, in addition to the value for the primary peak hours.
- Baylon: So, half of the equation is about when renewable resources will be available? It's not just about when there's load on the system?
- Light: Right. It's about which portion of EE is more cost effective than the alternative. We bundle EE that's cost effective. Providing savings during net coincidence peak hours has more value.
- Smit: Right. Also, coincident and peak are used in different ways. We say, "hours of greatest need." Conservation is avoiding peak prices in key hours.

White called [Slide 23] an error, saying heat pumps usually don't save anything on coldest days because they're in resistance mode. He said on peak savings shape for the coldest hour should be zero.

- Firestone: That comes down to our best saving shape knowledge. If we had more data, we could reflect that.
- White: The savings shape for peak should be 0.

Lenssen asked why [Slide 26] shows a benefit during this peak if we've already built the system to meet that demand.

- Firestone: Think of these peaks as hours of greatest need, not the traditional system peak.
- Lenssen: Isn't that a generation issue and not a T&D issue? Generation locationality gets wonky because of nighttime issues.
- Smit: I don't have a good answer for that. We need to think about that.

White was unclear about the averaging on [Slide 28.] He agreed that there could be some diversity factor, but thought that it should just be the peak, adding that you either build the resource or you don't, and if you build it for the peak hour then you have it for the other hours.

- Light: This is about what we were seeing as valuable in the Plan. We were seeing value in measures that saved energy even in some of these shoulder conditions. Again, that's in the 2021 Plan. Things will probably look different in the next Plan.
- Smit: This is a good question. We've been asking ourselves that as well. Part of what we did in the last Plan was motivated by our lack of knowledge about the exact peak, so there's some spreading of risk here too.

Baylon confirmed that the marginal resource is a particular thing.

- Light: It's a four-hour battery in the 2021 Plan.
- Baylon: As a result, our capacity benefits are tied to a specific resource build scenario. They aren't very general. That's why White can have such different numbers. This seems like a relatively narrow approach because it's tied to that kind of specificity.
- Smit: I don't think I understand the criticism. The Plan always tries to identify periods of greatest need, and we've tried to be very concrete about our resource assumptions. We're still trying to do that, but now we're in a more complex world with renewables, but the basic idea is the same as ever.

White asked if we could modify things in ProCost sooner rather than later [Slide 35].

- Firestone: The RTF cannot, but utility users can, and I can help you with that.
- White: We're constrained to use RTF methods, so it seems like we're stuck with values that don't reflect our reality. We're undervaluing capacity and will be for the next three years by using an average. It's becoming a critical factor that will hit the fan and we will not be prepared.
- Light: We're working to update the Plan assumptions as quickly as we can.
- Smit: Some of this is location and utility specific. Some utilities see no value for avoided T&D. It depends on where you are. We will have more locational value in the next Plan.

Lenssen questioned if this is talking about two things: system peak, where we need generation, transmission, and distribution adequate for those hours, versus a sort of average peak that is more of an operational, over-the-course-of-the-year thing.

- Light: The challenges we were seeing in the 2021 Plan were about these ramp periods.
- Lenssen: We see pretty different values in our territory. Our updated T&D value was over \$100 compared to the regional's \$10. That number is massive for us.
- Light: Hopefully the next Plan's subregional analysis will allow us to reflect this better.

Baylon asked if a user change ProCost inputs to better reflect conditions reported by White and Lenssen.

- Firestone: You can change which hours you think are peak, but you can't change the averaging methodology.

Light suggested reaching out to Smit if RTF members want to be a part of the process for reviewing many of these assumptions in the next Plan.

Light ended the meeting at 12:30.

Voting Record: June 18, 2024

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 June 18 meeting (Miller/Goss)	17	0	0	Yes	57%	100%	17
Motion: Approve the minutes from the May 21-22 meeting as posted (Blanton/Miller)	17	0	0	Yes	57%	100%	17
Motion: Deactivate the Floating Head Pressure Control for Single Compressor Systems UES. (Blanton/Jones)	19	0	0	Yes	63%	100%	19
Motion: Approve the Hot Food Holding Cabinets UES as presented, and: -Remove Washington application from the measure -Exclude portable HFHCs -Keep the Status at Active -Set the Category to Small Saver	18	0	0	Yes	60%	100%	18

-Set the sunset date to May 31, 2028 -Distribute the 180 school days across the year excluding July (Jerome/Baylon)							
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June 18, 2024 Meeting Attendance

* Designates Voting Member

Name	Affiliation
Jamie Anthony*	BPA
Sofya Atitsogbe	WA UTC
David Baylon*	Independent
Rebecca Blanton*	Independent
David Bopp	RTF Contract Analyst
Frank Brown	BPA
Bob Davis*	Ecotope
Emily Donohue	Evergreen energy
Christian Douglass	NWPCC
Logan Douglass	RTF Contract Analyst
Ryan Firestone	RTF Contract Analyst
Margaret Frey	Seattle City Light
Kevin Geraghty*	independent
Jackie Goss*	Energy Trust of Oregon
Brandon Hines	TRC Companies
Aaron Ingle	NEEA
Mark Jerome*	CLEARresult
Mitt Jones*	Cadeo Group
Jake Kennedy	Energy Trust of Oregon
Rick Knori*	Lower Valley Electric
Mark Lenssen*	Puget Sound Energy
Jennifer Light*	RTF Chair
Denis Livchak	RTF Contract Analyst
Ben Mabee	BPA
Eric Miller*	Independent
Eric Mullendore*	BPA
Andi Nix	Energy Trust of Oregon
Alex Novie*	Energy Trust of Oregon
Nick O'Neil*	Energy 350

Sorochi Okam	RTF Contract Analyst
Brian Owens*	CLEAResult
Andrew Paul	Avista Corp
Willa Perlman	Energy Trust of Oregon
Joe Prijyanonda	Applied Energy Group
Laney Ralph*	NW Natural
Mark Rehley*	NEEA
Samuel Rosenberg*	PNNL
Josh Rushton	RTF Contract Analyst
Aven Satre-Meloy	LBNL
Paul Sklar	RTF Contract Analyst
Kevin Smit	NWPCC
Kenji Spielman	Energy Trust of Oregon
Jennifer Snyder	WA UTC
John Stalnaker	BPA
Christina Steinhoff	NEEA
Jason Talford	Idaho PUC
Laura Thomas	RTF Manager
Michelle Wildie	Puget Sound Energy
Jim White*	Chelan County PUD
Geoff Wickes	NEEA
Kathy Yi*	Idaho Power