



**October 21, 2025
Meeting Minutes**

Welcome, Agenda Review and Meeting Minutes

Jennifer Light, RTF Chair, began the meeting at 9:00 by calling for introductions. She counted 25 voting members. Rick Knori, Lower Valley Electric, moved to approve the minutes from the September 16, 2025 meeting. Eric Miller, independent, seconded. The minutes were approved unanimously.

Miller then moved to adopt the day's adjusted agenda. Andrew Grant, Cadmus, seconded. The agenda was approved unanimously.

Management Update

Laura Thomas, RTF Manager [Presentation](#)

Staff presented updates. The RTF discussed if the materials to update ENERGY STAR® specifications will be available even though development has been paused.

David Baylon, independent, asked if there is any indication that ENERGY STAR will release supporting documents, even though they can't update standard [Slide 9].

- Laura Thomas, RTF Manager: All resources developed to date are on their website.
- Baylon: And there is no more work being done on any measure?
- Thomas: Yes, for the time being.

New Planning UES: Commercial Dishwashers

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

Staff presented the proposed new Planning UES for Commercial Dishwashers. Discussion focused on heat pump water heaters and their COP. The RTF voted to approve the measure with heat pump water heaters and a shortened sunset date.

Noe Contreras, NEEA, asked about insulated tanks on the equipment on [Slide 11] wondering if there are heat losses.

- Denis Livchak, RTF CAT: The tank is insulated, but open on top [Slide 6]. Equipment with the tank on the bottom is insulated on five of six sides [Slide 7]. The top picture just has sheet metal on top. The rack conveyor is insulated but has curtains on the sides.

Grant asked about the market average baseline on [Slide 14] wondering how the baseline is impacted by different states. Grant noted that OR/WA have v2 as a standard wondering if that means they'll have a different market average baseline than ID/MT.

- Light: Yes, we do baselines by state if we have to.
- Livchak: There are models you can buy in ID/MT that don't meet the ENERGY STAR spec.

Lisa Gartland, ODOE, asked if washing energy is a reporting requirement for manufacturers.

- Livchak: Most dishwasher types are required to report water consumption with NSF for food safety. NSF is concerned with the minimum amount of water you can use to sanitize wares. That's the only metric required to be reported for inefficient machines. Other metrics are only reported for ENERGY STAR.
- Gartland: From an ODOE standpoint, should we update our standard for dishwashers? Are there a lot of certified units?
- Livchak: There's no DOE spec. Most US manufacturers have washers on the ENERGY STAR list. Some high-end manufacturers are mostly ENERGY STAR certified. There are about 200 units certified for v3 of ENERGY STAR.

Baylon asked if the graphs on [Slide 17] include water heater energy.

- Livchak: Yes, the water heater energy is the light blue bar on the right. That's only energy from the building water heater. It's set to 140°F. By the time the water gets to the machine, we assume it's 124°F.

Bob Davis, independent, assumed Livchak is showing a resistance water heater. He noted that presumably line loss and standby loss is built into the water heater. Davis called this an outstanding presentation.

- Livchak: Yes, we'll get into water heaters later.
- Gartland: It looks like there's a water heater opportunity. Is there any talk of heat pump water heaters in these situations?
- Livchak: Yes, we'll get into those and show the savings later in the presentation.

Contreras asked if HVAC is impacted by the heat losses from the open tank.

- Livchak: We didn't look into this. There are very complex HVAC interactions, but most kitchens are unconditioned which is why we didn't consider it. But it can be complicated if there is and if there's heat recovery or not. I have a report I can share with you.

After looking at the SIW Grant noted that the models on [Slide 22] are residential water heaters, not commercial, wondering if there is a difference.

- Livchak: The SIW doesn't have commercial values. I assumed efficiencies were the same.
- Thomas: We can flag this for the next update, or the RTF could provide suggested values now.

Baylon moved to non-condensing gas water heaters saying he'd be surprised if half of restaurants were using them as they're expensive. He asked if the CBSA suggests that non-condensing water heaters are this common.

- Christian Douglass, RTF Vice Chair: We could check in the CBSA.

Davis checked if the SIW has 334% efficiency for heat pump water heaters. He noted that there's ongoing research on heat pump water heaters in restaurants, mostly in CA, adding that the number is pretty optimistic, but the region doesn't have better data yet. Davis said that some Sanden systems are going in which might get this high efficiency, suggesting the RTF should keep an eye on it.

- Livchak: We have a slide on COP assumptions coming up.
- Thomas: If the RTF has a suggestion, we could consider it. We're looking at commercial heat pump water heaters next year, too.

C. Douglass added the following to the parking lot: split on condensing versus non-condensing water heaters and the efficiency of gas and heat pump water heaters.

Baylon called the 3.34 COP assumption on [Slide 23] too optimistic for a heat pump water heater. He said the mix of resistance is okay, but maybe the COP of heat pumps should be 2.6 or 2.8. Baylon stressed that until we get to Sanden machines a 3.34 is way too optimistic.

- C. Douglass: We'll circle back to this issue at the end.
- Livchak: I looked at CBSA for water heater types. There was only one heat pump water heater in a restaurant or school. Currently, they're not that common. Puget Sound Energy received some program data, but it didn't tell us if it was a resistance or heat pump water heater.
- Baylon: Commercial heat pump water heaters sound like another measure, but we should be realistic about what it can provide.

Grant noted that ENERGY STAR v3 has been around for four years representing 53% of the market [Slide 26]. He asked why the RTF isn't considering this in the market average baseline mix.

- Livchak: We are, we are applying this current practice [Slide 27].
- Grant: I'll bring it up again when we get to cost. There seems to be a disconnect between savings and costs.

Baylon confirmed that Washington and Oregon are at ENERGY STAR v3 for undercounter low temperature machines [Slide 27].

- Livchak: Yes.
- Baylon: But not in high temperature?
- Livchak: For high temperature, we used judgement so that our numbers add up to 53% of overall categories for ENERGY STAR v3 penetration.
- Baylon: If we've already transformed the market, I don't believe 65/35 is going on.
- Livchak: All we have is ENERGY STAR's numbers. We don't have regional data.
- Baylon: I think the OR/WA estimate is very pessimistic for high temperature products.

- C. Douglass: Low and high temp machines are very different. For low temperature, everything meets v3, but not for high temperature?
- Livchak: Yes.
- C. Douglass: So, for high temperature products, there's room for improvement but not for low temperature.
- Baylon: I think we should assume higher market share for ENERGY STAR v3 for the high temperature in OR/WA as a matter of philosophy.

Grant found a drag down formula error in the workbook [Slide 29] saying staff need to fix the EULs for the different washer type on the Measure_InputOutput sheet.

Baylon noted that the region agreed on 180 days of operation in schools in the past but the shape on [Slide 32] suggests more like 250 days. He asked about consistency wondering why staff did not propose something closer to 180.

- Livchak: There's an overlap in the schedule across school districts
- Baylon: August is greater than September. That's not right. You could reduce June and August to something like ½ of what's there to get closer to 180 days.
- Thomas: We used the same monthly distribution as the hot food holding cabinet. This was based on a lot of conversation by the RTF about school schedules. We picked it for consistency. We can change if the RTF would like.
- Baylon: I'm not concerned about the precedence. I'm concerned about a 180-day assumption for energy consumption, that is not reflected in this graph. This graph is fantasy.
- Livchak: There's no weekend operation.

Douglass clarified that Baylon is pointing out the disconnect in the 180-day assumption and this shape.

- Baylon: This is just a load shape. Staff should make it so that the aggregate is about the same. It's easy to adjust the monthly amounts. It's okay if it's not exactly right.
- Livchak: So, I should reduce June, August, and December consumption?
- Baylon: Yes, a little in December, more in June and August.
- C. Douglass: We'll look into this. We can either change the days per year or change the savings shape.

Jerome stated that the RTF recognized that there are a lot of summertime school lunch programs for the hot food holding cabinets work. He said if schools are using hot food holding cabinets, they're also probably using dishwashers.

- Baylon: But not 100% of schools doing summer lunches, not by a long shot.

Baylon asked about heat pump water heating machines using backup resistance [Slide 33], saying you set the boosted temperature at the machine, not the water heater.

- C. Douglass: The heat pump water heater is on the right. The brownish bar is water heater savings. Compare bars left and right to see difference in water heater savings for resistance versus heat pump water heaters.

- Livchak: You may have to install an additional booster heater. This would have same efficiency as a resistance water heater.
- Baylon: But you're assuming the bulk of water heat is provided by the water heater, not the booster? That seems optimistic for a heat pump water heater.
- Livchak: This assumes demand is met by a water heater that uses resistance heat if needed. There can be boosters to get to wash water temperature and boosters to get to rinse water temperature. Also, the savings just assume resistance water heating. It doesn't matter if it happens at the water heater or at the dishwasher.
- Baylon: That makes sense. It's just the 3.3 COP for heat pump water heaters that I have issue with.

Grant noted that 60% of all products on [Slide 35 and Slide 40] have same savings. He wondered why costs are different for all products, but savings are the same. Grant said OR/WA cost-effectiveness is higher because ID/MT have bigger incremental cost, but the same savings.

- Livchak: This looks like a mistake. The costs should be the same for those categories.
- Thomas: We'll correct that in the QA/QC process and provide a management update if anything changes significantly.

Grant asked if the baseline on [Slide 43] is for low to high temperature.

- Livchak: The baseline for low temperature is low temperature. The baseline for high temperature is high temperature.
- Grant: There could be another measure to go from high to low temperature.
- Livchak: We assume there's no competition. If you can accommodate a high temperature machine, you get it. But there would be a lot of savings if you could switch.

Eva Urbatsch, Puget Sound Energy, thought that 355 days of operation seems high, adding that it would be easy to research [Slide 45].

- Livchak: Yes, quick service restaurants are usually open seven days a week. Full service is six or seven days per week. Then there are specialties like hotels and hospitals. So, there is low uncertainty. But a survey may capture that as well.

David Tripamer, BPA, stated that the 2025 CBSA has the days of the week that a building is normally open. He said that could tell you operating days for restaurants [Slide 47].

- Livchak: Yes, we could look at that. We've done that for other measures. I think the ones we updated last year looked at this and came up with a similar number.

Baylon voiced his concern with the existence of heat pump water heaters in this measure [Slide 49]. He didn't think staff captured the actual range of equipment and how they would be used in a restaurant. Baylon called for a more focused discussion of how heat pumps can be used in this context. Because of this, Baylon suggested excluding heat pump water heaters until staff do a review.

- C. Douglass: So, you're suggesting excluding heat pump water heater variations until we better understand that type of equipment in restaurants?

- Baylon: Yes. The California work should inform this. I encourage us to get that into the measure as soon as possible. But this heat pump water heater work is half-baked.

Parking Lot

C. Douglass laid out the outstanding issues:

- Corrections: fix costs, fix EULs – corrections noted. We'll reach out to Grant with any questions.
- Condensing versus Non-condensing water heater split: I looked at CBSA and it looks like the equipment is 90% non-condensing. I propose that split, Livchak nodded in approval.
- Other issues: Heat pump water heater COPs and if we should include heat pump water heaters at all. Also, the days per year disconnect with load shape.

Thomas reminded the RTF that they approved spreading 180 school days per year over 11 months of the year, excluding July, for hot food holding cabinets in June 2024. She stated that the proposed shape is consistent with that RTF decision.

Contreras asked if [Slide 47] groups OR and WA together in some places, but not all.

- Livchak: No, they're always grouped together.
- Contreras: OK. And why exclude the gas water heater with heat recovery dishwashers?
- Thomas: We're not sure about the savings on gas versus electric: you're going from gas water heating to electric water heating. We're not ready to sort that out, but the RTF could in the future. This concern is not applicable to electric water heaters because there is no fuel switching.

Brown suggested spreading the 180 school days, but decrementing June and August by 50%. He thought that would account for a lot of the issue.

- Baylon: That's a good way to do it, as long as we get to 180 days.
- C. Douglass: It looks like the group is OK with this.

Tripamer asked why the RTF is not just looking at operating days from the CBSA for schools.

- C. Douglass: We could look into that. But you have to be careful with the CBSA. Some open days might not be normal school days.
- Tripamer: The 2025 version has schedule information.

C. Douglass asked the room about excluding heat pump water heaters because of the COPs.

- Bruce Manclark, Earth Advantage: I agree to exclude heat pump water heaters.
- Jerome: Me too. They're not common.
- Baylon: There are a variety of heat pump water heaters that would change the calculation. I'm not sure which are available, but you need to know what kind of heat pump water heater is being sold to this operation.
- C. Douglass: I'll leave this up to the motion maker.

MOTION

I, David Baylon, move that the RTF approve the Commercial Dishwashers UES measure as presented, and: Update 90/10 non-condensing/condensing gas water heaters split, Adjust school savings shape to reduce June and August operation by half, 180 days total, Remove heat pump water heater savings, reviewed further by CAT at a later date pending CA study, Set the Category as Planning, Set the Status at Active, Set the sunset date to October 31, 2028. Gartland seconded.

Rob Marks, Snohomish County PUD, voiced trepidation about missing data from customers with heat pump water heaters, admitting there are very few of them. He reasoned that the impact of including them is small but without them the region misses the opportunity to collect data. Because of this, Marks didn't think it was worth disqualifying them.

Grant thought the sunset date should be sooner to incorporate better data on commercial heat pump water heaters. He thought that commercial duty water heaters should look different than residential heat pump water heaters.

- Davis: The prevailing system in the CA study is a 120-gallon AO Smith with 12 kW backup resistance heat. These machines get really cold. That's OK in a CA restaurant. We don't know how this will work in the Northwest, yet.
- Baylon: There are other technologies, like CO2 that will behave very differently than the AO Smith. The AO Smith COP is closer to the high 2's than 3.3. It's OK with me to include heat pump water heaters but provide a more realistic COP.
- Douglass: That makes senses. We could include a heat pump water heater but hedge on the COP.
- Marks: The technology works great in kitchens with a lot of waste heat and improves comfort for the kitchen staff.

Gartland stated that replacing a dishwasher doesn't mean you replace the water heater at same time, calling them separate decisions. She thought that it doesn't make sense to conflate these measures, again stressing that a heat pump water heater is a separate measure.

- Grant: To clarify, upgrading to a heat pump water heater is not part of the measure. A heat pump water heater application assumes that the technology is already in place.

Adam Hadley, RTF CAT, said he doesn't have a sense of what the RTF guidance is. He agreed that adjusting the COP from 3.3 to 2.5 make sense.

- Thomas: Here's what I would do. Once we finish the commercial heat pump water heater work, we can reevaluate this dishwasher measure and decide if we should add applications for the technology at that time.
- Ryan Firestone, RTF CAT: I think it make sense to include heat pump water heaters. The uncertainty is OK. It's a Planning measure. And it's low risk because there's not that many of them out there.

AMENDMENT

Jerome proposed not excluding heat pump water heater technology and shortening the sunset date to 18 months (April 30, 2027).

Jerome said the RTF has what is needed to go forth with a new measure and hopefully will have some work or CA study by then. Jerome didn't think the RTF needed to change the COP because they're not many out there.

Miller seconds the amendment.

Baylon said he would not support the amendment with an adjustment to the COP.

- Kyle Chase, Jefferson PUD: We're worried about COP. But having a higher COP leaves savings on the table. It doesn't hurt us.

Vote on the amendment. The amendment passes (23 yes, 3 no, 0 abstain)

AMENDED MOTION

I, David Baylon, move that the RTF approve the commercial Dishwashers UES measure as presented, and: Update 90/10 non-condensing/condensing gas water heaters split, Adjust school savings shape to reduce June and August operation by half, 180 days total, Set the Category as Planning, Set the Status at Active, Set the sunset date to April 30, 2027

Vote on the amended motion. The amended motion carries. (25 yes, 0 no, 0 abstain)

LUNCH

Update Planning UES: Commercial Secondary Glazing Systems

Laura Thomas, RTF Manager [Presentation](#)

After the presentation, the RTF voted to deactivate the measure.

Light explained that the staff proposal reflects the amount of RTF time required to maintain the measure when there's no uptake.

MOTION

I, Rick Knori, move to deactivate the Commercial Secondary Glazing Systems measure.
Baylon seconded.

Phillip Kelsven, BPA, said that Bonneville uses this measure and he was looking forward to an update. He said they did three or four in the last few years adding that two were old schools where windows couldn't be replaced and another building.

- Light: Could you collect data to improve the estimates we've had.
- Kelsven: It's possible.

Baylon said one of the problems with this measure is that it doesn't apply to operable windows, yet older schools are dominated by operable windows for ventilation and cooling. He asked what happens when you only do secondary glazing systems on half of the windows.

- Kelsven: The case I saw added VHE DOAS to the system, so they no longer need operable windows

- Baylon: It sounds like you'd do it anyway in that case. You'd manage your building shell as part of the HVAC upgrade.
- Thomas: We've heard from NEEA that this is an important measure, but they're prevalent in building performance/whole building measures. Jaime Anthony from BPA also mentioned a BPA/NEEA meter-level analysis. I'm not sure if it's appropriate as a stand-alone UES.
- Light: Sometimes the RTF deactivates a measure because we don't think there are savings. That is not the case here. We just think the savings are very uncertain and not being improved.
- Baylon: We'll never have a clear-cut way to evaluate this with our current tools. But it will be part of the whole building toolkit, especially with OR/WA performance standards. That doesn't make it a UES.

Vote on the motion. The motion carries. (23 yes, 1 no, 1 abstain)

Update Planning UES: Irrigation Hardware Upgrades

Paul Sklar, RTF CAT [Presentation](#)

Staff presented the update. Discussion centered around hours of use and percentage of surface versus well water. The RTF updated the measure.

Baylon felt that the RTF is allowing a fairly trivial upgrade (high pressure to MESA), calling three feet nothing [Slide 11]. He thought farmers would want to go down about 10 feet. Baylon asked why we have a MESA measure, saying he I can't imagine any systems still has sprinklers on the top of the tube.

- Paul Sklar, RTF CAT: That sounds right. I don't know how many MESA applications are being claimed.
- Baylon: This was a measure 20 years ago. I don't think it should be there anymore. A three-foot requirement is too small. My first guess is MESA is done. My second guess is it is current practice.
- Light: This is a retrofit measure.

Light asked Program Managers if high pressure-to-MESA being utilized.

- Andi Nix, Energy Trust of Oregon: Energy Trust of Oregon has it as a measure application, but I don't know the participation rate.
- Ben Mabee, BPA: We have it as a measure, and we still get claims for it.
- Light: Remember, this is a pre-conditions measure. You'd need a high-pressure system to qualify for the MESA application.

Urbatsch asked if LEPA and MDI are field specific to get the right furrow width.

- Sklar: Yes, farmer needs to pick the system that works for their crop. I don't know those specifics. But drop tubes can't interfere with crops.
- Quentin Nesbit, Idaho Power: MESA is very common but not 100%. There are some customers, especially in Idaho, because of corn. Some have converted back to

sprinklers on top. We don't manage this. We handle this as a custom measure because of other changes to the system at same time.

- Mabee: There were 140 conversion over the past couple of years. About 50 were to MESA.
- Light: Got it. It's still being used

Contreras asked if these categories compete with one another.

- Sklar: I don't know.

Baylon asked if high pressure means nozzles on the pipe [Slide 12].

- Sklar: Yes.
- Baylon: In that case, MESA is probably better than *that*.
- Sklar: Yes, see the reference on this slide. This paper provides the application efficiency estimates that we use.
- Baylon: I'd think evaporation would be higher, especially in ID and eastern OR/WA.

Baylon noted that the LESA/LEPA/MDI column on [Slide 13] says 95% for all, yet they're not all 95%. He said that LEPA and MDI are at the ground so they should have better application efficiency.

- Sklar: The 95% estimate comes from same source. They may have been equated in the report. We don't know as much about MDI.
- Baylon: MDI is drip irrigation. It will approach 100% because it minimizes or eliminates evaporation.
- Sklar: That sounds reasonable.
- Light: This is the data we have. The RTF can make a judgement beyond the data. We can put that in the parking lot.
- Baylon: 95% sounds right for the average of these three.
- Light: Noted. Data would be most helpful.

Grant addressed hours in the workbook [Slide 14], pointing to MT tab Inputs, cell B55. He noted that this is a different value than what's in the slides. Grant said the workbook looks like only 2018 source.

- Sklar: It sounds like a discrepancy. I'll look into that.
- Light: Which is right?
- Sklar: Using the 2018 numbers. They're more recent. The screen shows what we used previously (an average of 2013 and 2018).
- Light: Which are you proposing to use?
- Sklar: My intention is to use 2018 because it's newer.
- Grant: That's almost double any of the values because there's no secondary (utility) data source. Maybe an average of 2013/18 would be more appropriate for that reason.

Livchak addressed the hours of operation question saying the older version of workbook hours are same as the presentation. He suggested that maybe the newer version of the workbook is problematic.

- Light: This is in the parking lot. We'll come back to it.

Baylon said that western ID, eastern OR, and eastern WA get a lot of energy from Grand Coulee to make surface water [Slide 15]. He did not believe those areas have 30% wells.

- Sklar: Yes, I'm unclear about the accuracy of the survey, but I'm not sure how to systematically adjust it.
- Baylon: Surface water is being used in these areas.
- Sklar: WA and OR are all 28% wells. It was increased to 35% in the update. That's still a lot of surface water.
- Light: The CAT is proposing to update to the new farm and ranch survey. I can put this in the Parking Lot. Unless you have new data, this is what we have.
- Baylon: I think the 2018 data is better. I don't think it's right that the entire region has about the same share of wells versus surface water (35%).
- Light: Noted.

Grant pointed to Cost Data and Analysis in the workbook [Slide 18]. He said the material and install costs are identical and are being doubled but thought that costs should actually be lower. Grant thought that staff should have QC look at this.

- Light: Agreed.

Light reviewed parking lot items [Slide 25]:

Hours of Use: Sklar recommends just using the most recent data.

- Grant: The other HOU from that survey doubles (all states). But utility data might be more accurate, with more conservative values. That may be better than the survey.
- Sklar: That sounds good to me.
- There was agreement in the room.
- Light: So, we'd use the average of the two datasets with no update.
- Livchak: There are three surveys: 2013, 2018, and 2022. The 2013 hours of surface water is significantly lower (about 1000 hours). The other two surveys are close to 4000 hours.
- Light: Did we previously average across these?
- Livchak: The current measure on the screen is a 2013/18 average.
- Sklar: I couldn't find MT data in the survey. We do need to clarify the years.
- Light: Let's keep what we currently have for hours of use, rather than updating.

Light then addressed the Farm and Ranch Survey, saying staff proposed to use most recent one (2022). She pointed to the concern that the mix of well versus surface water is questionable in some cases.

- C. Douglass: I wonder if the particular crop types affect these. Maybe an average over several years is more appropriate?
- Nesbitt: I agree. There are big jumps from survey to survey so an average might be the better approach.

- Light: So, let's update from average of 2018/22 for well versus surface water percentage.

Light then addressed the 95% application for LEPA, LESA, and MDI. She asked if there is any better or more granular data.

- C. Douglass: For our agricultural Plan work, Dr. Peters provided a draft report with updated application efficiency estimates. It found that for high pressure it was about 65%. It was the same for MESA, LEPA, and LESA. MDI got 97%.
- Baylon: That's better than what we've got. MDI should be closer to 100%.
- Light: That's a strong endorsement from Baylon.
- C. Douglass: The report also says MDI and LEPA potentially have zero evaporation.
- Baylon: Removing evaporation is a big deal.
- C. Douglass: LEPA can have some pooling, MDI doesn't.

MOTION

I, Christian Douglass, move that the RTF approve the Irrigation Hardware Upgrades UES as presented, and: average of 2013 and 2018 F&R survey hours of use for Montana; average of 2018 and 2022 F&R survey for lift, operating pressure, and % of surface water, change high pressure sprinkler efficiency to 65% and MDI to 97% keep the Planning Category; keep the Active status; Set the sunset date to October 31, 2028.

Miller seconded.

Vote on the motion. The motion carries. (24 yes, 0 no, 1 abstain)

BREAK

Demand Response Overview

Laura Thomas, RTF Manager [Presentation](#)

Staff presented the scope and current focus of the Demand Response work, including striving to develop more consistency and basic structure/framework for analysis work. The RTF discussed the scope of the Demand Response work and provided feedback on the framework that staff presented to inform upcoming work.

Baylon asked what staff means by "DR" [Slide 7]. He said it sounds like it's linked to EE measures, calling that OK, but not relevant to what DR should be doing. Baylon asked if staff sees this as sticking it in bed and chopping off the heads and tails or if they are considering measures that are not linked to EE.

- Thomas: We're moving away from linking to EE measures. But we are limiting our work to technologies where we have technical expertise. For example, we don't have expertise in batteries, so we won't go there but we do have strong experience in water heating.
- Light: Another good example is Time of Use or Critical Peak Pricing. The RTF doesn't have expertise on those types of DR programs.

Anthony addressed the 2nd bullet from the bottom asking what the Council is planning here.

- Thomas: RTF work done in 2024 was used by Joe Walderman, NWPCC, for 9th Plan inputs. A lot of the work that the RTF does will inform Council Plan assumptions. For the region, our work helps with planning estimates.
- Light: For EE, we support planning and evaluation. For DR, we just support planning.

Grant asked about RTF subcommittees asking if there will be more granularity because there are multiple products.

- Thomas: As we don't have as much engagement in DR I'm thinking about just one. I'd like to build up the DR subcommittee with broad expertise to cover all of these measures. For example, that's what we do for Natural Gas: one subcommittee that covers many measures.

Grant asked about the implication of not putting this in the Guidelines [Slide 9]. He asked if we are then not beholden to definitions.

- Thomas: We have EE UESs and Standard Protocols. But for DR, we might need more flexibility. For example, I don't think we need a "Category." But maybe there will be things that we need to put in the Guidelines.
- Light: The Guidelines didn't start with the RTF but came much later out of an interest in codifying RTF decision making. It could take a while to get there for DR. Let's not rush it.

Jerome said he wants the RTF workbook to supply kWh estimates and kW impacts. He thought this work will moves us in the right direction.

- Rushton: We're not making you feel good. We're giving guidance on how bad you should feel.
- Baylon: I've been suffering under the delusions presented in the 2021 Plan that implied the DR was an actual thing that happened intermittently in case generating capacity suddenly declined.
- Light: Let's get to the next slide, which proposes a definition.

Light read the [longer DR definition from Council's 2021 Power Plan](#) [Slide 10]. "Demand response is a non-persistent intentional change in net electricity usage by end-use customers from normal consumptive patterns in response to a request on behalf of, or by, a power and/or distribution/transmission system operator. This change is driven by an agreement, potentially financial, or tariff between two or more participating parties. (Updated 2017)"

- Brown: This definition is helpful. That's a larger universe than what's on the screen. Either is fine as long as we agree on it. DR results are very sensitive to the type of DR. We need to be explicit about what type of DR we're talking about. Utilities are focused on more than when the power system is stressed.

Tripamer admitted that it was hard to follow the definition Light read confirming that batteries wouldn't be DR.

- Light: You could use DR on a battery. That's out of scope for RTF but the Council handled that, and you can discuss it with Walderman. Utilities can have agreements with

customers on battery dispatch. The Council's scope is broad. The RTF is starting with the technologies that we know well.

Grant said it would be useful and clarifying to create a slide containing of all the 9th Plan DR products and highlighting which ones the RTF would consider.

- Light: That makes sense. We can add that to the DR webpage.
- Jerome: I think the definition on the screen is a good spot for us to start with. A smaller subset of DR that looks at when power system is stressed.
- Light: I don't think the intent of the shorter definition was to limit our scope. What we're talking about should become clearer as the presentation goes on.

Baylon continued to worry about the proposed approach to Demand Response [Slide: What do we hope to accomplish with an RTF DR Product Workbook?]. He said the Council's definition is not a deployable product that is available as needed but instead something the utility deploys in lieu of a gas turbine, or market-based capacity purchase. Baylon said this is done if you have intermittent resource issues, but this sounds like we're treating DR like a variation of the capacity impact of our EE measures. Baylon concluded by saying the problem is not the same as an EE measure but accessing capacity and deploying it.

- Light: I don't think you're seeing what we're proposing. I think it would be helpful to go through more of the presentation so that we have something concrete to respond to.

Brown addressed the bullet "typical rates of opt out..." on [Slide Proposed Framework: Standard Elements] saying some enrolled customers will sometimes not be able to participate. He asked if that is opt out, and if it is incorporated in the curves.

- Josh Rushton, RTF Contract Analyst: I think that would be opt-out.
- Walderman agreed.

Grant stated that timing is on the hourly level and asked about seasonal values. He wondered if staff are breaking out incentives between summer and winter shoulder.

- Douglass: Yes.

Grant then asked about cost parameters, wondering about IT and system overhead, calling them a difficult conversation. He wondered how staff plan to handle this hurdle.

- Rushton: We will talk about this. The DRAC has covered this. I have a home for it but I'm proposing that the RTF not do much here.
- Douglass: DR isn't my wheelhouse. Will we have static values for things like opt-out? I wonder about decay rates over time. For example, what happens during multi-day events?
- Rushton: If we have the data, we'd include it. Otherwise, we'd flag it as an issue to consider.
- Thomas: I also want to highlight the uncertainty. When we get to the irrigation example you can see how this will play out.

Baylon felt that at some point in the process, the RTF should make a judgement as to what particular measures and sectors are appropriate for DR and then quit talking about them [Slide: Impact Parameters]. He called this an intermittent, not often used, resource. Baylon suggested the region should be conservative about where to spend money trying to get participation and where not to.

- Light: Noted. We'll do a bit more than just say if there's DR potential or not. This is a bigger deal for the region than it has been historically.
- Baylon: In the olden days, you made a phone call to a large industrial plant to shut down for a couple of hours.
- Light: It's different now.

Grant said this work uses program evaluations to get event kW. He suggested considering program maturity, opt-in versus opt-out, and component types. Grant admitted that it's a lot of work to distill that out to something perfect for the region, saying Council work shows that even looking at east versus west can have a huge impact.

- Light: Part of what Rushton is doing is making clear statements about the limitations of our work, and what you need to consider if you use our work for planning.
- Rushton: I've made a very conservative choice not to overstate things.
- Thomas: The region will learn a lot in the next few years. New programs are starting. Plus, we need to understand the Plan results. We're giving the RTF flexibility to adjust to needs and data as they come up.

Grant confirmed that staff will use ProCost updates to evaluate DR products [Slide: Cost Parameters]. He asked if staff are always thinking of stand-alone DR products, or if they will marry EE and DR values to make a cost-effective measure for programs.

- Thomas: That is to be determined. We'll have to see what comes up. It's a good thing for us to keep in mind.
- Light: The 2021 Plan identifies types of DR products. It doesn't think about cost-effectiveness. I don't know where the 9th Plan will land on DR, but that would inform updates to ProCost. Let's not get ahead of that. As far as joint supply curves for EE and DR we're still not there. The Cadeo Group's work on flexibility helps get us there, but we're not there yet.

C. Douglass thought where Rushton drew the lines makes sense, especially when Walderman and the Council are already collecting information. He said any data found along the way would be really useful for the Planners to have. He wondered if this is in the template as optional.

- Light: Walderman tries to collect this type of information annually.
- Walderman: We survey utilities on their DR programs to get this data every year. The way it's reported is not standardized and can be vaguely defined. It would be nice to know if someone had come across this information already.
- Thomas: That makes sense. A "No" here doesn't have to mean we won't include it.
- Rushton: We could consider Walderman's survey when we're trying to collect data.

Baylon voiced concern about trying to fit DR into the ProCost cosmology. He called the program really specialized to a particular time and place that is hard to predict. Baylon called for a specific tool for this, but probably not ProCost as it confuses a complicated issues.

- Light: Let's not think about ProCost. Let's just think of some generic "cost-effectiveness tool."

Tripamer approved of the presented framework calling it more of a toolkit than an RTF workbook. He liked the idea of including these things as a starting point for programs, including a range of numbers.

- Rushton: Got it. I'm hearing that "proposed inclusion" is really "RTF-level of effort" and "no" is "low." We do have Admin cost estimates for EE that we could consider.

Nix asked if DR marketing costs have an equivalent in EE.

- Light: We have the 20% administrative overhead. It varies by sector.

Anthony called this work super interesting and well put together. He voiced concern about spending even 6% of the budget on this, wondering how it will be evaluated. He asked if the RTF is saying this is a resource for the whole region. If so, he said didn't work for him as it is specific to a utility. Anthony was ultimately concerned about confusing BPA members and the users of our work products. Anthony asked if there is a DR program out there currently that values this RTF effort. He said this would help allay his skepticism.

- Light: The RTF PAC already decided the RTF will work on this and approved the budget. I hear your concerns, but we have the budget and support from the funders. And we're trying to be thoughtful in limiting our efforts. These things you're concerned about are things Rushton has wrestled with. I ask you to bear with us. See where we're going. If we decide it's not worthwhile, we can discuss that with the funders going forward.

Kevin Smit, NWPCC, said that the DRAC, run by Walderman, has utilities bringing their program data to develop estimates. He stressed that all the data is coming from utility programs.

- Light: We can build this muscle if we're willing to build it. We've done EE for a long time and are comfortable with it. This is new. There is interest and value in it. Let's give it some space before we say "no."

Garland pointed to her deep experience with DR, pointing to her 29 years of work in California for EnerNOC implementing DR across the state. She added that she also did evaluations. Garland thought that this is very doable and admitted to being shocked that Oregon is not implementing DR now, saying that is coming up.

Baylon was having trouble with snapback as it is defined on [Slide 29]. He said snapback doesn't make sense for DR when you turn something off. He said there is a snapback in the size of the water heater, adding that it is in kW, not the kWh. Baylon said that kWh doesn't make sense in DR at all because we want capacity.

- Rushton: That's fair. Maybe we should go sub-hourly? I wasn't planning on going lower than hourly because that's the lowest chop that's typically reported.

- Light: We'll go deep on water heater assumptions, but not today. We don't need to resolve this today.
- Baylon: There is a real kW snapback that we should consider. Programs need to be ready for it.
- Rushton: I glossed over staggered start times. Here's an example of where it would make sense for programs to stagger [Slide 26].
- Baylon: And here you may have more water heaters than you have need. You could stretch it out.

Contreras stated that he has been thinking of DR differently, as a strategy to offset electricity consumption [Slide 29]. He said he's also not supplying electricity during that time so he's looking for the supply piece of this of this work. Contreras stressed that the utilities are avoiding supply.

- Rushton: My objective is to show the DR impact. Programs will have to decide how to use that information.
- Light: I think the next step for programs is beyond the RTF scope, but not for Power Planning.

Grant thought it would be challenging to mesh together products with different timing. He was thinking through complex events, especially morning, midday, and evening. Grant asked to see the end-use load shapes for all loads as it would help benchmark evaluation results.

Anthony asked how the RTF is going to quantify probabilities for all possible scenarios [Slide 30]. He said this may be more complex than what we should do for the region. He wanted to hear how staff plan to do this.

- Light: Noted. We're going to get into the specifics but not today. It looks we'll have to present this in December. It won't be the single answer for all utilities in the region. It's a starting point for programs to help with planning. Rushton is being incredibly thoughtful about this. Please have some patience. The work has been done. Let's see what it looks like. We don't have time to go through it, but we'll bring it back in November.

C. Douglass expressed approval for the phrase "building the muscle" used by Light earlier. He said staff and the RTF will not get this right out of the gate but stressed that it is the future. C. Douglass said staff are talking about demand flexibility. He noted that the region has been doing EE for decades, but this work is starting from scratch, and it won't be perfect right out of the gate.

- Gartland: There are numerous types of programs that have been going on in CA for a long time. They get impacts. The information is out there. It works.

Grant asked if the shifting of the timing would be a product identifier.

- Rushton: Yes, we'll see that. It will be easy for programs to put their numbers into the analysis.
- Light: And there are limits to what we'll consider.

Brown thought that this is a great starting framework. He noted that the Council uses hourly increments so the RTF should stick to that. Brown agreed that applying a percentage to hourly loads makes sense, adding that the region has spent decades developing load shapes.

Light assigned the RTF the following homework:

- Review the DR Irrigation slides.
- Email questions to Rushton.

Light added that the RTF has budgeted to go through these six DR products, strongly stressing that the body is going to go through them.

- Thomas: We'll probably bring this back in November.
- Walderman: For example, I was talking to someone at PacifiCorp to get numbers for the DRAC and our modeling. She told me about their water heating program. The \$/kW didn't work out as they expected. The person at PacifiCorp expressed how helpful it would have been to have numbers regarding what to expect from the program upfront.

Thomas added more to the homework:

- Open up the workbook. It's posted, and a lot of thought went into it.

Anthony thanked the CAT and Council staff for getting presentation slides out a week before the meeting, calling it helpful for enabling a review.

Light ended the meeting at 3:40.

Voting Record: October 21, 2025

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 minutes from the September 16, 2025 RTF meeting. (Knori/Miller)	25	0	0	Yes	86%	100%	25
Motion: Approve the agenda for the October 21, 2025 RTF meeting. (Miller/Grant)	25	0	0	Yes	86%	100%	25
Motion: Original motion: Approve the Commercial Dishwashers UES measure as presented, and: • Update 90/10 non-condensing/condensing water heaters split							

• Adjust school savings shape to reduce June and August operation by half, 180 days total • Remove heat pump water heater savings, reviewed further by CAT at a later date pending CA study • Set the Category as Planning • Set the Status at Active • Set the sunset date to October 31, 2028 (Baylon/Gartland)							
Amendment: Remove the "remove heat pump water heater savings, reviewed further by CAT at a later date pending CA study" and set sunset to April 30, 2027. (Jerome/Miller)	22	3	0	Yes	76%	88%	25
Amended Motion: Approve the Commercial Dishwashers UES measure as presented, and: • Update 90/10 non-condensing/condensing water heaters split • Adjust school savings shape to reduce June and August operation by half, 180 days total • Set the Category as Planning • Set the Status at Active • Set the sunset date to April 30, 2028 (Baylon/Gartland)	25	0	0	Yes	86%	100%	25
Motion: Deactivate the Commercial Secondary Glazing Systems UES measure. (Knori/Baylon)	23	1	1	Yes	79%	96%	25
Motion: Approve the Irrigation Hardware Upgrades UES as presented, and: • Average of 2013 and 2018 F&R survey hours of use for Montana • Average of 2018 and 2022 F&R survey for lift, operating pressure, and % surface water • Change high pressure sprinkler efficiency to 65% and MDI to 97% • Keep the Planning Category • Keep the Active Status • Set the sunset date to October 31, 2028 (Douglass/Miller)	24	0	1	Yes	83%	100%	25

October 21, 2025, Meeting Attendance

* Designates Voting Member

Name	Affiliation
Jamie Anthony*	BPA
Landon Barber*	Idaho Power
David Baylon*	Independent
David Bopp	RTF Contract Analyst
Ryan Bottem	Public Gen Pool
Gregory Brown*	Tierra Resource Consultants
Frank Brown	BPA
Kyle Chase*	Jefferson PUD
Rachel Clark	Tacoma Power
Noe Contreras*	NEEA
Kasey Curtis	Puget Sound Energy
John Davey	Puget Sound Energy
Bob Davis*	independent
Christian Douglass*	RTF Vice Chair
Logan Douglass	RTF Contract Analyst
Emily Donohue	Evergreen Energy
Ryan Firestone	RTF Contract Analyst
Anthony Fontanini	Tacoma Power
Wesley Franks	WA UTC
Lisa Gartland*	ODOE
Kevin Geraghty*	independent
Andrew Grant*	Cadmus
Jackie Goss	Energy Trust of Oregon
Adam Hadley	RTF Contract Analyst
Wylie Hampson	NEEA
Mark Handy	C Plus C
Michael Hoch*	Energy Trust of Oregon
Zachary Horvath	Cadmus
Aaron Ingle	NEEA
Masumi Izawa	BPA
Mattias Jarvegren*	Clallum PUD
Mark Jerome*	CLEAResult
Mitt Jones	independent
Phillip Kelsven*	BPA
Erin Kempster	Power Takeoff
Rick Knori*	Lower Valley Electric
Lauren Kolojejchick-Kotch	Cap Oregon
Paul Kuck	Energy Solutions

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
Ali Mires	DC PUD
Michelle Morales	Ecoact
Holly Mulvenon	Puget Sound Energy
Quentin Nesbitt	Idaho Power
Andi Nix*	Energy Trust of Oregon
Nick O'Neil*	Energy 350
Eric Olson	NEEA
Brian Owens	CLEAResult
Eric Olson	NEEA
Craig Patterson	independent
Andrew Paul*	Avista Corp
Joe Prijyanonda	ICF International
Laney Ralph*	NW Natural
Ronald Ramey	Energy Solution
Samuel Rosenberg*	Pacific Northwest National Lab
Josh Rushton	RTF Contract Analyst
Paul Sklar	RTF Contract Analyst
Kevin Smit	NWPCC
Kenji Spielman	Energy Trust of Oregon
John Stalnaker	BPA
Christina Steinhoff	NEEA
Laura Thomas	RTF Manager
David Tripamer	BPA
Eva Urbatsch*	Puget Sound Energy
Garrett Valenzuela	C Plus C
Aquila Velonis	Cadmus Group
Michelle Wildie	Puget Sound Energy
Sarah Widder	NEEA