



Oregon Energy Strategy
 Building Electrification, Energy Efficiency, and Distributed Energy
 Resources Policy Working Group

Meeting 3

March 19, 2025, 9:00-12:00

Post-Meeting Notes

Meeting Summary

Rob Del Mar and Ruchi Sadhir (ODOE) facilitated a meeting to identify and discuss strategies to address the barriers raised in the prior PWG meeting. Rob presented draft issue statements intended to synthesize feedback from the prior meeting and requested written feedback on these draft statements.

In-Meeting Notes

Participants

ODOE	Oregon Agencies	PWG Members
Hugh Arceneaux	Joy Aldrich OHCS	Kellye Dundon, NWN
Edith Bayer	Sam Henstell, OHA	Laney Ralph, NWN
Joshua Price	Mark Heizer, DCBS	Mary Moerlins She, Her NW Natural
Jessica Reichers	Anne Gire, DCBS	Paul Hawkins, Port of Portland
Rob Del Mar		Chris Golightly, CRITFC
Ruchi Sadhir		Ken Morgan, Gensco
Stephanie Kruse		Bob Kaplan, City of Ashland
Alan Zelenka		Ryan Tran, CUB
Amanda Welch		Christina Zamora, KLCAS
Jillian DiMedio		Nick Cheke , Community Energy Project
		Charity Fain, Community Energy Project
		Dr. Pat DeLaquil, DecisionWare Group; Mobilizing Climate Action Together
		Adam Shick, Energy Trust.
		Jonathan Belais, NEEA
		Jake Wise, PGE
		Ryan Perry, TPUD
		Billy Curtiss, EWEB
		Maddy Salzman, Earth Advantage
		David Heslam, Earth Advantage
		Claire Prihoda, Climate Solutions
		Hannah Dondy-Kaplan, BPA

Introduction

- Ruchi Sadhir (ODOE) expressed appreciation for PWG members' attendance, reviewed ODOE's mission, and provided reminders on WebEx functionality. Ruchi asked that PWB members use the raise hand function and chat window to engage during the call and that they introduce themselves in the chat. Ruchi also requested that meeting attendees provide input through the public comment portal at <https://odoe.powerappsportals.us/en-US/energy-strategy/>.
- Ruchi introduced the meeting objectives:
 - Discuss strategies to address the barriers identified in our last meeting
 - Identify policy gaps or opportunities
 - For example: Determine if we need to change an existing policy, create a new policy, or better understand a potential solution
 - Outcome: Create an outline of potential policy solutions
- Ruchi reviewed the group agreements reiterating that ODOE wants participants to be comfortable in sharing their perspectives. Ruchi reviewed the meeting agenda, explaining that ODOE planned to review Oregon's policy landscape before dedicating most of the meeting time to whiteboard activities and discussions

Policy Landscape:

- Rob stated that meeting will quickly review policies and barriers identified in the prior meeting so that ODOE and the PWG can focus on policy and strategies to address barriers.
- Rob presented a slide highlighting feedback received from other PWGs that pertains to the BE, EE, and DERs PWG¹
- Rob reviewed factors informing the changing policy landscape in Oregon. Rob describes increased extreme weather and heatwaves as highlighting community resilience needs. Additionally, energy costs have risen dramatically recently in response to climate risks, wildfires. Says this exposes changes in Oregon; whereas Oregon previously had among the lowest rates in the country, rates are now closer to national averages. This affects the economics of the energy transition and equity considerations
- *from Bob Kaplan to all panelists: Summer cooling, yes, and also summer air quality events that necessitate closing windows that limit nighttime cooling opportunities.*
- Rob reviewed policies being considered in legislative session, including policies related to net metering, virtual power plants, community solar, and microgrids.
- Today's focus; addressing barriers identified in the prior meeting within the current policy landscape and with a focus on state-level policies that can be informed by the Strategy. In terms of timeline, the PWG should consider the Strategy as first supporting the 2027 Legislative Session.
- Current PWG synthesis: ODOE is continuing to synthesize PWG work and has made an early draft of issue statements. Rob stated that ODOE plans to continue working on and modifying these statements based on the continuing policy discussions in this PWG. Rob highlighted that a

¹ These are available at <https://www.oregon.gov/energy/Data-and-Reports/Documents/2025-03-19-OES-PWG-Buildings-Mtg-Presentation.pdf> on slide 10.

Clean Electricity Generation issue on promoting resilience for local communities pertains directly to this PWG and overlaps between both groups.²

- Rob opened for questions and feedback.
- Bob Kaplan:
 - On BE and EE measures being too expensive; Bob wants to call out renters
 - Stephanie notes a comment from Charity on the Miro board asking what “too expensive means”; Stephanie responds that that answer may vary from community to community.
 - *from Christina Zamora to everyone: ++Bob, also calling out small businesses*
 - *from maddy salzman to everyone: To me the most important piece of the first one is the unfavorable cost to benefit ratio rather than a clear understanding of what is “too expensive”*
 - Maddy: Ultimately, this comes down to wanting more building owners, homeowners, small businesses to see the value they of EE and BE measures as worth the input that it requires of them.
 - Stephanie says, to Maddy’s point, this may be an issue of inadequate valuation of BE/EE benefits
 - Claire Prihoda; value conversation is important to renters, but non-cost difficulties such as workforce shortages, contractor experience in the region; does the buyer know what they’re looking for, what they need to ask. True for both renters and homeowners

Miro activity

- Rob reviewed the Miro board and a bar charts depicting barriers received in the last meeting. Rob provided reminders on how to use Miro and invited PWG members to begin working in the Miro board.

Whiteboard Exercise 1: BE and EE in Residential and Small Commercial

- Rob provided 5 minutes for PWG members to brainstorm
- Stephanie reflects seeing a sticky on better valuing EE and BE benefits for both valuation and education and outreach
 - Pat, MCAT; upfront costs are a barrier, but it is in the public interest to provide for EE; that provides societal benefits. That’s a justification for something like a state bank or revolving loan fund to provide easier financing, especially based on income categories, for EE improvements and related cost and health savings
 - *from Charity Fain to everyone: I think no interest loans are a great tool for some but should not be the solution for low-income households.*
 - Bob; appreciates the no-interest loan is the term of the load; extending terms makes loans more affordable. Agrees that loans may be insufficient for low-income households
 - Maddy; regarding financing, given scope of need across the state as exceeding need of other public-funded programs, encourages consideration of loan loss and reserves and interest rate buy downs. Says California has a useful example in providing financing in

² Draft synthesis issue statements are available at [2025-03-19-OES-PWG-Buildings-Mtg-Presentation.pdf](https://www.oregon.gov/energy/2025-03-19-OES-PWG-Buildings-Mtg-Presentation.pdf) on slide 15.

this sector; a public bank gets you a 2-to-1 ratio, but a loan loss reserve can provide a 20-to-1 ratio for financing and derisking opportunities.

- *from Jake Wise to everyone: To level-set, Energy Trust budgets for EE and RE differ. The former is not pegged to utility revenues while the latter does increase in lockstep.*
- *from Claire Prihoda to everyone: @Jake does that mean the ETO budget is better news for DERs than EE? can RE pay for batteries?*
- *from Adam Shick- Energy Trust to everyone: 9:56 AM*
- *Energy Trust does offer incentives for solar+battery installations through our RE program: <https://www.energytrust.org/solar-electric-incentive-lookup/>*
- *from Bob Kaplan to all panelists: Pay-as-you-save programs can be complex, but offer another good tool. <https://www.eetility.com/pays>*
- David Heslam; MA home-loss reserve and tools that work with credit unions, including Mass Save, that provide zero interest loans; but uptake has increased over years as these programs are integrated with free weatherization service. That improves public awareness. Thinks adding mandatory education to programs that already happen and relate to homeownership; adding for state interjection can help make programs more accessible on a more equitable basis
 - Ruchi; can you give an example of the education considered?
 - David; during home transactions, interjecting home energy scores; says academic papers highlight that these types of programs work and can provide for 4-5x increases in EE measures. David shares a story of energy scores affecting a home purchase decision
 - *from Christina Zamora to everyone: ++David, also making sure that educational materials are accessible and appropriate, in plain language and languages other than English*
 - *from Bob Kaplan to all panelists :Do HES programs now in effect in Oregon also offer info on electrification? or just efficiency improvements?*
 - *from David Heslam to everyone: Bob, the automated recommendations in Oregon keep fuels the same. In CA, this has been switched and two sets of recommendations are made. One for shell measures and another that is electrifying the equipment. It's illuminating in CA, the efficiency always saves energy and dollars, the electrification does not always save dollars depending on the specifics about the home and the local utility rates.*
 - David also recommended that programs like Portland's time of listing home energy score provision is an example of when this type of information could be provided.
 - *from Stephanie Kruse ODOE to everyone: Similar mandatory education around how to properly operate equipment, and manage indoor air quality with wood stove installations*
 - *from Charity Fain to everyone: We are about to release this video as an example [finalizing a few things on it (captioning) but an example of what we are working on] of education: https://drive.google.com/file/d/1-P_Y8OSihBnFsOYSqsTjrHqGCBpJEnbq/view*

- Rob; reflecting on seeing working with CBOs stickies, says between mandatory organizations and working with CBOs can both help in expanding this public education network.
- Stephanie; funding this work. Administrative cost limitations can make it difficult to adequately fund additional barrier-reduction outreach related to operating programs; curious how this group envisions addressing this challenge or barrier? Separate funding streams, adjusting admin caps, changing how project costs are considered?
 - Charity; program delivery costs should be distinguished from admin costs, says recently tight admin costs have lumped in program delivery costs. Says there's confusion around this distinction. In any event, admin cost caps are too low; says CEP shouldn't have to undertake fundraising to fund a state program
 - Rob; what would the ideal solution be? Higher caps or separate streams?
 - Charity; thinks including these costs in budget rather than as an incentive. Thinks negotiating rates or providing >10% admin cap would be helpful; primarily, stop lumping all costs together into admin costs
 - Bob; funds for CBOs often go through ETO. Says they're sensitive to that in Ashland where ETO only works with the gas utility, and not the local electric utility, because ETOs won't work with COUs. So, ETO isn't a good vehicle for Ashland; there need to be alternative channels for funding local CBOs that don't impose fuel-switching limitations
- *David Heslam to everyone: The state energy office in CA has developed a very comprehensive database on electricity. It provides full information on rate, including all the TOU rate structures, but also provides the hourly carbon emission profile for each utilities' supply for all 8760 hours in the year. This allows the electrification analysis to be more accurate as peak hour reductions are more accurately represented. Eventually, I think this will help more adoption of DR measures integrated with efficiency and electrification*
- *from Christina Zamora to everyone: Community Action has established relationships with communities around the state- rural, urban and frontier ++Charity, creating value for doing the work is important since retention can be a barrier to implementing programs.*
 - Agrees with Charity that program delivery funding is vital and can drastically impact program quality
- Stephanie; reflects note and stickies around dual fuels, fuel switching, strategic use of electrification; trying to find where it's most efficient to electrify vs retaining dual-fuel systems, especially for resilience purposes. Is there any policy recommendation we should raise to address this issue?
 - Rob agrees; says this issue showed up in EJ and Equity, need for furnace in some Oregon communities. Asks if any NG utilities can speak to dual-use?
 - *from Claire Prihoda to everyone: I think this is where cross utility planning becomes important for both reliability and equity.*

- Says this provides opportunities for all customers; doesn't strand folks on an abandoned system
- Mary expresses agreement with Claire; says efforts to ensure that gas fireplaces have safe operations when power is out. Says online and backup gas generation is valuable and provides better AQ than propane or diesel background; says there's no incentive or education program around this. Thinks resilience should be considered on a community scale, in addition to household scale
- Kellye Dundon; they're exploring pilots for dual-source systems, use of gas to meet peak energy needs. An issue is optimizing control settings to provide for this efficiency.
- *from Ryan Tran, CUB to everyone: keep in mind that dual use will be more costly overall. Because there is both gas mains/service connections and electric distribution connected to your home, which is millions in investments that require a rate of return*
- *from Mary Moerlins She, Her NW Natural to everyone: In response to your comment Ryan T, In our experience with current pilots the energy users who utilize hybrid systems are already gas customers who opt to install a heat pump as well to optimize. In existing homes both connections typically already exist.*
- *from Ryan Tran, CUB to everyone: Sure Mary, but if you prune it, because the customer no longer uses gas, there is no need to maintain and pay O&M or have to replace faulty pipes, which is extremely expensive.*
- *from David Heslam to everyone: Or pay to replace sewer laterals that get destroyed when the replacement gas line gets bored through the neighborhood. That's what happened in my neighborhood and the broken sewer pipes had to be dug up and replaced by the gas utility, but only after the pipes had been leaking into the soil below the parking strips. I assume cost to fix the pipes and sidewalks was recovered by the utility, but the rat problem was borne by the neighborhood.*
- Stephanie; wants to highlight that small commercial issues should be included in this discussion. Is there a different policy approach needed for small commercial?
 - Stephanie says small commercial buildings face similar barriers as renters; wonders if education and outreach, low-interest loan policies would also be beneficial to small commercial buildings

Whiteboard Exercise 2: BE and EE in Large Commercial and Industrial Sectors

- Rob reviewed the issue statement and provided 5 minutes for PWG members to brainstorm . Asked that PWG members also add recommended edits to the issue statement in Miro.
- David: says, in framing this issue, timing is important; eventually non fuel-intensive means will be developed for industrial uses; thinks a total bar to feasibility of electrification for some uses may be inaccurate.
 - *from Claire Prihoda to everyone: +1 to that reframe*
 - *from maddy salzman to everyone: Agree david - focus on step by step process to decarbonize what we can now*

- Mary; says fossil fuels aren't the only alternative to electrification. Hydrogen should be considered as an alternative that provides high-heat more efficiently. Expects there will be more efficient arc furnaces in the future, but doesn't want to exclude hydrogen from the list of possible solutions. Rob reflects the Low-Carbon Fuels group as providing similar perspectives.
- Pat: proposes that a type of entity that would be an energy service provider for large commercial/industrial entities; an entity that provides investments and services necessary at commercial buildings and capture those savings would be valuable for addressing incentive gap between lessors and lessees for EE and BE measures.
- Kelly Dundon: regarding DR, large customers have interruptible rate schedules. This DR tool is valuable. Historically, they've been unable to offer EE to customers who buy their own gas, but with recent changes in policy these options are becoming available. Also, cap-and-trade, like in WA, offer ways to stimulate EE and alternative fuels measures
- Energy Parks, collocating generation and end-use; Ruchi asks if anyone can speak more to this opportunity
 - Claire Prihoda; she added this sticky and is interested in stimulating discussion on this topic
 - Stephanie: moved to Oregon from Alaska. In Alaska, coal energy is relied upon and use waste heat to provide district heat for downtown and campus. That's an example of collocating energy production and end-uses, especially for byproducts
 - Kelly; agrees; says collocation can provide for waste-heat and byproduct use efficiencies.

10 min break

Whiteboard Exercise 3: Customer-sited DERs

- Rob reviewed the issue statement and provided 5 minutes for PWG members to brainstorm. Asked that PWG members also add recommended edits to the draft issue statement in Miro.
- Rob reflects rate design and appreciating grid benefits; Rob wants to consider whether recognizing values beyond energy should be considered in programmatic design
- Pat, regarding expanding time of day pricing and providing access to DERs; also wants to highlight that, while DERs are a customer-driven resource, it's in the utility interest to incentivize them properly and provide for utility control so as to realize grid benefits. There are two pathways; where DERs happen to utilities, and where utilities guide DER buildout based on grid benefits and needs
 - Rob; based on state incent thinking, as batteries become more affordable, more grid benefits become available than would for rooftop solar arrays without battery support. Rob says PGE has incentivized batteries and sought access to battery resources; asked if PGE can speak to net metering and these types of initiatives
 - *from Ryan Perry - TPUD to everyone: Price decline isn't enough on batteries, from a utility perspective, there needs to be a duration increase component to make the juice worth the squeeze.*
 - *from Jake Wise to everyone: PGE sees value in dispatching solar-fed storage and co-deploying incentives with Energy Trust. There are no plans to change NEM at this time.*
 - Ruchi asks for more detail about co-deploying incentives; one example is battery storage, where the Trust has developed and implemented incentives for batteries and

PGE has a battery pilot; PGE's intent is to align those programs to maximize value to customers

- Jake; PGE worked with Energy Trust on a co-deployment of incentives
- Rob; considering increasing rates, how should that affect DERs policy? How does this pertain to equity, energy burden on low-income households and whether higher-income households need incentives to support DER adoption?
 - Ryan; issue of power prices going up. It's a chicken-and-egg issue; under measure 7, no nuclear, the new low-carbon resources don't provide firm, reliable energy. Adding intermittent resources without batteries and accounting for population growth, data centers; there's a need for firm capacity to provide for peak need. Says we may be too far from firm capacity need vantage; can we count on batteries catching up with solar in 10-15 years? Says DERs alone aren't sufficient; and community-scale solar has a problem with TPUD obligations to BPA for spinning and reserves fee. So, price of solar isn't the only issue at play because of how solar nameplate capacity may exceed actual generation and how that may lead to a spinning and reserves penalization from BPA. Says there's more than one lever that needs to be pulled
 - *from Christina Zamora to everyone: Is there any way for the BPA customer utilities to leverage resources as a group to reduce risks at the local level of spending down reserves?*
 - Ryan; says that, because they're islanded; they have relatively limited opportunity here; Bob Kaplan agrees Ashland is islanded. Says COUs did group to buy generation resources but determined that they had to lean on BPA; says another issue is that the PNW has flipped from a net exporting to a net importer of energy
 - Ryan says TPUD has also tried to coordinate with COUs to renegotiate with BPA; says it's a tough ask
 - Ruchi: there's a tradeoff effect between the four pillars of decarbonization. Ruchi adds that nuclear was allowed to be developed in the modeling outside of Oregon. Says it's valuable to think about BPA contractual constraints and trying to consider what changes to a BPA contract would be needed?
 - Ryan; says BPA contracts go through 2044 and are due now. Added that TPUD is doing what they can on EE and other pillars. Thinks testing measure 7, considering location SMRs on tribal land is interesting
 - Pat: regarding need for firm energy supply, says the modeling shows only limited need for natural gas but a significant role for enhanced geothermal. Says that the modeling's lack of granularity beyond a two-zone system is necessary to address when considering this aspect, though.
 - Ryan says if batteries improved from providing 4 to 8 hours of charge, TPUD would probably be in
 - Pat says he's optimistic on batteries based on changes in prices historically
 - Rob expresses appreciation for mention of enhanced geothermal, says there's a pilot around Bend that could demonstrate geothermal prices lower than what might be provided by SMR
 - Alan Zelenka (ODOE); says he's been through contract negotiations with BPA and there's opportunity for COUs to work together; references an ORCA project, as a past means for

COUs to share resources. Adds, consistent with Pat's statement, that it's complex but doable to meet Oregon load needs with renewable energy; says SMRs weren't chosen because other resources provided lower-cost options. Says meeting energy needs with renewables is energy and cost-effective, based on modeling results

Whiteboard Exercise 4: Demand-Response

- Rob reviewed the issue statement and provided 5 minutes for PWG members to brainstorm. Asked that PWG members also add recommended edits to the draft issue statement in Miro. Rob recognizes that this last exercise has overlap with all of the previous exercises; still invites members to raise relevant strategies and not exclude them based on potential overlap. However, the perspective to focus on for this PWG is on the customer-side of the meter.
- Rob reflects seeing stickies on utility rate design and stickies on actual device technology; Rob asks that PWG members focus on how state policy can support utility efforts.
- Ruchi: can anyone comment on a sticky highlighting a need to deploy smart meter devices to be ready to implement a DR program?
- Ryan Perry says they deployed smart meters years ago and have already cycled through a generation; Billy Curtiss says they also have deployed smart meters.
- Bob Kaplan; they've deployed and provide for free opt-out for households afraid of smart-meters. Considering whether that's an appropriate policy moving forward.
- Rob; if smart thermostats, water heaters, EVs were deployed; is there capacity at utilities to run a program to leverage these devices? Would state support be needed?
 - Ryan; they don't have a DR program, but instead of reaching out to 1k+ homeowners, they just have relationships with larger industrial users that can have equivalent impacts to ~1,200 homes. They have a special contract for that type of situation.
 - Kellye agrees they have interruptible rates with large industrial customers; says they avoid interrupting industrial customers as much as possible. Says they have a smart thermostat program but there are tech barriers to coordinating gas and electrical systems
 - Ruchi; are there industry standards for these, or individual negotiations?
 - Kellye; says it's a rate tariff structure
 - *Stephanie Kruse ODOE to everyone: I have heard about a similar relationship between McMinnville Power and Light and one of their largest consumers Cascade Steel*
- Rob; state hasn't seen DR included in incentive programs for, say, heat pump installation; would there be value in increasing the number of DR-ready devices out in the market? Would that support COU efforts, or is staffing more of the barrier?
 - Jonathan Belais; from NEEA's perspective, it is helpful from what they've heard, so that there will be DR potential in the future
- David; not likely applicable to COU contexts, but in California, in a past emergency situation, they offered to pay for performance for DR; says that could be a good option in Oregon IOU territory where large number of market actors, aggregators to find participants. David says that went from being an emergency to a standard program; says 97% of DR savings come from commercial and industrial customers, with 3% from residential, because of difficulty in getting residential customers to cost-effectively provide this.

- This is a market-based approach where you provide an incentive and allow market actors to get payment if they actually deliver DR savings [with a bonus option as well]
- *from David Heslam to everyone: 11:42 AM*
- *PG&E summertime reliability program <https://www.aesc-inc.com/wp-content/uploads/2024/09/FINAL-PGE-MSSR-IP-Webinar-20240819-1.pdf>*
- *from Pat DeLaquil to everyone: 11:42 AM*
- *Agree with David. The utilities can offload some of the grunt work to aggregators.*
- Jonathan says that's interesting and that pay-for-performance is great to wind up a program; however, a lot of DR value is based around (Xyz transcript); it's a matter of having a resource available ...check TS
- *from David Heslam to everyone: 11:43 AM*
- *Jonathan, this program measures Total System Benefit (TSB) to get at the additional benefits you are mentioning. That's how the pricing is set for the aggregator. We're leading the efforts to help identify the potential measures for aggregators of the residential savings.*
- *from Jonathan Belais to everyone: 11:43 AM*
- *Very cool. Thanks, David.*
- Stephanie reflects seeing comments on where low-income households fit and wondering how community-level resources like VPP or microgrid could be valuable
- David: based on what has been seen in California, it's important to understand baseline energy consumption of households in question and then design measures around that information. Inefficient ACs running consistently during peaks in some households is a particular example; a direct-replacement program for through-the-wall AC would provide direct DR benefits by cutting loads and bills. In Oregon, what kind of peak loads could be addressed? Bulk purchase of DHPs, or maybe addressing electric resistance morning heat could be valuable.
 - *from jake wise to everyone: 11:46 AM*
 - *PGE does plan for a flex load summer season with an "all call" approach - PTR, tstats, TOD, EV, etc. We have had great success in appeals during heat waves over the past few years.*
 - *from Ryan Perry - TPUD to everyone: 11:47 AM*
 - *Whoa, seems like a good opportunity for bulk purchase DHP application*
 - Ruchi; Jake, can you help define some of the terms included in chat?
 - Jake Wise; There's both behavioral demand response and record control or behavioral side peak time rebate (TR), and time of day (TOD)
- Rob; following on David's statement, a need to focus on EVs first; wonders if there are any thoughts on EVs in low-income households? Where/how can state policy work in this vein?
- *from Claire Prihoda to everyone: @Jake it would be helpful to understand PGE's strategies to date in overcoming the customer education and other barriers that we've noted for DR.*
- *from maddy salzman to everyone: I feel like David's comment on focusing on inefficient cooling for low income households is likely to be impactful*
- David; regarding morning electric resistance heat; remaining electric resistance heat will begin accounting for a greater and greater fraction of peak demand issues. Will be valuable to focus on transitioning these resistance heat technologies to heat pumps, especially for low-income

households. This is important from a peak demand and equity perspective. Additionally, this would provide cost-effective cooling to those households.

- Ryan; to make it cost-effective for their utility, they drafted an RFP and sent letters offering free ductless heat pumps. Helped provide EE and reduce peak demand.
- Bob; they've started to offer replacement packaged heat pumps, or PTHPs, as replacements for AC or PTACs; says there's a generous BPA incentive for this improvement in hotels but not in apartments. Great for improving on electric resistance heaters while improving low income affordability and comfort
- *from Jonathan Belais to everyone: For low-income customers, ensuring the DR capability is built into devices through appliance standards is a good first step.*
- *from Christina Zamora to everyone: providing EV transportation resources to low income households who don't have transportation...I like David's comment re: cooling as well*
- *from Kellye Dundon to everyone: Agree with David, electric resistance replacement should be the priority*
- *from Jake Wise to everyone: @Claire happy to connect you to my colleagues. Also here's our recent flex plan <https://edocs.puc.state.or.us/efdocs/HAQ/um2141haq332220025.pdf>*
- *from David Heslam to everyone: Bob, there are some very "cool" new heat pump replacements for old PTACs. Check out Ephoca AIO*

Next steps

- Rob stated that the next steps are for PWG members to think further on recommendations and synthesis statements and to provide input through the public comment portal at <https://odoe.powerappsportals.us/en-US/energy-strategy/>.
- May 7 will focus on reviewing synthesized items and working on policy recommendations
- Rob and Ruchi thanked everyone for their participation and adjourned the meeting

Virtual Meeting Chat

Time	Send User	Target User	Content
2025-03-19 09:05:28	Hugh Arceneaux , ODOE	All Participants	Public comment portal: https://odoe.powerappsportals.us/en-US/energy-strategy/
2025-03-19 09:06:00	Ruchi Sadhir she/her - OR Dept of Energy	All Participants	Name Affiliation What is your favorite place in Oregon and when are you going there next?
2025-03-19 09:06:30	Mary Moerlins She, Her NW Natural	All Participants	Mary Moerlins, NW Natural. My favorite place in Oregon is Forest Park
2025-03-19 09:06:38	Joy Aldrich OHCS, Energy Svcs	All Participants	Dr. Joy Aldrich, OHCS Energy Services Business Analyst, either the beach or the forest
2025-03-19 09:06:47	Stephanie Kruse ODOE	All Participants	Stephanie Kruse, ODOE, Devil's punchbowl and probably the first weekend in April
2025-03-19 09:06:51	Christina Zamora	All Participants	Christina Zamora, Klamath and Lake Community Action Services, my favorite place in Oregon is Joseph
2025-03-19 09:07:00	Sam Henstell she/her	All Participants	Sam Henstell (she/her), Oregon Health Authority, Powell's Books (don't know when I'll go there next)
2025-03-19 09:07:01	Bob Kaplan	All Panelists	Bob Kaplan, City of Ashland, Owyhee River, next month
2025-03-19 09:07:01	Chris Golightly, she/her, CRITFC	All Participants	Chris Golightly, Columbia River Inter-Tribal Fish Commission, Oregon coast ... Father's day weekend
2025-03-19 09:07:02	Ruchi Sadhir she/her - OR Dept of Energy	All Participants	Ruchi Sadhir, ODOE. Hard to pick a favorite place but recently we have loved taking our kids to the gorge (now that the rain has let up a bit) on small hikes to water where they can splash around.
2025-03-19 09:07:02	Amanda Welch	All Participants	Amanda Welch, ODOE - State Building Efficiency, Hood River
2025-03-19 09:07:03	Billy Curtiss	All Participants	Billy Curtiss, EWEB, McKenzie River, hopefully soon!
2025-03-19 09:07:03	Hannah Dondy-Kaplan BPA	All Participants	Hannah Dondy-Kaplan, Bonneville Power Administration Government Affairs group. So many great places! Wagle Cap Wilderness maybe?
2025-03-19 09:07:06	Rob Del Mar	All Participants	Rob Del Mar, Oregon Department of Energy. Lake County.

2025-03-19 09:07:09	Pat DeLaquil	All Participants	Pat DeLaquil, DWG, MCAT, Mt.Hood. Not soon enough
2025-03-19 09:07:14	Jonathan Belais	All Participants	Jonathan Belais, NEEA. Favorite place in Oregon is probably the Wallowas.
2025-03-19 09:07:27	Kellye Dundon	All Participants	Kellye Dundon, NW Natural, She/her, Yachats, hopefully soon
2025-03-19 09:07:30	Adam Shick- Energy Trust	All Participants	Adam Shick, Energy Trust Planning Manager. My favorite place is the lower Deschutes river, hopefully going there this soon!
2025-03-19 09:07:34	Anne Gire	All Participants	Anne Gire, representing Oregon Building Codes Division. I love the coast range of Oregon! tillamook state forest and clatsop county. Going back in June
2025-03-19 09:07:35	Ryan Tran, CUB	All Participants	Ryan Tran, CUB, my apartment
2025-03-19 09:07:41	maddy salzman	All Participants	Maddy Salzman, Earth Advantage. Probably the Oregon Coast but no idea when I am going next!
2025-03-19 09:07:45	Ken Morgan	All Participants	Ken Morgan, Gensco, Crater Lake National Park, in a few months :)
2025-03-19 09:07:46	jake wise	All Participants	Jake Wise, PGE, Jefferson Park
2025-03-19 09:08:08	Paul Hawkins, he/him	All Participants	Paul Hawkins, he/him, City of Portland, the Gorge ASAP
2025-03-19 09:08:19	Nick Cheke, CEP	All Participants	Hi, everyone. I'm Nick Cheke and I'm with the Community Energy Project. As for favorite place, too many! One of my favorite views of Oregon is at Domaine Drouhin over in the Dundee Hills.
2025-03-19 09:15:36	Ruchi Sadhir she/her - OR Dept of Energy	All Participants	I changed it for you Rob :)
2025-03-19 09:22:05	jake wise	All Participants	The ODOE energy wallet concept seems to cut across all four areas/themes
2025-03-19 09:24:19	Bob Kaplan	All Panelists	Summer cooling, yes, and also summer air quality events that necessitate closing windows that limit nighttime cooling opportunities.
2025-03-19 09:31:57	Josh Price, ODOE	All Panelists	Copy and paste this link in your browser: https://miro.com/app/board/uXjVIR2vxvE=?share_link_id=253707367342
2025-03-19 09:34:33	Christina Zamora	All Participants	#NAME?

2025-03-19 09:34:51	maddy salzman	All Participants	To me the most important piece of the first one is the unfavorable cost to benefit ratio rather than a clear understanding of what is “too expensive”
2025-03-19 09:48:13	Charity Fain	All Participants	I think no interest loans are a great tool for some but should not be the solution for low-income households.
2025-03-19 09:51:25	jake wise	All Participants	To level-set, Energy Trust budgets for EE and RE differ. The former is not pegged to utility revenues while the latter does increase in lockstep.
2025-03-19 09:53:16	Bob Kaplan	All Panelists	Pay-as-you-save programs can be complex, but offer another good tool. https://www.eetility.com/pays
2025-03-19 09:53:30	Claire Prihoda	All Participants	@Jake does that mean the ETO budget is better news for DERs than EE? can RE pay for batteries?
2025-03-19 09:56:12	Christina Zamora	All Participants	#NAME?
2025-03-19 09:56:17	Adam Shick-Energy Trust	All Participants	Energy Trust does offer incentives for solar+battery installations through our RE program: https://www.energytrust.org/solar-electric-incentive-lookup/
2025-03-19 09:56:25	Bob Kaplan	All Panelists	Do HES programs now in effect in Oregon also offer info on electrification? or just efficiency improvements?
2025-03-19 09:59:25	Stephanie Kruse ODOE	All Participants	Similar mandatory education around how to properly operate equipment, and manage indoor air quality with wood stove installations
2025-03-19 09:59:36	Charity Fain	All Participants	We are about to release this video as an example of education: https://drive.google.com/file/d/1-P_Y8OSihBnFs0YSqsTjrHqGCBpJEnbq/view
2025-03-19 10:00:12	Charity Fain	All Participants	finalizing a few things on it (captioning) but an example of what we are working on
2025-03-19 10:02:11	David Heslam	All Participants	Bob, the automated recommendations in Oregon keep fuels the same. In CA, this has been switched and two sets of recommendations are made. One for shell measures and another that is electrifying the equipment. It's illuminating in CA, the efficiency always saves energy and dollars, the electrification does not always save dollars depending on the specifics about the home and the local utility rates.
2025-03-19 10:03:04	Christina Zamora	All Participants	Community Action has established relationships with communities around the state- rural, urban and frontier
2025-03-19 10:04:45	Christina Zamora	All Participants	#NAME?

2025-03-19 10:06:06	David Heslam	All Participants	The state energy office in CA has developed a very comprehensive database on electricity. It provides full information on rate, including all the TOU rate structures, but also provides the hourly carbon emission profile for each utilities' supply for all 8760 hours in the year. This allows the electrification analysis to be more accurate as peak hour reductions are more accurately represented. Eventually, I think this will help more adoption of DR measures integrated with efficiency and electrification
2025-03-19 10:07:35	Charity Fain	All Participants	I agree with that too! We need other methods than via ETO.
2025-03-19 10:08:41	David Heslam	All Participants	Thumbs up on Stephanie's comment on wood stove use. I was woken up early this morning when the neighbors' plume of wood smoke got pulled straight into my home's ventilation intake.
2025-03-19 10:09:29	David Heslam	All Participants	CA makes that database publicly available through API services so that businesses can integrate the data into their IT tools.
2025-03-19 10:10:10	Bob Kaplan	All Panelists	David, can you share a link?
2025-03-19 10:12:15	David Heslam	All Participants	Midas is the database with API access https://midasapi.energy.ca.gov/
2025-03-19 10:12:42	Claire Prihoda	All Participants	I think this is where cross utility planning becomes important for both reliability and equity
2025-03-19 10:18:59	Ryan Tran, CUB	All Participants	keep in mind that dual use will be more costly overall. Because there is both gas mains/service connections and electric distribution connected to your home, which is millions in investments that require a rate of return
2025-03-19 10:25:14	Mary Moerlins She, Her NW Natural	All Participants	In response to your comment Ryan T, In our experience with current pilots the energy users who utilize hybrid systems are already gas customers who opt to install a heat pump as well to optimize. In existing homes both connections typically already exist.
2025-03-19 10:26:37	Claire Prihoda	All Participants	+1 to that rerae
2025-03-19 10:26:46	Claire Prihoda	All Participants	*reframe (whoops)
2025-03-19 10:26:53	maddy salzman	All Participants	Agree david - focus on step by step process to decarbonize what we can now
2025-03-19 10:28:31	Ryan Tran, CUB	All Participants	Sure Mary, but if you prune it, because the customer no longer uses gas, there is no need to maintain and pay O&M or have to replace faulty pipes, which is extremely expensive.
2025-03-19 10:36:21	Mary Moerlins She, Her NW Natural	All Participants	A great example of a very well articulated Energy Park/Industrial symbiosis is the GreenLab project in Skiva Denmark https://www.greenlab.dk/

2025-03-19 10:37:43	David Heslam	All Participants	Or pay to replace sewer laterals that get destroyed when the replacement gas line gets bored through the neighborhood. That's what happend in my neighborhood and the broken sewer pipes had to be dug up and replaced by the gas utility, but only after the pipes had been leaking into the soil below the parking strips. I assume cost to fix the pipes and sidewalks was recovered by the utility, but the rat problem was born by the neighborhood.
2025-03-19 10:47:01	David Heslam	All Participants	Another cool resource from the energy office in CA. This one you can actually interact with. It's an interactive tool that tracks electrical consumption across multiple factors. It enables transparency https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/california-energy-consumption-dashboards-0
2025-03-19 10:47:30	Sam Henstell she/her	All Participants	back!
2025-03-19 10:47:31	Charity Fain	All Participants	back
2025-03-19 10:47:33	Jonathan Belais	All Participants	Back
2025-03-19 10:47:34	Nick Cheke, CEP	All Participants	Here
2025-03-19 10:47:34	Christina Zamora	All Participants	I'm back
2025-03-19 10:47:39	Joy Aldrich OHCS, Energy Svcs	All Participants	back
2025-03-19 10:47:45	Anne Gire	All Participants	here
2025-03-19 10:47:46	Pat DeLaquil	All Participants	I'm back
2025-03-19 10:48:05	Adam Shick- Energy Trust	All Participants	back
2025-03-19 10:48:07	Ruchi Sadhir she/her - OR Dept of Energy	All Participants	Please let us know if you are back from the break.
2025-03-19 10:48:08	Kellye Dundon	All Participants	back
2025-03-19 10:48:10	Ryan Tran, CUB	All Participants	back

2025-03-19 10:49:06	Claire Prihoda	All Participants	back
2025-03-19 10:53:25	David Heslam	All Participants	back
2025-03-19 10:53:54	Charity Fain	All Participants	I've got to prep for a board meeting, so have to leave now. Sorry.
2025-03-19 11:00:12	Ryan Perry - TPUD	All Participants	Price decline isn't enough on batteries, from a utility perspective, there needs to be a duration increase component to make the juice worth the squeeze.
2025-03-19 11:01:01	jake wise	All Participants	PGE sees value in dispatching solar-fed storage and co-deploying incentives with Energy Trust. There are no plans to change NEM at this time.
2025-03-19 11:09:56	Christina Zamora	All Participants	Is there any way for the BPA customer utilities to leverage resources as a group to reduce risks at the local level of spending down reserves?
2025-03-19 11:13:46	Bob Kaplan	All Panelists	We in Ashland are islanded too
2025-03-19 11:20:07	Ruchi Sadhir she/her - OR Dept of Energy	All Participants	The "donut"!
2025-03-19 11:31:04	Billy Curtiss	All Participants	We have deployed smart meters.
2025-03-19 11:34:36	Stephanie Kruse ODOE	All Participants	I have heard about a similar relationship between McMinnville Power and Light and one of their largest consumers Cascade Steel
2025-03-19 11:42:00	David Heslam	All Participants	PG&E summertime reliability program https://www.aesc-inc.com/wp-content/uploads/2024/09/FINAL-PGE-MSSR-IP-Webinar-20240819-1.pdf
2025-03-19 11:42:22	Pat DeLaquil	All Participants	Agree with David. The utilities can offload some of the grunt work to aggregators.
2025-03-19 11:43:09	David Heslam	All Participants	Jonathan, this program measures Total System Benefit (TSB) to get at the additional benefits you are mentioning
2025-03-19 11:43:28	Jonathan Belais	All Participants	Very cool. Thanks, David.
2025-03-19 11:43:33	David Heslam	All Participants	That's how the pricing is set for the aggregator
2025-03-19 11:46:03	David Heslam	All Participants	We're leading the efforts to help identify the potential measures for aggregators of the residential savings.

2025-03-19 11:46:37	jake wise	All Participants	PGE does plan for a flex load summer season with an "all call" approach - PTR, tstats, TOD, EV, etc. We have had great success in appeals during heat waves over the past few years.
2025-03-19 11:47:50	Ryan Perry - TPUD	All Participants	Whoa, seems like a good opportunity for bulk purchase DHP application
2025-03-19 11:50:20	David Heslam	All Participants	I love that idea Ryan
2025-03-19 11:51:59	Claire Prihoda	All Participants	@Jake it would be helpful to understand PGE's strategies to date in overcoming the customer education and other barriers that we've noted for DR.
2025-03-19 11:52:48	maddy salzman	All Participants	I feel like David's comment on focusing on inefficient cooling for low income households is likely to be impactful
2025-03-19 11:53:30	Jonathan Belais	All Participants	For low-income customers, ensuring the DR capability is built into devices through appliance standards is a good first step.
2025-03-19 11:54:41	Christina Zamora	All Participants	providing EV transportation resources to low income households who don't have transportation...I like David's comment re: cooling as well
2025-03-19 11:55:20	Kellye Dundon	All Participants	Agree with David, electric resilience replacement should be the priority
2025-03-19 11:56:08	jake wise	All Participants	@Claire happy to connect you to my colleagues. Also here's our recent flex plan https://edocs.puc.state.or.us/efdocs/HAQ/um2141haq332220025.pdf
2025-03-19 11:57:12	David Heslam	All Participants	Bob, there are some very "cool" new heat pump replacements for old PTACs. Check out Ephoca AIO
2025-03-19 11:58:23	Ryan Perry - TPUD	All Participants	Thanks everyone, I appreciate the discussion!
2025-03-19 11:58:26	David Heslam	All Participants	Other programs are figuring out how to use the PTAC sleeve and available power to install a 1:1 minisplit
2025-03-19 11:58:41	Bob Kaplan	All Panelists	Thanks David. I'll check it out.
2025-03-19 11:59:09	Hugh Arceneaux , ODOE	All Participants	https://odoe.powerappsportals.us/en-US/energy-strategy/
2025-03-19 11:59:47	Christina Zamora	All Participants	Thank you!
2025-03-19 11:59:57	Kellye Dundon	All Participants	thank you!
2025-03-19 12:00:04	Pat DeLaquil	All Participants	thank you

Whiteboard

Below is a transcription of the feedback received in the 3/19/25 Miro Whiteboarding activity. The whiteboard is also available for review at: [Buildings PWG 3-19 - Miro](#)

Whiteboard Q1

Question 1:

What are the opportunities to maximize benefits from building electrification and energy efficiency in residential and small commercial buildings?

- Work with CBOs to educate households on benefits (+1)
- Opportunities to partner with community organizations (CAA network) and culturally responsive organizations (+1)
- Post installation training on how to maximize savings (+2)
- State revolving fund, no-interest loans (+3)
- Targeted electrification to ensure bill reduction
- Differentiate between social policy and resource planning
- Promote a holistic view of energy wallet
- Document installations and analyze overall impacts on households
- Regularly publicize information about how people are benefiting from programs
- shift Addressing social/education/access barrier from admin to project/program cost in programs and/or expand admin caps on programs
- Regularly collect customer surveys to understand what they like / don't like
- Focus electrification projects first in homes that have delivered fuels
- Support energy information disclosure in real estate transactions
- Look to PCEF model on funding full retrofits
- working as a system to increase energy efficiency instead of continuing the silos
- Reduce administrative costs of EE program delivery
- working with communities to prioritize efforts and provide education around measure interaction
- Include pre-paid maintenance to retain new efficiency levels.
- Ensure program communications place value on the installations rather than the rebate/incentive
- Success stories need to get more attention. Everyone seems to hear about the poor performing HVAC system, but how do we help spread the news about all the people that are more comfortable and saving money? Broad-based social media campaign themes that partners can leverage?
- Develop a fuel-neutral cost-benefit calculation to identify beneficial fuel switching or dual fuel opportunities (+1_
- Utility and/or state investment in regional load flexibility and demand response efforts to better define opportunity
- Maximizes the dwindling firm load capacity of the system
- Establish a loan loss reserve / interest rate buydown to pull private funders into marketplace
- Better recognition by government of the societal value of efficiency as justifications for financing incentives (+1)
- Funding for deferred maintenance (roofs!) (+3)
- Fuel switching is allowed so incentives can be accessed
- Education is also needed after install to understand how to use new systems more effectively (+2)
- evaluate electrification measures with realized savings, not nameplate for more effective assessment of benefits
- Incentive programs for resiliency resources in rural and outage prone communities.
- targeting high energy use customers
- integrate EV-home opportunities to mitigate impact of
- power outages
- Fully funded programs for low-income. NO loan programs for low-income. (+3)
- no-interest loans are an alternative/ complement to more expensive whole home retrofits or no-cost incentives which spreads dollars over more customers

- Work with communities to map assets and challenges to electrification in a community
- Explicitly connect electrification efforts to climate resiliency (emphasize health-related benefits in a warming world to communities)
- Work with CCOs and LPHAs to promote electrification, with an emphasis on health benefits
- Support for community level "navigators" to help sort out the options and financial assistance
- Opportunity to layer benefits with other, existing state funds (+1)
- Focus on switching from electric resistance heating for maximum energy savings and cost savings
- Better (emergency) use of ETO funds. higher utility costs = \$100 million more than 2 years ago.
- Long term zero interest loans to fund 10-year on-bill or associated consumer financing (+1)
- Recognize that dual fuel systems may be most efficient, cost effective, and provide DR for the electric and gas systems (+3)
- ensuring a good experience with programs to increase positive word of mouth in communities- particularly important in rural communities (+1)
- consistent installation techniques and requirements across programming that meets the consistent standard
- training the meets teh consistent standard and certifications that capture proficiencies for particular professions
- consistent method to define cost/benefit analysis
- increasing quality assurance requirements
- Recognizing that weatherization benefit home owner/ renter in summer and winter regardless of energy source (+3)
- Fuel switching (away from gas)
- Support availability and adoption of less-expensive but efficient cooling options (eg portable HPs and window units)
- "Pay as you save" program infrastructure that can serve renters and owners
- Support for community loan funds to facilitate low interest 10-year consumer loans (+1)
- Focused programs for tribal communities that recognize their unique community and ownership situations
- get rid of gas LEAs
- education on proper install of hp and how they perform at peak cold weather and constrain grid (+1)
- Increase educational and outreach opportunities to help people understand the savings and benefits.
- whole building renovation; house as a system to increase impact longevity
- State Home Energy Score requirements
- neighborhood scale projects, leveraging economies of scale and providing targeted grid benefits
- Mortgages that finance energy efficiency investments at the time of purchase
- creative solutions to support older manufactured homes (+1)
- More mandatory education about the benefits is needed. HES disclosure at time of sale has been proven to work in Oregon at driving uptake. Perhaps similar mandatory education at the time of every mortgage origination would scale this up
- community based social marketing
- California GoGreen Financing pulls in lending partners: <https://www.gogreenfinancing.com/partners/lender-partners/residential/>
- Recognize that ETO funding comes from utility customers
- cross utility planning (actual collaboration, not just each utility modelling the other's system)
- Replacement of propane and electric resistance with heat pumps almost always provides bill relief/home comfort and replacement of natural gas with heat pumps very often provides bill relief/ home comfort. Need targeted appraches for the former and state-level transition plan for the latter.
- Require electric utilities to offer winter rates for heat pump customers like Colorado is doing.

Bike Rack

- Electricity prices
- Setting Goals that are too low for EE will lead to policies that are not ambitious enough
- Cross-organization administration difficulties

- Home electric panel upgrade needs [comment: Yes! Can be a big cost & deterrent]
- Oregon building codes limiting cities' action
- Limited enforcement
- All carrots no sticks
- 9th Circuit ruling and current Administration [comment: Perhaps the biggest one]
- Electric grid mix still has a lot of coal and NG generation
- electric generation is not necessarily free of fossil fuels
- Educate builders that electric home can cost less to build
- Supply chain is limited
- Electric service size to existing homes
- Electric cost burden switch to non-EE customers
- Here's a communications strategy suggestion to help with general population understanding of the issues. If the positive vision of the future for housing is an energy efficient, healthy, all-electric housing stock, then we should talk about modernizing our housing stock. I think that terminology would also encompass the issue of addressing deferred maintenance.
- On bill financing of HVAC upgrades discussed by several PWG members

Whiteboard Q2

Question 2:

What are the opportunities to maximize benefits from building energy efficiency in large commercial and Industrial?

- Many of the same financing options at larger scale
- Make more specialized knowledge/navigation available
- target areas/industries where energy savings can be realized and share best practices among industry customers
- Allow building energy service providers as an interface between building owners and the utility.
- If incentives are to be established we need a credible baseline
- multi-year logic models provide a framework for technological readiness
- industrial decarb targets exist in 20 states
- clean heat standards exist in at least 4 states
- Recognize that one size doesn't fit all with these facilities
- Focus on alternative fuels like H2 for industrial uses
- Encourage CPP CCI money to fund EE and alternative fuels for these industries
- Recognize that these customers compete in global markets and driving them out of state to areas with higher energy emissions is an even bigger loss for global emissions reductions
- Develop policies and regulations that encourage carbon capture
- State could offer local governments a tool set where investment in efficiency measures could be tied to property tax benefits for businesses making investments. The city would be getting additional public benefit beyond just the jobs that are typically viewed as the benefit from these tax giveaways.
- Revisit the BPS standards at least every three years to adjust targets as needed using a science-backed methodology.
- Importance of CPP for setting long term declining emissions.
- There are great financing products available for multifamily retrofits. The state could promote the use of these more to both bankers and property owners. Formal recognition for leading banks and bankers?
- provide clear messaging to encourage engagement/prioritization
- coordination and partnership between high load end users and utility capacity upgrades
- incentivizing load centers that can most benefit from DERs and the end users that have the greatest impact to partner to reduce peak grid impacts
- smart rate design by utilities that incentivize EE (+2)

- Utilities to determine best bang-for-the-buck: Focus on substations/regions where DR/Storage could reduce costs to all rate payers. Give bigger "efficiency" credit
- Micro grid developments with data centers that provide resiliency services to the nearby communities, not just the servers themselves.
- Energy Parks (opportunity to collocate energy generation and use in symbiotic ways)

Bike Rack/Parking Lot

- The technology challenges in electrifying some industrial processes, makes these a target for renewable fuels, Given the supply and cost constraints expected for such fuels, makes it critical that we target their use here (and avoid them in residential and small commercial settings)
- is there a policy option to incentivize or support co-location of (large) energy production and consumption or intentional use of (energy) waste streams in development of new industrial facilities or retrofitting older facilities?
- I think the issue statement could be reframed to "may not be feasible until a longer timeframe than other uses..." because I firmly believe that even the most energy intensive activities will eventually be weaned off fossil fuels.
- Competitive Market Pressures (+1)
- lack of local need/market for byproducts or waste heat
- commercial vacancy rates
- missing consideration of non energy non \$ benefits in developing programs and incentives
- Need for more backup energy sources (hospitals)
- Comprehensive retrofits can kick in codes associated with new construction resulting in higher baselines
- Letting perfect be the enemy of good
- Issues surrounding remaining useful life of equipment and related baseline considerations
- retrofit efficiency workforce shortages
- incentivizing decarbonization - potential vehicle for this in GHG reporting programs
- Both steel and cement can be made thru electrolysis processes that have emerging demonstration projects
- target industries which show the most promise for growth

Whiteboard Q3

Question 3:

What are the opportunities to maximize benefits from customer sited distributed energy resources?

- renter relationship to maintenance of equipment, need a way to engage out of state property owners
- provide funding mechanism to prepare site for DER installation
- While DERs are customer driven decisions, it's in the utility's interest to incentivize them properly to gain sufficient control to maximize their grid benefits.
- Expand
- peak pricing?
- Expand time-of-day pricing and provide access to DERs that will save customers money and lower peak demands (+1)
- develop neighborhood-wide approach in areas where resiliency is also a concern/priority (+1)
- rate design to promote benefits of DERs for customers and grid (+2)
- end-use TOU for EV and heat pumps
- Rate design that provides more reward to battery owners for providing peak power
- Rate design. Discounted wintertime rates for electric heat. "Colorado is requiring IOUs to propose heat pump rates. Canary article https://www.canarymedia.com/articles/heat-pumps/how-closing-the-spark-gap-can-boost-heat-pump-adoption?amp%3Butm_medium=email&%3Butm_campaign=canary&_hsenc=p2ANqtz- 0F5-vc0M_7nbQTZmKIIaLhtfXYmfhy-e4-gRHPQLg31S-ZycFmlN9FJ4yFtUCH6HQQFgdIcVqcelxTNeSVFpapnrnbQ&_hsmi=351174987&utm_source=newsletter

- Integration with microgrid development
- (Adding to above) Give more value to peak pricing, give more weight
- Align resources statewide to understand gaps in policy and benefit allowances
- utility ownership/leasing of DERS (+2)
- mitigating effects on energy burden of increasing rates, particularly for low income and small businesses

Bike Rack/Parking Lot

- microgrid/community generation
- Does it make sense for utilities to take a more direct role in solar/electrification? Small companies as contractors, but utility acting as the general contractor. Should aggregating these investments be treated as a "resource" for utility cost recovery?
- PMA Contracts
- Too many different companies and programs, not enough utility streamlining for clarity and ease (+1)
- Need to open up business opportunities for developers to partner with schools or warehouses to use available roof space
- system sizing appropriate to building size
- Utilities know best where distributed resources will have most impact. How to balance needs & incentivize
- On premise generation should be a complete system (Solar+battery) for grid resilience.
- harder to maximize output/target in the areas needed most or most ready
- Premise question: do DERs have to be customer sited? or is there a role for utilities or other entities?

Whiteboard Q4

Question 4:

What are the opportunities to maximize benefits from demand response?

- Same comments about rate design and peak pricing (+2)
- Enable independent DR entities (aggregators) to make offerings. Bottoms up approach to provide flexible approaches, rather than top down from the utilities.
- Invest in research and pilots to develop a more complete value proposition for flexible loads
- Focus on EVs first
- Make value proposition strong for customers - easy to participate, deliver real cost savings (+1)
- create/articulate value in dollars of behavioral changes
- Look to regional efforts to mitigate costs associated with development of DR portfolios
- Identify geographic areas with capacity constraints to emphasize/deploy DR (+1)
- consider impact of cost structures on low income customers
- leverage best practices from utilities who do have demand response programs (+1)
- Work with utilities to demonstrate reliability of DR resources to allow better integration into resource planning (+1)
- Customers need to know how they can benefit (and if will help stabilize their rates)) (+1)
- Have COUs switched to smart meters? or is that still a needed step?
- Develop consistent methodology for identifying potential and setting targets across utilities (+1)
- Is there low hanging fruit with institutional customers like school districts?
- Look at large-use customers first...greatest impact
- Grid Interactive Efficient Building (GEB) reqs in building codes
- Working with municipalities to incentivize housing developers who consider and value energy efficiency when building new single family or multifamily homes
- State efficiency standards to include CTA-2045 reqs
- Build DR capability into more appliances. This can be paired with efficiency efforts.

- Explore strategies for pre-heating/cooling to minimize customer discomfort and also increase impact & ability to extend DR events
- Are we actually using the demand response we have? do we interrupt our "interruptable" customers?
- PGE and PAC, optimize your TOU rates
- PG&E Measured Savings for Summer Reliability program is an example of enabling non-utility aggregators to bring DR savings to the utility <https://www.aesc-inc.com/wp-content/uploads/2024/09/FINAL-PGE-MSSR-IP-Webinar-20240819-1.pdf>
- Ensure homes are well weatherized to minimize customer discomfort (+1)
- Continue to support & incentivize installation of connected equipment to expand callable DR resource

Bike Rack/Parking Lot

- Need to properly value the grid + environmental benefits of DR -- community resilience & salmon protections
- impact on low income household service costs when they have little/no control of EE in their home
- Space heating DR + a commissioned system could be very impactful program.
- CEP talked to low-income homeowners on peak management. They are willing to change behavior but want to know all rate payers are doing their part and changing too. Were very happy to learn more on this topic
- Important to remember that DR is a resource for all energy types
- grid benefits are not tied to weatherization energy savings
- Tie incentives to DR ready systems to promote adoption.
- Limitations/
- trustworthiness of reliable energy in rural OR
- Are utilities a "natural monopoly" for DR programs, or do we benefit from decentralized programs?
- collaborative utility and industry DR/load management example at Cascade Steel and McMinnville Power
- DERMS systems - overall statewide system for calling events
- Look at SMartDER "bring your own device" tariff in Hawaii
- Community level DR - microgrids, virtual power plants