



International Energy Conservation Code E4C-HVACR Subcommittee

Meeting Minutes

March 9, 2023

11:00 AM EST to 2:00 PM EST

[Webex](#) Link

Committee Chair: John Bade, representing the California Investor Owned Utilities

Committee Vice Chair: Blake Shelide, Oregon Department of Energy

1. **Call to order**-Chair or vice-chair

2. **Meeting Conduct.** Staff

- a. Identification of Representation/Conflict of Interest
- b. ICC [Council Policy 7](#) Committees: Section 5.1.10 Representation of Interests
- c. ICC [Code of Ethics](#): ICC advocates commitment to a standard of professional behavior that exemplifies the highest ideals and principles of ethical conduct which include integrity, honesty, and fairness. As part of this commitment, it is expected that participants shall act with courtesy, competence and respect for others.

3. **Roll Call** – Establish Quorum- John Bade

	First Name	Last Name	Category	Company
<input checked="" type="checkbox"/>	John	Bade	Utility	2050 Partners
<input checked="" type="checkbox"/>	Drake	Erbe	Standards Promulgator	ASHRAE
<input checked="" type="checkbox"/>	Henry	Ernst	Manufacturer	Daiken
<input checked="" type="checkbox"/>	Mark	Heizer	Gov. Regulator	Oregon Bldg Codes Div
<input type="checkbox"/>	Gary	Klein	User	Self
<input checked="" type="checkbox"/>	Jeff	Kleiss	Manufacturer	Lochinvar (AO Smith)
<input checked="" type="checkbox"/>	Benjamin	Levie	Consumer	UCSF
<input type="checkbox"/>	Dick	Lord	Manufacturer	Carrier
<input checked="" type="checkbox"/>	Frank	Morrison	Manufacturer	Baltimore Aircoil
<input checked="" type="checkbox"/>	Christopher	Perry	Gov. Regulator	US DOE
<input checked="" type="checkbox"/>	Daniel	Nall	Gov. Regulator	Dan Nall Consultant/ AIA
<input checked="" type="checkbox"/>	Laura	Petrillo-Groh	Manufacturer	AHRI
<input checked="" type="checkbox"/>	Kevin	Rose	Public Segment	NEEA
<input checked="" type="checkbox"/>	Shannon	Corcoran	Utility	American Gas Assoc.
<input checked="" type="checkbox"/>	Blake	Shelide	Gov. Regulator	Oregon Dept of Energy
<input type="checkbox"/>	Amin	Tohmaz	Gov. Regulator	City of San Antonio
<input type="checkbox"/>	Doug	Tucker	Manufacturer	Mitsubishi
<input type="checkbox"/>	Jeremy	Williams	Gov. Regulator	US DOE
<input checked="" type="checkbox"/>	James	Yeoman	Gov. Regulator	City of Orem

[Quorum met.](#)

4. **Review of Notes** from the February 23, 2023 meeting . Per staff direction, subcommittees do not have minutes, but notes. These do not need a vote.

5. Approval of Agenda

John Bade walked through the agenda.

Jim Yeoman motioned to approve the agenda, Dan Nall seconded Motion to approve the agenda passed 10-0-1, John Bade abstained.

6. Old Business - none

7. Review and possibly vote on the following public comments

CED1-170

John Bade (CA IOUs)

- It is not required to vote to reconsider as the intend is kept unchanged.
- Struck out what is not meant to strick out.

Chris Perry (DOE)

- Was not able to make the meeting previously. Would voted negatively.
- Excluding multifamily building type is extremely problematic. Multifamily buildings have high water consumption. It would be Ideal for load shifting. Individual building may not be high, but the power in the whole building will aggregate.
- Resilalnace issue- Increase electrification and decarbonization, the ability to shed on the grid and power failure straight on the grid.
- Urge to disapprove

Greg Johnson (National Multifamily Housing council)

- Not sure how it will be responsible for the bldg. owner to ensure how the grid operates.
- During the initial discussion, it was told that all water heaters are having the controls. The service life of water heaters is 10-15 years. Owner will not avoid to compliance how the market is structured.
- The way the language is structured now, owner can avoid the compliance. It is possible to design a way around compliance.
- Subcommittee decides to restore the exception and the language got deleted and modify the table so that there is an option to incent the owner to volunteerly putting an equipment.
- Don't agree with DOE.

Diana Burke (NBI)

- Agreed with Chris Perry and disagree with Greg Johnson that building owner will receive no benefits. They have an option to receive it.
- The exemption is not applicable for R2 occupancies.
- Low rise multifamily building have the requirement.
- Mentioned AHRI suggestion on this topic.

Ben Levie (UCSF)

- Don't know how big of an impact on R2 structure with heat pump water heater.
- Grid response won't be big as heat pump water heater is extremely efficiet, for the diversity.
- How big of an impact is really is.

Lost the internet connection and reconnected later. Blake had notes.

Motion: Kevin Rose motioned to disapprove, Chris Perry seconded.

Mike Tillou (PNNL)

- Doesn't agree with Greg Johnson. Section C406.3.7 refers to service water load management. It may cause confusion if it is added without coordinating language with Section C404.10.

Greg Johnson doesn't agree with Mike Tillou.

Motion to disapprove passes 5-1-4.

CECD1-14-22

John Bade (CA IOUs)

- Basis of the discussion is to dealing with the exception for onsite renewable energy. The double count is not acceptable where the energy credits are applicable.
- Made editorial changes to high-capacity gas-fired water heaters.
- Agreed with Greg on moving the definition.

Dan Nall motioned to reconsider, and Jim Yeoman seconded.

Motion to reconsideration passes 9-0-1, and John Bade abstained.

**Motion: Dan Nall motioned to approve, and Jim Yeoman seconded.
Motion to approve passes 7-0-4.**

Committee Proposal **Heat Recovery for Healthcare**

John Bade (CA IOUs)

- This change mimics an addendum done in ASHRAE 90.1. It did not describe the intent of the requirement. The analysis was done based on the recovering heat from the return water.
- Current language refers to the recovery of the heat from the condensed water. The recovering from the condenser water is low-cost heat; any reduction on the chiller is not achieved. Lot of saving in this method and the cost remains the same. ASHRAE study in 2019 was not based on condenser design.
- The proposed language will eliminate confusion.
- Added the change to on-site renewable energy to avoid double counting renewable energy.

Drake Erbe (ASHRAE)

- Asked whether it is fixed in 90.1-22?

John Bade confirmed that it is fixed in 90.1-22.

Motion: Drake motioned to approve the committee-generated proposal and Mark Heizer seconded.

Motion to approve passes 11-0-1, and John Bade abstained.

Reason Statement: It harmonizes with ASHARE 90.1-22.

CED-1-176

Mike Tillou (PNNL)

- Walked through the additional modifications PNNL recommended to the additional questions raised during the last call.
- Worked with Blake. The bldg. should get full credits regardless of whether there is a demand response signal is available or not in the jurisdiction.
- Modified the table for better clarification.

Bryan Ahee

- Footnotes are reversed. It needs to be interchanged.

Mike Tillou (PNNL)

- Agreed with Bryan Ahee.

Bryan Ahee

- If there is a heat pump water heater greater than 12 kW, it would not have to be have demand response ready. 33% credit on using heat pump water heater. Asked for the the resoning behind it.

Mike Tillou (PNNL)

- The credit was based on the impact of the demand response on electric resistance on electric water heaters. The potential impact will be third. The credit are in alignment with each other depending on theequipemnet installed.

Bryan Ahee

- Asked for the values to compare with the energy credit tables.

Mike Tillou (PNNL)

- Part of the work PNNL is done on credit is to levelized on the impact of each measure. The credit value is intended to create parity across all credits. It is not meant to incentivize a specific strategy by weighing credit. Each credit was developed to the impact of the whole building.

Mark Heizer (Oregon Bldg Codes Div)

- When a demand response signal is available, it complicates from an enforcement position.
- Asking for clarification – it was mandated recently that the demand response for some equipment, whether or not a signal is available. This proposal is going to credit whether or not a demand signal is available.

Steve Rosenstock (Edison Electric Institute)

- Proposed changes on footnotes for better clarification.

Mike Tillou agreed with the modification.

John Bade (CA IOUs)

- Proposed design is typically used for modeling.

Mike Tillou (PNNL)

- The credit has been written to require action on the prescriptive requirement. It requires that a water heater be capable of demand response. The credit requires that load management acted upon and be acted on. The lighting made that same approach. The supporting language was added for the code official.

Kevin Rose (NEEA)

- Referring to the enforcement and assessing whether the demands response signals are available needs to be simplified.
- Looking at the measure across the bldg. type, the points used for the hot water use are low. Modified by 15% will be a very low number. It will be useful to have the ability to have predictions. There is a relative reward of keeping the flexibility versus the enforcement ask.

Motion: Chris Perry motioned to approve as modified; and Dan Nall seconded. The motion to approve as modified passed 11-0-2; Mark Heizer and John Bade abstained.

Reason Statement:

CED1-169

John Bade (CA IOUs)

- Preferred to disapprove CED1-169 as it is a long addendum and propose as a new committee proposal.

Laura Petrillo-Groh motioned to reconsideration, and Skip Ernst seconded. Motion to reconsideration passed 12-0-1; John Bade abstained.

Laura Petrillo-Groh will move to withdraw CED1-169 by sending an email to Kris.

CECD1-XX

John Bade (CA IOUs)

- Walked through the committee proposal created by Laura.
- The original reason statement was because the ASHRAE 90.1 addendum had not been completed then.
- This same language will not appear at ASHRAE 90.1 until the 2025 version. The 2022 version still has the equivalent of what's in IECC 2021.

Reason Statement: This harmonizes the code in ASHARE 90.1-22

Drake Erbe (ASHRAE)

- It prevents dichotomy in IECC for the alternate path being one way and the IECC doing something else.

Drake Erbe motioned to approve as modified the committee proposal. Laura Petrillo-Groh seconded.

Armin Hauer (ebm Papst)

- Pris to have a concrete statement when this will be reconsidered.
- What happens if the 90.1 Addendum is published in two months? Will that trigger reconsideration?

John Bade (CA IOUs)

- The new fan power limibeent t has approved in the ASHRAE Winter meeting. It would not be published until the 2025 version.

Laura Petrillo-Groh (AHRI)

- Prefer to remove AHRI recommendation.

John Bade (CA IOUs)

- hown't promise how the next committee meeting will go.

Reason Statemnet: This harmonizes with the 90.1 code.

Skip Ernst (Daikin)

- ASHRAE 90.1 and IECC are always offset when a change occurs.
- ASHRAE 90.1 refers to BHP/cfm and an addendum to change to kW/cfm has been passed. It is better language technically.
- Asked whether there is a reason not to do better not now than later.

Laura Petrillo-Groh (AHRI)

- The addendum version of 2022 was not published in time. It will be including the 2025 edition of 90.1. It would be appropriate to include it with appropriate authorization in the expedition of IECC rather than the 2025 version.

Skip Ernst (Daikin)

- Asked why the next version IECC can't move first to the end users.

Laura Petrillo-Groh (AHRI)

- ASHRAE 90.1 version is directly preceding the IECC, unless there is an opportunity to change.

Drake Erbe (ASHRAE)

- It will be a new way of doing other than Title 24. It will give the industry some time to understand exactly what they're doing. If we have two different ways, the industry will follow the easiest way to do, that will be following 90.1. It may lead to confusion and compliance. If there are two methodologies, and there are no comparison, it will be difficult to compliance.

Greg Johnson (National Multifamily Housing council)

- Proposed changes for better.

Laura accepted the proposed changes.

Kevin Rose (NEEA)

- Referring to CEP119, this is not the proposal that saves tiny amount of energy where this is a potential complication. These proposed values reduce the allowed fan system electrical input power by 10% on average.
- Agreed with Skip- why not IECC will go first as it's for a meaningful energy saving?
- Curious to include this in IECC, how Oregon could potentially help to move the language.

Mark Heizer (Oregon Bldg Codes Div)

- We look at beyond what has gone in ASHRAE. We don't let one code influence the adaption or not adoption of another code.

Motion to approve the modification of the committee proposal passed 10-0-3.

Reason Statement: This aligns with ASHRAE 90.1-22.

The quorum met after the break.

CED1-157

Nick O'Neil

- This aligns with the new federal requirement of boilers, both the small boilers (> 300,000 BTU) and larger commercial boilers.
- There was an ongoing court case to dispute the efficiency level.

Laura Petrillo-Groh (AHRI)

- Putting the table harmonizes with 90.1 and covers IECC if DOE approved the levels.

Nick O'Neil (NEEA)

- Lawsuit is for commercial boiler efficiencies.
- If the proposal is withdrawn, then 90.1-22 will align with the proposed IECC.
- Appendix F has the new federal minimums efficiency table.

John Bade (CA IOUs)

- 90.1 doesn't put a requirement for residential product as they are directly under control of DOE, which happened six years ago.

- We could revert associated items in the proposal.

Steve Rosenstock

- Agreed with the updating the table. IECC doesn't have an appendix in residential equipment.
- Proposed to align with DOE update.

Drake Erbe (ASHRAE)

- If it is withdrawn, it would be in what's in the public draft. Preferred to modify.

John Bade (CA IOUs)

- Confirmed that the table in the public comment draft is the same as the table in the 90.1-2019 and 2022.

Laura Petrillo-Groh (AHRI)

- If DOE prevails, the table will be as in the Federal Register today. If AHRI prevails, the level will be back to the 90.1 levels. By harmonizing with the 90.1 levels won't be any concerns with preemption.

John Bade (CA IOUs)

- The potential dispute is for 300,000 BTU or larger,

Steve Rosenstock (Edison Electric Institute)

- Concerned that if there is no agreement between ASHRAE and IECC.

Kris Stenger

- Tried to avoid any technical change that would require another round of comment because of lack of time.

John Bade (CA IOUs)

- ASHRAE table will look like 2021- no change.

Kris Stenger

- If there was a preemption issue, preemption would be to modify the table, so that it doesn't fall into an issue.

Drake Erbe (ASHRAE)

- This instance happened before and all go back to CFR and use what's in there.

John Bade (CA IOUs)

- Preferred to change as less efficient boilers won't be in market. Or, disapprove here and propose committee generated proposal next meeting.

Laura Petrillo-Groh (AHRI)

- Under 3000 category will be in residential product. Agreed to adopt the approach for residential products.

Drake Erbe (ASHRAE)

- Referred to Mike Pfeiffer's comment, if there is nothing done to a number in the table on the next round, we can't modify.

Kris agreed with Drake. Kris is agreed to make changes now. We can't be adding anything in the next round.

Drake Erbe (ASHRAE)

- Agree to make necessary changes.

Kevin Rose (NEEA)

- Agreed to change. There might be an impact on the performance path related projects as the values are updated. The smallest values are not part of the lawsuit.
- Worth to consider that the shorter code is better.

Nick O'Neil (NEEA)

- Gas-fired natural draft needs to be unstricken.

Kevin Rose motioned to table the proposal to the next meeting. Laura seconded. Motion to table passed 11-0-2 motion; and Jim Yeoman and John Bade abstained.

Kevin Rose will work with Nick O'Neil to work on the table.

CED1-15

John Bade mentioned that there is no substantive changes.

Diana Burke (NBI)

- Provided background. Original proposal was CEPI-22.
- The purpose of the model code is to provide the starting point for requirements, and the appendix could be useful for jurisdictions that are interested in requiring the new construction to be all-electric.
- Language from Washing Energy Code was adapted, added a few sections on sizing to make sure that electric resistance heat for supplementary heat is reduced.
- Added a new section to help consider the electrification of existing buildings. It doesn't permit new combustion equipment. It is aligned with the target outlined in ASHRAE 100. That proposal incentivizes heat pumps.

Steve Rosenstock (Edison Electric Institute)

- Concerned about the budget equipment definition.
- Concerned about how 1000 ft² equipment buildings will align with the proposal.
- What about water chillers in the commercial building.

John Bade (CA IOUs)

- Need to make the language more clear.

Left the IECC meeting to attend the AHRI meeting. Blake had minutes for the rest of the meeting.

Proposal Number	Code Section(s)	description	proponent	Subcommittee Member Lead
CED1-170	C404.10	R-2 Exception for Water Heater DR Controls. Vote to reconsider and revote to provide correct strikeout	Greg Johnson	N/A
CECD1-14	C403.10, C403.11.6	Vote to reconsider. Ensure that on-site renewable energy is not double counted. Revote because the up-to-date language was not shown	John Bade	N/A
CED1-169	C403.8.1	Delete Fan Power Limits. Suggest revote because the wrong text was included.	Laura Petrillo-Groh	N/A
CECD1-XX	C403.8.1	Committee proposal with corrected text that CED1-169 should have used.	Laura Petrillo-Groh	N/A

CED1-157-22	C403.3.2(6) Table	Boiler table	Nicholas O'Neil	John Bade
Committee Proposal	C403.11.6	Heat Recovery for Health Care	John Bade	N/A
CED1-176-22	C406.3.7	G06 SHW demand response	Reid Hart	Dan Nall, Chris Perry, Doug Maddox, Gary Klein
CED1-14-22	Multiple	Electric-Ready Requirements for Building Employing Combustion Fuels	Diana Burke	TBD
CED1-15-22	New Appendix	All-Electric Buildings Option	Diana Burke	TBD

8. **Updates on other public comments.** Reports from subcommittee response leads on progress working with commenters.

Proposal Number	Code Section(s)	Description	Proponent	Subcommittee Member Lead	Scheduled HVACR and Water Heating Subcommittee Hearing Date
CED1-156-22	C403.3.2	Update efficiency tables to match ASHRAE 90.1	Steven Rosenstock	John Bade	Working with IECC

9. **Other business.**

- Members to bring up any new business

10. **Upcoming meetings.**

a. **March 16, 2023, from 11:00 a.m. to 2:00 p.m. Eastern Time** and every two weeks thereafter.,

11. **Adjourn.**

FOR FURTHER INFORMATION BE SURE TO VISIT THE ICC WEBSITE:

[ICC Energy webpage](#)
[Code Change Monograph](#)

FOR ADDITIONAL INFORMATION, PLEASE CONTACT EITHER

- John Bade, Subcommittee Chair at johnbade@2050partners.com.
- Blake Shelide, Subcommittee Vice-Chair at blake.shelide@energy.oregon.gov

Chat Message:

March 9, 2023 9:59 AM from Greg Johnson to everyone: Greg Johnson National Multifamily Housing council

March 9, 2023 10:00 AM from Steve Rosenstock to everyone: Steve Rosenstock, Edison Electric Institute, guest

March 9, 2023 10:00 AM from Blake Shelide to everyone: Blake Shelide, Oregon Department of Energy

March 9, 2023 10:01 AM from Alex Smith to everyone: Alex Smith - NAHB

March 9, 2023 10:04 AM from DAN NALL to everyone: iel Nall - AIA

March 9, 2023 10:04 AM from Jim Yeoman to everyone: Jim Yeoman Deputy Building Official Orem City Utah

March 9, 2023 10:04 AM from Joe Cain - SEIA to everyone: Joe Cain, Solar Energy Industries Association (SEIA)

March 9, 2023 10:05 AM from Diana Burk, NBI to everyone: Diana Burk, NBI

March 9, 2023 10:06 AM from Mike Waite to everyone: Mike Waite, ACEEE

March 9, 2023 10:06 AM from skip ernst to everyone: I just joined

March 9, 2023 10:06 AM from Michael Tillou to everyone: Michael Tillou, PNNL

March 9, 2023 10:07 AM from Kevin Rose to everyone: Kevin Rose, NEEA joining late

March 9, 2023 10:08 AM from Laura Petrillo-Groh to everyone: Laura Petrillo-Groh, AHRI, arriving late

March 9, 2023 10:20 AM from Greg Johnson to everyone: The benefit accrue to all gridusers, so all should pay for it

March 9, 2023 10:22 AM from Joe Cain - SEIA to everyone: CED1-170-22: I would suggest that owners and tenants of Group R-2 have just as much concern about grid stability and power outages as everybody else. As we move toward smart grids and microgrids, we need smart controls to enable the advanced features of the smart grids.

March 9, 2023 10:24 AM from Greg Johnson to everyone: This is an incentive to buy gas water heaters

March 9, 2023 10:25 AM from Chris Perry to everyone: FYI - to Ben's question, prior to working at DOE I did some research on the load shifting potial of multifamily grid-connected water heaters and it is quite high!

March 9, 2023 10:25 AM from Chris Perry to everyone:
<https://www.aceee.org/sites/default/files/pdfs/b2101.pdf>

March 9, 2023 10:27 AM from Douglas Maddox to everyone: There is already a demand response SWH Energy Credit. G06.

March 9, 2023 10:28 AM from Douglas Maddox to everyone: Maybe it's not exactly the same, since it invloves pre-storing energy in the tank by running at higher storage temperature.

March 9, 2023 10:28 AM from Laura Petrillo-Groh to everyone: I need to step away. Back at noon.

March 9, 2023 10:28 AM from Alex Smith (privately): "The HPWH then stops heating water during

peak demand times, such as early evening, when solar production is low and multifamily residents come home from work and start using equipment and appliances. " - load shifting can best be accomplisehd with large batteries, specifically in combination with community solar. Shutting of people's hot water in the middle of the day isn't the best solution

March 9, 2023 10:29 AM from Alex Smith (privately): sorry kris, switched chat accidentally

March 9, 2023 10:29 AM from Alex Smith to everyone: "The HPWH then stops heating water during peak demand times, such as early evening, when solar production is low and multifamily residents come home from work and start using equipment and appliances. " - load shifting can best be accomplisehd with large batteries, specifically in combination with community solar. Shutting of people's hot water in the middle of the day isn't the best solution

March 9, 2023 10:32 AM from Diana Burk, NBI to everyone:l'm talking but it's not working

March 9, 2023 10:32 AM from Chris Perry to everyone: @Alex - load shedding is shutting off water heaters (admittedly less effective). Load shifting is superheating during low peak times so that you can coast during high peak times

March 9, 2023 10:32 AM from Jim Yeoman to everyone: Yes we hear

March 9, 2023 10:33 AM from Alex Smith to everyone: the article I quoted describes it as "load shifting" - "The most promising contribution to grid flexibility from HPWHs is load shifting (sometimes

called intraday balancing), in which electricity consumption is shifted from hours of peak demand to hours of low demand (Delforge and Vukovich 2018). In other words, the water heater draws energy to heat the water during times of excess energy supply, such as in the middle of the day when solar production is high. The HPWH then stops heating water during peak demand times, such as early evening, when solar production is low and multifamily residents come home from work and start using equipment and appliances."

March 9, 2023 10:33 AM from Mark Heizer to everyone: Have to step away for a minute. I would support

March 9, 2023 10:33 AM from Alex Smith to everyone: by article., I mean the link you provided, Chris

March 9, 2023 10:34 AM from Chris Perry to everyone: Right, and I'm agreeing that shifting is where the value is for grid connected water heaters. Load shifting doesn't require shutting off people's water heaters unexpectedly -- just shifting the time when they are heating the water.

March 9, 2023 10:35 AM from Alex Smith to everyone: again, I am just quoting what you psoted

March 9, 2023 10:35 AM from Alex Smith to everyone: posted*

March 9, 2023 10:35 AM from Alex Smith to everyone: none of those words are mine

March 9, 2023 10:36 AM from Chris Perry to everyone: I agree and I think they are good words! Not sure where the confusion is

March 9, 2023 10:37 AM from Steve Rosenstock to everyone: Just because the water heater is "off" does not mean that it can't distribute the hot water that is still in the tank.

March 9, 2023 10:38 AM from Alex Smith to everyone: My confusion is your statement that "load shifting" is not shutting off water heaters when the link you provided states "The HPWH then stops heating water...". How is heating stopped if the heater is not shut off?

March 9, 2023 10:38 AM from Steve Rosenstock to everyone: The heating element may be shut off, but all other controls stay on and hot water is provided to end uses.

March 9, 2023 10:41 AM from Alex Smith to everyone: the hot water remaining in the tank, yes, I agree, past that, the heat is shut-off.

March 9, 2023 10:42 AM from Alex Smith to everyone: for r-2 occupancy, depending on how the water heater is shared, that may not be a long time at all before the residual hot water remaining in the tank is used

March 9, 2023 10:44 AM from Chris Perry to everyone: Agreed with Steve. When I think of "shutting off" a water heater to me it means something like an Aquanta control that basically cuts off power to the water heater entirely. Confusion here might just be semantics, but I see a big difference between totally cutting off the power vs. using the heating element at a different time

March 9, 2023 10:46 AM from Alex Smith to everyone: I agree, seems to be semantics.. I've lost power to a water heater many times and it's never stopped being able to deliver hot water, so that wasn't a consideration in turning the power off, to me

March 9, 2023 10:46 AM from Alex Smith to everyone: residual hot water I mean

March 9, 2023 10:47 AM from Mark Heizer to everyone: John,

March 9, 2023 10:47 AM from Mark Heizer to everyone: Had to abstain due to local issue

March 9, 2023 10:48 AM from Steve Rosenstock to everyone: Laura is out until Noon

March 9, 2023 10:49 AM from Chris Perry to everyone: Alex, that makes sense!

March 9, 2023 10:50 AM from Greg Johnson to everyone: The desire to have owners subsidize utilities via ADR by mandating specific equipment installations, even where there is no ADR program, is an inexcusable interference in the market. There is no reason why these installations cannot be incented by the utilities.

March 9, 2023 10:53 AM from Alex Smith to everyone: @Greg - Portland General Electric is at least one utility that is incentivizing smart thermostats. That is definitely the route this should be going. https://www.pge.com/en_US/residential/save-energy-money/savings-solutions-and-rebates/smart-ac/smartac-thermostat.page

March 9, 2023 10:53 AM from Alex Smith to everyone: "Enroll with a smart thermostat you already have and receive \$75; or get \$120 off a new smart thermostat"

March 9, 2023 10:53 AM from Mark Heizer to everyone: PGE is not all of Oregon.

March 9, 2023 10:54 AM from Kristopher Stenger to everyone: this will get proposal number CECD1-13-22

March 9, 2023 10:55 AM from Alex Smith to everyone: @Mark - yes, that's true, about half of Oregon's population live in PGE's service area

March 9, 2023 10:57 AM from Greg Johnson to everyone: when the utilities want to forward know what they want to do about establishing ADR programs they should consider that (according to DOE) 42 states have energy codes equivalent to 90.1-2013 or earlier. For residential it's 39 states at the 2015 IECC or earlier.

March 9, 2023 10:58 AM from Greg Johnson to everyone: When utilities want to use the energy code to plan future programs they should consider that 42 states that have energy codes equivalent to 90.1-2013 or earlier. For residential it's 39 states at the 2015 IECC or earlier. Those are DOE numbers.

March 9, 2023 11:00 AM from Joe Cain - SEIA to everyone: Switching to a different meeting. Thanks everyone.

March 9, 2023 11:00 AM from Greg Johnson to everyone: a. should say "where" instead of "when"

March 9, 2023 11:00 AM from Greg Johnson to everyone: now b should say "where"

March 9, 2023 11:01 AM from Alex Smith to everyone: Most of the other half of Oregon is served by Pacific power, which also has a smart thermostat rebate program .

March 9, 2023 11:08 AM from Mark Heizer to everyone: To Alex: Yes: the IOU's serve most of the population. That's not the point. We have one co-op that serves over 20,000 square miles and about 4,000 meters. Some of their customers manually report their monthly meter use. This is a national code, not for coastal cities And FYI: participate in the PGE smart stat program. I'm a lucky beneficiary of their program.

March 9, 2023 11:10 AM from Alex Smith to everyone: @Mark - I may be misunderstanding your testimony, but I feel like we'er mostly on the same page and I might just not be doing a good job of making my point, which is that demand response should be reserved for areas that actually have programs in place so they can best take advantage of cost savings potential

March 9, 2023 11:15 AM from Blake Shelide to everyone: Chris Perry - Reason statement for 176?

March 9, 2023 11:41 AM from Chris Perry to everyone: Blake sorry I missed this request - hold on

March 9, 2023 11:55 AM from Chris Perry to everyone: Reason statement for approval as modified of CED1-176: The SWH Energy Storage portion of the Energy Credits section has been updated to account for the difference between a capability being required in the base code and full implementation though the credit measure.

March 9, 2023 12:01 PM from Nick O'Neil to everyone: One clarification, in both 90.1 and IECC, the residential-size boilers will be below the federal standard regardless of the outcome of the commercial boiler court case.

March 9, 2023 12:03 PM from Jim Yeoman to everyone: BRB

March 9, 2023 12:07 PM from Jim Yeoman to everyone: back

March 9, 2023 12:23 PM from Blake Shelide to everyone: yes

March 9, 2023 12:31 PM from Mark Heizer to everyone: I can assist from Oregon

March 9, 2023 12:43 PM from Joe Cain - SEIA to everyone: I just re-joined. Which proposal are we viewing?

March 9, 2023 12:43 PM from Diana Burk, NBI to everyone: CED1-015 All Electric Appendix

March 9, 2023 12:45 PM from Joe Cain - SEIA to everyone: Thx