



International Energy Conservation Code E4C-HVACR Subcommittee

Meeting Notes All notes are in blue text

January 27, 2022
11:30 AM EST to 1:30 PM EST (2 hours)
[Webex](#) Link

Committee Chair: Shaunna Mazingo, Mazingo Code Group LLC
Committee Vice Chair: Blake Shelide, Oregon Department of Energy

1. **Call to order**-Chair. [Called to order at 11:36 a.m. EST](#)

2. **Meeting Conduct.** Staff

- a. Identification of Representation/Conflict of Interest – [The chair reminded members to identify themselves and who they represent.](#)
- 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- Vice-Chair [roll taken by others](#)

	First Name	Last Name	Category	Company
<input type="checkbox"/>	Christopher	Arnold	Consumer	Grand forks Public Schools
<input type="checkbox"/>	John	Bade	Utility	2050 Partners
<input type="checkbox"/>	Ellen	Eggerton	Gov. Regulator	City of Alexandria
<input type="checkbox"/>	Drake	Erbe	Standards Promulgator	ASHRAE
<input type="checkbox"/>	Henry	Ernst	Manufacturer	Daiken
<input type="checkbox"/>	Mark	Heizer	Gov. Regulator	Oregon Bldg Codes Div
<input type="checkbox"/>	Adrian	Jones	Gov. Regulator	City of Lawrence
<input type="checkbox"/>	Gary	Klein	User	Self
<input type="checkbox"/>	Jeff	Kleiss	Manufacturer	Lochinvar (AO Smith)
<input type="checkbox"/>	Benjamin	Levie	Consumer	UCSF
<input type="checkbox"/>	Dick	Lord	Manufacturer	Carrier
<input type="checkbox"/>	Frank	Morrison	Manufacturer	Baltimore Aircoil
<input checked="" type="checkbox"/>	Shaunna	Mazingo	User	Mazingo Code Group
<input type="checkbox"/>	Christopher	Perry	Gov. Regulator	US DOE
<input type="checkbox"/>	Daniel	Nall	Gov. Regulator	Dan Nall Consultant/ AIA
<input type="checkbox"/>	Laura	Petrillo-Groh	Manufacturer	AHRI
<input type="checkbox"/>	Kevin	Rose	Public Segment	NEEA

<input type="checkbox"/>	Thomas	Schultz	Utility	Spire and American Gas Assoc.
<input 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 type="checkbox"/>	James	Yeoman	Gov. Regulator	City of Orem

4. Approval of Minutes Approval of December 9, 2021 meeting minutes and January 13, 2022 Minutes.

- Approval of December 9, 2021 meeting: Moved John Bade, seconded Frank Morrison. Approved by unanimous voice vote.
- Approval of January 13, 2022 meeting: Moved by Thomas Shultz, seconded by Amin Tohmaz. Approved by unanimous voice vote.

5. Approval of Agenda Moved by John Bade, seconded Chris Perry as modified passed by unanimous voice vote. Modified to remove CEPI 88, 90, 92, 93, and 94. The tables will be reviewed during the February 10 meeting. Moved by John Bade, seconded by Mark Heizer. Passed 17-0-1

- Chair suggested holding equipment tables until after the ASHRAE Winter Meetings. Steve Rosenstock and Chris Perry.
- John Bade suggested going forward with boilers and correct after public comments.
- Mark Heizer suggested moving the consumer and industrial boilers separately since the consumer boiler values are not in question.
- Kevin Rose suggested moving CEPI-93 forward
- Laura Petrillo-Groh suggested we should wait since DOE will reply to the courts today as to whether they will complete their work in 90 days.
- Chris Perry said that we can review the tables at the February 10 meeting

6. Old Business

- Items forwarded to other committees for review or completion.
- The chair has forwarded CEPIs 64, 65, and 72 to the envelope subcommittee.

7. Action Items. (We will hear as many of these as possible. Any proposal not heard in this meeting will be moved to the first items on the next meeting's agenda)

- CEPI-088-21**, HVAC Table Updates, Proponent- Steve Rosenstock (previously tabled)
 - Removed from the agenda
- CEPI-090-21**, Heat Pump Table Updates, Proponent- Steve Rosenstock (previously tabled)
 - Removed from the agenda
- CEPI-092-21**, Boiler Table Updates, Proponent- Steve Rosenstock (approved by committee but tabled moving it to consensus committee until hearing CEPI-093 revision)
 - Removed from the agenda
- CEPI-093-21**, Boilers Min Efficiency Req Gas and Oil, Proponent- Nicholas O'Neil (previously tabled)
 - Removed from the agenda

- e. **CEPI-094-21**, Variable Refrig Air Conditioners Table, Proponent- Steve Rosenstock
- Removed from the agenda
- f. **CEPI-102-21**, Humidity Controls, Proponent- Emily Toto/ASHRAE
- Skip Ernst brought up the idea of an exemption for supermarkets. Ellen Eggerton disagreed.
 - Mentioned that many supermarkets use desiccants.
 - Thomas Shultz expressed concern about the need to control humidity for virus reduction.
 - John Bade noted that higher requirements are not in safety codes.
 - Skip Ernst noted that 62.1 is unlikely to call out higher humidity levels
 - Thomas Schultz wondered about application in Controlled Environmental Horticulture.
 - Dick Lord stated that residential buildings humidification is rarely used.
 - Mark Heizer noted that there are options to humidify to higher than 30% without using fossil fuels.
 - Jon McHugh agreed
 - Mark Heizer moved as submitted, John Bade seconded Passed 16-2-0. The “no” votes were from Thomas Schultz and Chris Arnold.
- g. **CEPI-106-21**, Outdoor Air Relief, Proponent- Emily Toto/ASHRAE
- John Bade presented the proposal
 - Jon McHugh suggested that balanced airflow should not be presumed in the calculation of relief airflow.
 - Ellen Eggerton spoke in favor, said balance should apply to economizer controls.
 - Skip Ernst and Doug Maddox made comments that they failed to record.
 - Dick Lord pointed out that other requirements for modulated control of exhaust fans in Section 4.8 apply.
 - Thomas Schultz asked about dedicated outside air units. He noted that these units often are controlled to operate during economizing hours.
 - Moved as modified by John Bade, seconded Ellen Eggerton. Passed 19-0-0
- h. **CEPI-111-21**, Parking Garage Ventilation, Proponent- Emily Toto/ASHRAE
- John Bade presented
 - Mark Heizer thinks that the language should refer to the IMC.
 - The subcommittee agreed to add that phrase.
 - Ellen Eggerton expressed concern about not having specific requirements for specific contaminants.
 - John Bade said that levels should be called out in the IMC and that they are not covered in the current language.
 - Ellen Eggerton noted that the IMC does not have maximum levels for contaminants.
 - Jon McHugh stated that there are specific limits in the California Mechanical Code. <https://up.codes/viewer/california/ca-mechanical-code-2019/chapter/4/ventilation-air#404.0>
 - John Bade noted that there are no existing levels in the IECC today.
 - Ellen Eggerton suggested adding the California limit to the IECC.
 - The California requirements for CO and NOx were added to the text.
 - Blake Shelide wondered in parking garage section needs to be further defined. The subcommittee did not modify the text.
 - Aaron Gunzner expressed general support. Noted that the definition of parking garage section was discussed at IAPMO.

- Committee motion to approve as modified. Moved by Ellen Eggerton seconded by Thomas Schultz 13-4-1. “No” voters were Shaunna Mozingo, Chris Arnold, Mark Heizer, and a member not recorded by the secretary. Skip Ernst abstained.

i. CEPI-087-21, HVAC performance Requirements, Proponent-Glory O’Brien

- Proponent not in attendance
- John Bade expressed concern about violation of preemption and requiring 3rd party certification
- Skip Ernst and Dick Lord said not enough detail in modeling requirements.
- Disapproved motion by Dick Lord, seconded Skip Ernst. 17-1-1 Opposed Chris Arnold, Abstain Chris Perry.

j. CEPI-089-21, DX unit Climate Zone Exception, Proponent- Glory O’Brien

- Proponent was not present.
- John Bade spoke against it. He pointed out that manufactures were going to rate their equipment to AHRI 920 anyway, and that even in the absence of dehumidification the requirement provides a minimum efficiency.
- Dick Lord suggested that there should not be a complete release from requirements for equipment in dry climates.
- Motion for Disapproval by Dick Lord, seconded John Bade. Passed 16-0-1 Chris Perry abstained.

k. CEPI-095-21, Package electric heat cool equipment, Proponent-Mike Kennedy

- Mike Kennedy described the proposal
- Mark Heizer explained issue that have been seen in Oregon.
 - Need to make clear to which equipment it applies.
 - Oregon does not require above 20 ton nominal cooling capacity, as there is not much available in the market.
 - Made for new construction only. Changes breaker size.
- Dick Lord said that in cold climates the heat pump does not make people comfortable. He also noted that units above 20 tons are uncommon. Mentioned that condensate is a problem in PTAC.
- John Bade expressed concern about condensate management.
- Time ran out. The chair announced that this proposal will be considered at the next meeting.

l. CEPI-096-21, HVAC Reversing Valve Requirement, Proponent-Glory O’Brien

- no action

m. CEPI-076-21, HVAC Total System Performance, Proponent – Jeremy Williams

- no action

9. Other business.

- Discuss order for hearing proposals for next meeting.
 - The chair sent out a tracking spreadsheet, and asked for comments from the subcommittee on the order of the proposals.
- Identify and schedule discussion dates for proposals that were sent to us from other subcommittees, if applicable.
 - None received so far. The chair asked the committee to review proposals that should be sent to other subcommittees.
 - Thomas Schultz suggested we ask for volunteers to speak for proposals.

11. Upcoming meetings.

- Second and fourth Thursday of each month, 11:30am – 1:30pm Eastern Time

Next meeting is February 10, 2022.

12. **Adjourn.** Motion to adjourn. Moved by John Bade, Seconded by Mark Heizer.

FOR FURTHER INFORMATION BE SURE TO VISIT THE ICC WEBSITE:

[ICC Energy webpage](#)

[Code Change Monograph](#)

FOR ADDITIONAL INFORMATION, PLEASE CONTACT Shaunna Mozingo, Subcommittee Chair at sdmozingo@mozingocodegroup.com or Blake Shelide, Subcommittee Vice-Chair at blake.shelide@energy.oregon.gov