



International Code Council IECC Residential Consensus Committee Draft Meeting Minutes

Meeting Date: April 27, 2023

Committee Chair: JC Hudgison
Committee Vice Chair: Bridget Herring

1. Call to order. The meeting was called to order by Vice Chair Bridget Herring at approx. 12:02 pm CT.

2. Meeting Conduct. IECC Secretariat Kris Stenger introduced this item and made attendees aware of ICC [Council Policy 7](#) Committees: Section 5.1.10 Representation of Interests, [Council Policy 50](#) antitrust, and ICC [Code of Ethics](#).

3. Roll Call.

Committee members in attendance: (45 in attendance 2 absent)

Chair JC Hudgison, Vice-Chair Bridget Herring, Charles Allen, Jennifer Amann, Rob Austin, Kyle Bergeron, Amy Boyce, Daniel Carroll (alt), Patricia Chawla, Shannon Corcoran (alt), Clifford Davis, Paul Demers, Stephen Dent, Craig Drumheller, Ann Edminster, Ian Finlayson, Kevin Gobble, David Goldstein (alt), Emma Gonzalez-Laders, Gary Heikkinen, John A. Hensley, R L Johnson, Mark Lyles, Shane Hoepfer, Cherlyn Kelley, Alison Lindburg, Ricardo Madrid, Thomas Marston, Amy Martino, Jim Meyers, Michael Noble, Thomas Paine (alt), Robert Parks, Chris Perry (alt), Richard Potts, William Pousson Jr., Ben Rabe (alt), Robert Raymer, Mark Rodriguez, Gil Rossmiller, Robert Salcido, Amy Schmidt, Brian Shanks, Alex Smith (alt) Michael Stone, Richard Truitt, Lauren Urbanek, Gayathri Vijayakumar, Seth Wiley, Jeremy Wright

Not in attendance: Molly Berg (alt), Pamela Fasse, Garret Jaynes (alt), Cesar Lujan (alt), Nehemiah Stone (alt), Laura Petrillo-Groh (alt), Paul Messplay (alt), Gavin Mabe, Jeremy Williams, John E. Hensley, Vladimir Kochkin, Michael Tillou (alt),

ICC Staff in attendance:

Kris Stenger, Ed Wirtschoreck, Russ Manning, Jerica Stacey

4. Approval of the Agenda-request to move RED1-73-22 and RED1-26-22 after RED1-78-22. Request to move RED1-304-22 after RED1-302-22. Motion by Robert Raymer to approve the agenda as modified with a second from Paul Demers. Motion passes unanimously.

5. Approval of the Minutes-staff noted update to reason statement from Seth Wiley. Motion to approve as modified the minutes from 4/20 by Robert Raymer with a second from Gayathri Vijayakumar. Motion passes unanimously.

6. Administrative issues. Staff noted Alex Smith joining as an alternate for Vladimir Kochkin.

7. Action Items

a) RED1-27-22(Glide path to zero net energy) Proponent Gayathri Vijayakumar. Introduction by Ian Finlayson chair of Econ, modeling subcommittee. Motion to approve as modified with a second from Brian Shanks. Motion from Gayathri Vijayakumar to further modify with a second from Mark Lyles. Motion to modify passes 31-2-1. Motion to approve as modified passes 29-2-3. Reason: support a Glide Path Appendix as an optional pathway for AHJ's to adopt in order to achieve higher energy conservation without yet requiring net-zero performance or renewable installations. Compared to the version in the monograph, the Proponent had modified the ERI Max values to reflect 10% reduction below 2024 IECC ERI values without OPP and to revise the ERI Max values with OPP, based on recent PNNL analysis. The additional modification that was approved revised the language that was copied from the Main body of the code, if that copied text was updated through the approval of other RED1s.

b) RED1-28-22(Operational carbon rating and energy reporting) Proponent Gayathri Vijayakumar. Introduction by Ian Finlayson chair of Econ, modeling subcommittee. Motion to approve as modified with a second from Brian Shanks. Motion to further modify by Gayathri Vijayakumar with a second from Seth Wiley. Motion to modify passes 30-6-2. Motion to approve as modified passes 28-7-2. Reason: support the Carbon Rating Appendix as an optional pathway for AHJ's to adopt in order to demonstrate reductions in operational carbon. Based on SC action, the max CO_{2e} Index was increased to 65 from 55 and the additional modifications approved further limited that max to all-electric units, with the option for AHJs to established other max values for mixed-fuel homes.

c) REPCD1-18-22. Public comment heard. Proponent noted that action on prior proposals resolved her comment. No further action taken by committee.

d) RED1-194-22(Air space R-value requirements) Proponent Jay Crandell. Introduction by Emma Gonzalez-Laders chair of Envelope subcommittee. Motion to approve as modified with a second from Robert Parks. Motion to approve as modified passes 37-0-1. Reason: Adds language to ensure air space R-values are properly specified and applied for both reflective and non-reflective air spaces.

e) RED1-218-22(Radiant barriers) Proponent Greg Johnson. Introduction by Emma Gonzalez-Laders chair of Envelope subcommittee. Motion to approve with a second from Robert Parks. Motion to approve passes 35-0. Reason: This is an editorial update to remove unnecessary language.

f) RED1-260-22(Editorial revision) Proponent Hendrik Shank. Introduction by Emma Gonzalez-Laders chair of Envelope subcommittee. Motion to approve with a second from Robert Parks. Motion to approve passes 35-0. Reason: Editorial modification to italicize terms where the use is consistent with definitions.

g) REPCD1-4-22. Public comment heard. No further action taken by committee.

h) REPCD1-5-22. Public comment heard. No further action taken by committee.

i) REPCD1-20-22. Public comment heard. No further action taken by committee.

j) RED1-310-22(Demand recirculation water system edit) Proponent Alisa McMahon. Introduction by John Hensley chair of HVACR subcommittee. Motion to approve as modified with a second from Rick Madrid. Motion to approve as modified passes 36-0-1. Reason: addresses recommended distance language in R403.5.1.1 text in red. For R403.5.1.1.1.2 and 3 simplify language with recommendation adding friendly amendment to the “as modified.”

k) RED1-285-22(Duct system) Proponent Gary Klein. Introduction by John Hensley chair of HVACR subcommittee. Motion to approve as modified with a second from Rick Madrid. Motion to further modify by Gayathri Vijayakumar with a second from Gil Rossmiller. Motion to modify passes 31-2-1. Motion to approve as modified passes 32-1-1. Reason: Better define what the code means when it says “ducts”, “ductwork”, and “duct system”, by using 2021 IMC definitions, modified as needed. Use these defined terms to better clarify what is meant by “ducts in conditioned space” and what components are included in the “total duct leakage test”. Clarify what must be tested during the total duct leakage test. Reduce the use of the phrase “rough-in” and “post-construction” since that is not actually the criteria of importance. Additionally, it clarifies how duct location and insulation is simulated in R405 and adds a new measure in R408, with reduced points, for ducts located in conditioned space, where some of those ducts are contained within wall or floor assemblies that are adjacent to unconditioned space.

l) Based on passage of RED1-285-22 proposals RED1-308-22, RED1-306-22, and RED1-359-22 were withdrawn by the proponent.

m) RED1-307-22(Duct leakage table) Proponent Robby Schwarz. Introduction by John Hensley chair of HVACR subcommittee. Motion to disapprove with a second from Rick Madrid. Motion to disapprove passes 33-1. Reason: The Committee was not comfortable adding the language proposed to an “informational sticker” on the air handler. The Committee also did not agree with the removal of the higher duct leakage allowance that is permitted for homes with ducts located completely within conditioned space.

n) RED1-305-22(Clarify duct location in ceiling) Proponent Jay Crandell. Introduction by John Hensley chair of HVACR subcommittee. Motion to disapprove with a second from Rick Madrid. Motion to disapprove fails 8-25-1. Motion to approve by Gayathri Vijayakumar with a second with Seth Wiley. Motion to approve passes 30-6-1. Reason: The Committee voted against Disapproval in order to afford the Proponent the opportunity to speak to their proposal and be able to consider modifications, given the confusion on whether it was or was not included in 285. The committee voted to approve, after a friendly amendment which improved the original proposed wording.

o) RED1-302-22(Duct insulation exception) Proponent Vladimir Kochkin represented by Alex Smith. Introduction by John Hensley chair of HVACR subcommittee. Motion to approve with a second from Rick Madrid. Motion to approve passes 29-3. Reason: the proposal cleans up the language in R403.3.2 clarifying the provisions.

p) RED1-304-22(Remove 3 in ducts located in conditioned space) Proponent Alisa McMahon. Introduction by John Hensley chair of HVACR subcommittee. Motion to disapprove with a

second from Rick Madrid. Motion to disapprove passes 30-1-1. Reason: Proponent recommended disapproval based on committee action on RED1-302 and 285.

q) RED1-342-22(Electric readiness space heating option) Proponent Mark Lyles. Introduction by John Hensley chair of HVACR subcommittee. Motion to disapprove with a second from Rick Madrid. Motion to disapprove fails 18-19. Motion to approve as modified by Gayathri Vijayakumar with a second from Mark Lyles. Motion to call the question by Ian Finlayson with a second from Mark Lyles. Motion to call the question passes 33-7. Motion to approve as modified fails 17-21. Motion to approve as submitted by Emma Gonzalez-Laders with a second from Mark Lyles. Motion to approve fails 16-21. Proposal fails as it does not reach any consensus. Reason: Committee could not find common ground regarding adding an additional efficiency measure in R408 that would award points for those builders who choose to make their mixed-fuel homes electric ready for space heating.

r) RED1-343-22(HERV/ERV option) Proponent Mark Lyles. Introduction by John Hensley chair of HVACR subcommittee. Motion to approve as modified with a second from Rick Madrid. Motion to approve as modified passes 38-0. Reason: Replaces 2021 IMC definition for 'balanced ventilation' with a 2024 IRC definition for 'balanced ventilation system', and then revised as needed where the term is used. Also, replaces the credits awarded in CZ 6, 7, & 8 with 'TBD', given that 2.5 ACH50 and ERV/HRVs are now required in those CZs and the points may need to be re-calculated by PNNL.

s) RED1-77-22(R408 mechanical equipment edit) Proponent Amy Boyce. Introduction by John Hensley chair of HVACR subcommittee. Motion to disapprove with a second from Rick Madrid. Motion to disapprove passes 28-9-1. Reason: The Committee felt that the minimum HVAC efficiencies that were eligible for points had already been established through approval of the consensus proposal RED1-351 and was not comfortable removing options now.

t) RED1-337-22(Air leakage and mechanical ventilation reorganization) Proponent Mike Moore. Introduction by John Hensley chair of HVACR subcommittee. Motion to approve with a second from Rick Madrid. Motion to approve passes 35-0. Reason: editorial and sync with other sections and table of proposals.

u) RED1-9-22(Thermal energy storage heating system) Proponent HVACR subcommittee. Introduction by John Hensley chair of HVACR subcommittee. Motion to approve as modified with a second from Rick Madrid. Motion to further modify by Kyle Bergeron with a second from John Hensley. Motion to modify passes 22-7-5. Motion to approve as modified fails 11-18-5. Motion to disapprove by Ian Finlayson with a second from Shane Hoeper. Motion to disapprove passes 25-7-3. Reason: The proposal would create a new exception to the 2 kW limits on the use of electric-resistance space heating for thermal energy storage heating systems. This proposed exception does not align with improving energy efficiency in this code.

v) RED1-329-22(Systems serving multiple dwelling units) Proponent Greg Johnson. Introduction by John Hensley chair of HVACR subcommittee. Motion to disapprove with a second from Rick Madrid. Motion to disapprove fails 11-26-1. Motion to approve as modified by Gayathri Vijayakumar with a second from Jim Meyers. Motion to approve as modified passes 30-2-3. Reason: The Committee agreed to vote against the Disapproval in order to hear the modification. The modification resolved objections by not fully deleting the reference to IECC-C and by beginning the process of bringing in applicable IECC-C requirements into IECC-R.

w) RED1-315-22(AHRI Standard 1430-2022) Proponent Kyle Bergeron. Introduction by John Hensley chair of HVACR subcommittee. Motion to approve as modified with a second from Rick Madrid. Motion to approve passes 32-0. Reason: provides standard for demand flexible electric resistance storage and electric heat pump water heaters.

x) RED1-316-22(Demand response water heaters) Proponent Greg Johnson. Introduction by John Hensley chair of HVACR subcommittee. Motion to disapprove with a second from Rick Madrid. Motion to call the question by Robert Parks with a second from Gayathri Vijayakumar. Motion passes 28-1. Motion to disapprove passes 26-10. Reason: committee preference is to not move this language to R408.

y) RECD1-1-22(Intermittent exhaust control for bathroom and toilet room) Proponent HVACR subcommittee. Introduction by John Hensley chair of HVACR and water heating subcommittee. Motion to approve with a second from Rick Madrid. Motion to modify by Alex Smith with a second from Robert Raymer. Motion to modify passes 29-2-1. Motion to approve as modified passes 27-1-2. Reason: This proposal will coordinate the IECC-R with Section C403.8.6.2 of IECC-C PC#1.

z) RED1-78-22(R408 remove credit for appliances) Proponent Amy Boyce. Introduction by Ian Finlayson chair of Econ, modeling subcommittee. Motion to disapprove with a second from Brian Shanks. Motion to disapprove passes 17-11-4. Reason: Based on prior consensus on REPI-18, which introduced the point system, including credit for the installation of appliances, the Committee preferred to retain the measure and revise it in RED1-360.

aa) RED1-73-22(R408 additional measures) Proponent Alex Smith presented by Gayathri Vijayakumar. Introduction by Ian Finlayson chair of Econ, modeling subcommittee. Motion to approve as modified with a second from Brian Shanks. Motion to further modify by Gayathri Vijayakumar with a second from Brian Shanks. Motion to modify passes 30-0-2. Motion to approve as modified passes 31-1-2. Reason: the modification further clarifies the language; provides additional direction for implementation in MF buildings; coordinates with other proposals that have been approved for this section.

ab) Based on action on RED1-73-22 proposal RED1-26 was withdrawn by the proponent.

ac) RED1-360-22(R408 efficient appliance option) Proponent Mark Lyles represented by Ben Rabe. Introduction by Ian Finlayson chair of Econ, modeling subcommittee. Motion to approve as modified with a second from Brian Shanks. Motion to further modify by Ben Rabe with a second from Gayathri Vijayakumar. Motion to modify passes 27-3-1. Motion to approve as modified passes 29-4-1. Reason: Improves clarity of the requirements to meet the appliance credit.

ad) RED1-80-22(R408 remove credit for appliances) Proponent Alisa McMahon. Introduction by Brian Shanks vice chair of Econ, modeling subcommittee. Motion to disapprove with a second from Emma Gonzalez-Laders. Motion to disapprove passes 28-1. Reason: Proponent recommended disapproval based on committee action on RED1-360.

ae) RED1-79-22(R408 total UA improvement options) Proponent Amy Boyce. Introduction by Brian Shanks vice chair of Econ, modeling subcommittee. Motion to approve as modified with a second from Gayathri Vijayakumar. Motion to approve as modified passes 29-1-1. Reason:

Proposal expands the availability of credits for additional improvements in total UA and included edits proposed by RED1-83.

af) Based on action on RED1-79-22 proposal RED1-83-22 withdrawn by proponent

ag) RED1-71-22(Air leakage additional efficiency requirement) Proponent Gayathri Vijayakumar. Introduction by Brian Shanks vice chair of Econ, modeling subcommittee. Motion to approve as modified with a second from Gayathri Vijayakumar. Motion to approve as modified passes 30-2. Reason: Clarifies language in R408.2.1.1 to align with prior action on RED1-79. Introduces reduced air leakage credit for achieving air tightness below the prescriptive air leakage rates and a comparable air leakage reduction credit for R-2 occupancies in R408 in CZ 0-5.

ah) Based on action on RED1-71-22 proposal RED1-82-22 withdrawn by proponent

ai) RED1-257-22(Minimum roof reflectance) Proponent Aaron Phillips. Introduction by Brian Shanks vice chair of Econ, modeling subcommittee. Motion to approve with a second from Thomas Marston. Motion to approve passes 32-0. Reason: Clarifies footnotes and aligns IECC-R provision with IRC Ch11 provision.

aj) RED1-258-22(Minimum roof reflectance) Proponent Glen Clapper. Introduction by Brian Shanks vice chair of Econ, modeling subcommittee. Motion to disapprove with a second from Thomas Marston. Motion to disapprove passes 29-3. Reason: Proposal reduces the stringency of the roof reflectance values for low slope roof in R408. The reflectance values in the public comment draft were supported by the Consensus Committee in Round 1. Roof reflectance values align with the current low slope roof requirements for single family and multifamily buildings in California.

ak) RECD1-12-22(Fuel definitions) Proponent Gayathri Vijayakumar. Motion to approve as modified by Gayathri Vijayakumar with a second from Robert Raymer. Motion to approve as modified passes 30-2. Reason: Based on multiple approved RED1's and IRCED1's in this round (IRCED1-10, 340, 292, 116, 335) and the prior round, there are inconsistencies in how 'fuels' are referenced that need to be resolved. The Committee voted to approve this proposal because it resolves those inconsistencies by creating a new term "liquid fuel" that is inclusive of traditional heating oils but also expanded to clearly also include biodiesel blends.

8. Subcommittee reports

None at this time

9. Other Business-staff reviewed balloting and public comment schedule. Committee Action Report/Ballot #1 tentatively due out on Monday, May 1st. Public Comment Draft #2 posted for comment mid-May.

10. Upcoming meetings. The next meeting will be Thursday, June 29, 2023 time to be determined

11. Adjourn. at 5:49 pm.

FOR FURTHER IECC Residential INFORMATION BE SURE TO VISIT THE ICC WEBSITE:
[IECC Residential Website](#)

FOR ADDITIONAL INFORMATION, PLEASE CONTACT:

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