International Code Council
IECC Residential Consistency and Administration Subcommittee

January 18, 2022

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Paul Messplay, Secretary	paul.messplayiv@dhcd.virginia.gov
Amanda Hickman – Hickman Group	amanda@thehickmangroup.com
Wes Hall - Reflectix	
David Yarbrough – R&D Services	
Darren Meyers – IECC, LLC	
Staff Liaison	**Email**
Kristopher Stenger	kstenger@iccsafe.org

Meeting Minutes

1. Call to Order – Rich Truitt (Vice-Chair) called the meeting to order at 2:05pm EST.
    a. Rich modifies action item 5A on the agenda. This will be heard by the commercial subcommittee.
    b. Amanda Hickman (Hickman Group) asks to move action item 5C and 5B and switch them, respectively.
        i. Heather Goggin makes the motion.
        ii. Cliff Davis seconds the motion.
        iii. No discussion on the motion. No opposition from SC members.
2. Conduct – Vice Chair provides a brief overview of ICC policy.
3. Roll Call – Paul Messplay conducted roll call. Richard Potts was absent, Paul Messplay filled in as Richard's alternate. Ric Johnson was absent at time of roll call but joined the meeting shortly after. Quorum established
4. Approval of minutes –
    a. Dec. 21st meeting minutes: Heather Goggin motions to approve the minutes. Michael Rhodes seconds the motion. No opposition from SC members for approval of minutes. Motion passes unanimously.
    b. Jan 4th meeting minutes: Ric Johnson makes the motion to approve the minutes. Heather seconds the motion. No opposition. Motion passes unanimously.
5. Action items –
    a. Heather Goggin makes a motion to move action item 5D and 5B at the request of proponent of REPI-011-21, Amanda Hickman. This was Amanda Hickman's original intent.
        i. Maureen seconds the motion. Motion passes unanimously.
    b. REPI-011-21 – Amanda Hickman (Hickman Group)

i. R303.1.1 – The change that's being sought is to include language in this section to include reflective insulation and to provide a definition for reflective insulation.

ii. Maureen Guttman – Asks if Amanda could explain the definition of reflective insulation, particularly with respect to "one or more air spaces"

1. Amanda Hickman – Reflective insulation does have an associated r-value with it. This is consistent with the ASTM standard for reflective insulation. Amanda notes that Wes Hall (Reflectix) is on the call and may provide some further information.
2. Maureen Guttman – So this is the same definition in the standard?
3. Amanda – Yes, this is consistent with the standard in ASTM
4. Wes Hall (Reflectix) – Reflective insulations are tested as an assembly. That assembly consists of a low-emittance surface and has to be unventilated. The entire assembly is then tested. R-values for reflective assemblies will have different levels of performance. The air space is an important component of that system.
5. Michael Rhodes – Doesn't the effective R-value rely on the emittance of both surfaces, and if one surface is not properly installed can't there be a significant reduction in the effective r-value. I struggle with the term "r-value" since it's an effective or calculated r-value.
6. Wes Hall – As with any insulation, the proper installation is important to get the thermal performance the manufacturer claims.

7. Michael Rhodes – So, for example, if a rigid foam insulation is placed within an assembly, if it's an R-5, it's an R-5. Wool insulation will be relatively close to the R-value as stated on the package. Reflective values are, as you have stated, extremely complicated to do properly. How is this reflected in the language that is proposed to ensure the installer will do it properly to get the values they are supposed to get?
8. Wes Hall – These assemblies are already within buildings. So as far as the way the installation goes, its not complicated. These are typically sheet products sold on a roll and installed over one side of the cavity and then the cavity is enclosed. That's why these definitions are written this way. The FTC 460 rule has subsections that very clearly define how these values are determined.
9. Michael Rhodes – Does not feel he can support this proposal based on the language provided.

iii. Maureen Guttman – Back to my original question. I understand exactly now what this definition says but I have a problem with the way it's worded. The way I would've written it is, "a material with a surface emittance of 0.1 or less installed in an assembly consisting of one or more enclosed effective air spaces."

1. Amanda Hickman – Maureen, I think that sounds right and if that provides some clarity, I would support that change.
2. Wes Hall – Yes, I believe that would be an improvement.
3. Michael Rhodes – I don't believe that the material itself is an insulation. If you were to test the material sheets, they are not an

insulation. The enclosed space that they create provides an effective R-value.

4. Wes Hall- That has been a debate – how it's classified. ASTM came to their decision that the assembly could be qualified as a reflective insulation because of the thermal performance that it does provide. The products are Federally recognized as insulation but I understand your point and I've certainly heard that conversation previously.
5. David Yarbrough (R&D Services)– It is an R-value. Mr. Yarbrough restates the definition of R-value. Yes, the installation of an assembly is important for reflective insulations and it's important for all insulations, so I don't see that it's a reason to challenge a particular technology.
6. Amanda Hickman – Wants to make the comment that this is exactly why we're making this proposal – the code is silent on it.
7. Maureen Guttman – I'm still confused. Is this basically a reflective barrier or is it something else?
8. Amanda Hickman – There are many different product types considered reflective insulation. This is one of the reasons why to include this language in this section – to give some guidance
9. Maureen Guttman – So if it's reflective insulation, it's one of these many types of materials that also provides an R-value. Your sentence in R303.1.1 – to have a mark on it to have the R-value – you're asking the manufacturer to mark it with the R-value of the assembly where its installed

10. Wes Hall – As far as section R303.1.1 – this is an R-value mark that's put on a certification. The installer is required to designate that specific value on the certification. What we're doing here, essentially, is paralleling the information required by other insulation types for that packaging and that certification.
11. Michael Rhodes – If the material itself is placed in a heat flow meter without the assembly parts, what is that r-value and is that provided on the packaging? The definition uses the words enclosed and unventilated, what are the allowable air-flows that would allow for the effective r-value of those assemblies?
12. David Yarbrough – The material r-value of the reflective insulation is typically about 0.2 in inch-pound units. The primary resistance is that provided by the airspace. Enclosed means it's surrounded by building materials. There is no specific allowance for infiltration.

iv. Maureen Guttman – Makes a motion to approve this proposal changing the definition of reflective insulation to say; "A material with a surface emittance of 0.1 or less in an assembly consisting of one or more enclosed reflective air spaces."

1. Motion seconded by Cliff Davis and Amanda Papageorge
2. Michael Rhodes – Can we see that modification written on screen, please?
3. Rich Truitt provides the change on the screen
4. Michael Rhodes – How much does the receiving side, or the opposite face, affect the R-value. You also mentioned the effect of heat flow. Neither of those are reflected in this definition.

5. David Yarbrough – The values for emittance go from 0 to 1. Most building materials have an emittance of about .9. If you combined a .1 and a .9, you would get approximately .1.
6. Darren Meyers (IECC, LLC) – I don't really know what "enclosed" means. If it's enclosed by vapor permeable wrapping materials, does this have to be a quiescent enclosure?
7. David Yarbrough – A material that is vapor transmitting is not necessarily air transmitting since water is transferred through diffusion. The applications that are conventionally used are enclosed by construction material like wood or metal.
8. Darren Meyers – Thank you, I think this points out the flaw in the rewrite. Encourages the SC to review this so as not to cause confusion by field inspection staff as to what "enclosed" means.
9. Wes Hall – These are all typical building components. The direction outside of what would be a typical wall system. The installation instructions are specific to the cavity, the type of cavity. These really are straight forward building systems, standard building techniques.
10. Maureen Guttman – The word "enclosed" has been referenced 46 times in the residential code and it's never been questioned.
11. Michael Rhodes – In the ASHRAE book of fundamentals, there are at least 100 different directions based on heat flow, material types, etc. The r-value being provided is a single value and is trying to encompass an entire range. Is this the least value for the worst-case scenario based on the entire range? How does this work if we're provided with one r-value?

12. Wes Hall – The r-value is specific to the assembly, the closed air space, and the physical emittance of the product. The handbook has a wide range of different enclosed air spaces.
13. David Yarbrough – It's worth mentioning that FTC 460 states how the r-value is to be calculated for the assembly. This is a labeling law and is quite specific.
14. Darren Myers – The FTC 460 rule is a residential act. Believes this is a CEPI proposal.
15. Amanda Hickman – This proposal is meant to amend section R303.1.1. We flipped around REPI 11 over the CEPI 15. This is a residential proposal so the FTC 460 rule applies here.
16. Kristopher Stenger – Point of order. Is the proponent okay with this modification?
17. Amanda Hickman - Yes

v. Paul Messplay, Ric Johnson, Andrea Papageorge, Cliff Davis, Heather Goggin – In Favor

vi. Maureen Guttman and Michael Rhodes - Opposed

vii. Motion passed with a vote 5-2

viii. Reason statement: This is a grammatical modification that provides more clarity

c. CEPI-15-21 Part I – Amanda Hickman, proponent

i. Amanda Hickman – Most people look at the word emittance and understand what that word means. This definition will be helpful to have to account for new technology coming into the field. This definition is consistent with ASHRAE and ASTM.

ii. Maureen Guttman – motion to approve as submitted

1. Seconded by Andrea Papageorge

iii. Rich Truitt – Maureen do you have a reason statement?

1. Maureen – I'll stand on the reason stated by the proponent.

iv. Vote: 5 members affirm, no opposition.

d. CEPI-15-21-Part III – Amanda Hickman, Hickman group

i. Maureen Guttman – Motion to approve

ii. Andrea Papageorge – Second

iii. Vote: 5 members affirm, no opposition.

6. Other business –

a. No other business for discussion.

7. Upcoming meetings – Next meeting is February 1st.

8. Adjournment –

a. Motion to adjourn: Andrea Papageorge.

b. Second: Ric Johnson.

c. Meeting adjourned at 3:11pm EST.