

Illinois Energy Code Advisory Council Residential Subcommittee
November 14, 2014 – 10:00 a.m.
Teleconference
MEETING MINUTES

In Attendance:

Lisa Mattingly, CDB
Ted Schieler, Schieler & Rassi Quality Builders
David Wytmar, Groundwork, Ltd.
Tom Ayers, City of Rock Island
Don Plass, Building and Fire Code Academy
Bruce Selway, Department of Commerce & Economic Opportunity

Jason Huelsmann, New Tradition Homes
Shannon Bookey, CDB
Darren Meyers, International Energy Conservation Consultants LLC
Brad Babcook, Chemical Industry Council of Illinois
Matthew Giudice, MEEA
Tracy Butler, Home Builders Association of Greater Southwest IL
Dan Hohl, AIA-Illinois
Eric Lacey, Responsible Energy Codes Alliance
Dave Bowman, International Code Council

- Ms. Mattingly called the meeting to order at 10:05 p.m.
- Ms. Mattingly explained that Jason Huelsmann would be a non-voting member representing the home builders. An appointment for the position has not yet been approved by the Governor's Office.
- David Wytmar volunteered to be the Chairman for the subcommittee.
- The Home Builders Association of Greater Southwest IL's proposed amendments to the 2015 IECC were the first on the agenda. Chairman Wytmar asked for the Home Builders Association of Greater Southwest IL to walk the Subcommittee through the amendments.
- Mr. Huelsmann presented Amendment E3 CLIMATE ZONE 1-4 OVERHANG CREDIT FOR SHGC.
This proposed code change allows for the use of overhangs to meet the solar heat gain coefficient requirements within the IECC. Permanent exterior shading features, such as overhangs are allowed to be used in IECC Chapter 5 as a prescriptive trade-off to meeting SHGC requirements within the code.

Ms. Butler commented that NHBA research center provided information for the amendments. HERS programs allow credits for overhangs but it is not recognized by RESCheck. Mr. Meyers commented on the formatting of the

amendment E3 and stated that this is prescriptive requirement. He also mentioned that it is difficult to get DOE to make changes to the RESCheck software.

Mr. Selway also commented on the difficulties of having DOE/PNNL make changes to RESCheck. DOE will want to verify the values that are being proposed and make sure that they agree. DOE does not like to make changes to the software that will bring Code below national levels.

Mr. Plass asked if this has been proposed to other states. Ms. Butler said yes it is part of a national toolkit.

Chairman Wytmar acknowledged that the numbering was probably incorrect, and would need to be addressed by the proponent. Documentation of the calculations needs to be provided by IHBA Greater Southwest.

Mr. Ayers made a motion that the proponents bring amendment E3 back in a more useable format. Don Plass seconded the motion. Motion passed.

- Mr. Huelsmann presented Amendment E4 MULTI-FAMILY TIGHTNESS TESTING (E4)

Multi-Family Building Tightness Testing Correction. This proposal will remove requirements to test each individual dwelling unit for building tightness in multifamily buildings and allow builders to test the entire building as a whole, as is done in commercial buildings.

There was a brief discussion but it was determined that this amendment has been addressed in the 2015 IECC so no action was taken.

- Mr. Huelsmann presented Amendment E5 BUILDING TIGHTNESS CORRECTION

Building Tightness Leakage Rate Correction. The 2012 IECC requires homes to have a leakage rate of no more than three air changes per hour (3 ACH) in climate zones 3-8. The ASHRAE Handbook of Fundamentals shows that less than 10% of homes achieve 3 ACH or less. This proposal modifies the requirement from 3 ACH to 5 ACH, an aggressive tightness level that will provide a comfortable, energy-efficient home for the consumer.

This amendment maintains the levels from the 2012 IECC amendments. Mr. Selway and Chairman Wytmar support this proposal. Mr. Ayers agreed that buildings shouldn't be any tighter. Mr. Ayers made motion to accept this amendment. Mr. Selway seconded. Motion passed.

- Mr. Huelsmann presented Amendment BUILDING TIGHTNESS TRADE-OFF (E6)

Energy Neutral Building Tightness Trade-off. This proposal allows builders to trade improvements in other building energy components for less stringent building envelope pressure test results. This performance option provides flexibility in meeting the air tightness requirements and provides options for

recovering from an unexpected air tightness test failure. (Part of Amendment # E1).

Chairman Wytmar asked for more clarification about the purpose of the amendment. Mr. Meyers and Mr. Ayers discussed how this would change the tightness of the building envelope. Mr. Ayers is not in favor of this proposed amendment because it seems to increase the tightness. Mr. Ayers made a motion to disapprove. Mr. Selway seconded. Motion passed.

- Mr. Giudice from MEAA commented on the air leakage rate. MEEA urges the committee to go to tighter requirements than what the committee is currently recommending based on Amendment E5. They would suggest 3 air changes per hour or at a minimum 4. The State is currently at 5. Mr. Giudice wants the committee to reconsider the reasoning for doing this. He also suggested that the State of Illinois would be falling behind what other states are implementing. Mr. Selway disagreed with this. He stated that even if we continue to adopt more stringent codes but we aren't getting compliance then we are not really making progress. There are currently obstacles with compliance and enforcement. He suggested that we need to consider all aspects of the code so that we can get better compliance and enforcement. Mr. Giudice said that he would still like the committee to consider fewer air changes per hour.
- Mr. Huelsmann presented Amendment DUCT LEAKAGE TESTING (E7)
Proposed changes provide clarity as to what thermal distribution system efficiency should be applied to the Standard Reference Design and how the ducts should be modeled in the performance path. (Part of Amendment # E1)

Chairman Wytmar asked Mr. Meyers if the proposed amendment language was based on 2012 or 2015 IECC. Mr. Meyers responded that it is based on the 2012. Mr. Meyers also stated that this amendment will make the duct leakage requirements less stringent than the 2012 IECC and the 2015 IECC. Chairman Wytmar and Mr. Ayers are not in support of this amendment. Mr. Ayers motioned that this amendment not be recommended. Mr. Plass seconded. Motion passed.

- Mr. Selway commented that the purpose of the Council is to make recommendations to the CDB. Mr. Selway stated that the subcommittees and Council have the flexibility to make recommendations that could bring the 2015 IECC more in line with the 2012 IECC.
- Mr. Bowman commented that there is a tradeoff in the 2015 IECC for duct leakage.
- Mr. Huelsmann presented Amendment CLIMATE ZONE 5 BASEMENT WALL (E8)
When using Energy Plus (modeling program used by DOE), the energy savings in a 700 square foot basement totaled \$7/yr in Chicago (Climate zone 5). The additional cost for this is conservatively estimated at \$590. This makes the simple payback in excess of 58 years. This also will create a negative cash flow for the consumer.

The proposed values are from the 2015 IECC. Mr. Ayers is more interested in keeping the amendment made to the 2012 IECC regarding the basement wall insulation depth. Mr. Selway agreed. Chairman Wytmar discussed the constructability aspect and supports the amendment. Mr. Ayers suggested that when insulating the whole wall an R-value of 10/13 could be used or if insulation was only provided to 4 feet below grade as allowed in the 2012 amendment then an R-value of 15/19 should be required. Chairman Wytmar asked Ms. Butler to resubmit with the proposed amendment with language incorporated from the sentence above.

- Mr. Schieler left the meeting at 11:30 a.m.
- Mr. Huelsmann presented Amendment CEILING INSULATION REDUCTION CLIMATE ZONES 2-5 (E9)
Ceilings Climate Zones 2, 3, 4 & 5. This proposal reinstates the appropriate minimum ceiling R-Values in climate zones 2, 3, 4 and 5, those published in the 2009 IECC. The 2012 IECC values increase construction costs an average of \$1,342 per home yet save only \$14 per year in energy costs – or a payback of 99 years.

This amendment was also based on the 2012 IECC. The R-value factors did not change between 2012 and 2015. Mr. Plass motioned that this amendment not be recommended. Mr. Selway seconded. Motion passed.

- Mr. Huelsmann presented Amendment CORRECT SHGC FOR CLIMATE ZONE 4 (E10)
The addition of a prescriptive restriction for the SHGC of 0.40 is not a requirement that saves energy. In Climate Zone 4, heating degree days outnumber cooling degree days by about 2 to 3 times. Therefore for most of the year, the “sun is your friend” and solar heat gain is beneficial and reduces heating loads and saves energy.

Mr. Selway asked if it was worth splitting the state into two climate zones. This has caused issues in the past for compliance and enforcement. Values in the 2015 and 2012 IECC are the same in Table R402.1.1. Mr. Plass made a motion to accept this proposed amendment. Mr. Ayers seconded. Motion passed. This proposal should be presented in conjunction with E3 to the Council. If E10 is accepted by the Council, then E3 would be removed from consideration.

- Mr. Huelsmann presented Amendment MECHANICAL EQUIPMENT TRADE-OFF (E11)
Energy Neutral Mechanical Equipment Trade-offs. This proposal reinstates the performance option in the International Energy Conservation Code (IECC) to reduce prescriptive requirements by installing HVAC equipment with higher energy-efficiency performance ratings than required by the code.
(Part of Amendment # E1)

Mr. Plass asked if RESCheck would have to be modified to accommodate this amendment. Mr. Meyers remarked that it would and that DOE would probably

not agree to this. Several people commented that this amendment was presented at the ICC hearings and was received very unfavorably. Mr. Bowman mentioned that the formatting for this needs to be changed. Mr. Meyers stated that this amendment would take the IECC back to the 2006 level which would be below the Recovery Act requirements. Mr. Selway made a motion to not accept this proposed amendment. Chairman Wytmar seconded. Motion passed.

- Mr. Huelsmann presented Amendment WINDOW AREA TRADE-OFF (E12) Energy Neutral Window Area Trade-off. Currently the 2012 IECC provides no incentive in the performance path to optimize the window area in order to save energy and provide day lighting, egress and views that makes for a safe and comfortable house. This code change proposal will provide the building designer the ability to reduce window area and get credit for the energy saved. (Part of Amendment # E1)

Mr. Lacey provided clarification of the amendment. Mr. Plass made a motion to not approve the amendment. Mr. Selway seconded. Motion passed.

- Ms. Mattingly stated that another set of proposed amendments had been received by CDB from the Chicago Roofing Contractors Association. She will distribute those to the subcommittee prior to the next meeting.
- The subcommittee members thanked everyone that provided input into today's meeting as well as Ms. Butler and the IHBA of Greater Southwest IL for submitting their proposed amendments.
- Next teleconference is set for November 24th at 10:00 a.m.
- Meeting adjourned at 12:30 p.m.