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BOARD OF BUILDING REGULATIONS AND STANDARDS
NOTICE OF VIRTUAL MEETING

11th Edition Energy Advisory Subcommittee

In accordance with the provisions of G.L. c. 30A § 20, notice is hereby given that the Energy Advisory Subcommittee of the Board of Building Regulations and Standards (BBRS) convened a meeting in accordance with G.L. c143 § 97 on:

Meeting called to order on Tuesday, December 16, 2025 at 10:05 AM
Meeting Minutes

Roll Call

Ian Finlayson, Chair, DOER staff	<input checked="" type="checkbox"/> present <input type="checkbox"/> absent
Rebecca Ansolabehere, Mechanical Engineer	<input checked="" type="checkbox"/> present <input type="checkbox"/> absent
Michael Browne, HERS rater	<input checked="" type="checkbox"/> present <input type="checkbox"/> absent
Nathan Darling, Municipal Building Official	<input checked="" type="checkbox"/> present <input type="checkbox"/> absent
Tarica Leskiw, BBRS Member	<input checked="" type="checkbox"/> present <input type="checkbox"/> absent
Paulette McGhie, ResNet Staff	<input checked="" type="checkbox"/> present <input type="checkbox"/> absent
Rebecca Rahmlow, Architect	<input type="checkbox"/> present <input checked="" type="checkbox"/> absent
Vineet Nair, BBRS Member	<input checked="" type="checkbox"/> present <input type="checkbox"/> absent
Dan Walsh, DOL Staff	<input checked="" type="checkbox"/> present <input type="checkbox"/> absent

1. **Nominate/Vote** Secretary

Rebecca Rahmlow sent email stating she would welcome a nomination for this position. Nathan Darling nominated Rebecca Rahmlow for the position of secretary, seconded by Tarica Leskiw. No discussion. A roll call vote was held. None opposed, none abstained. The motion passed unanimously.

2. **Review** Comparison of IECC 2024, IECC 2021, and 780 CMR

Chair Finlayson called upon staff to review the excel document they created to help with workload of subcommittee. Executive Director Gropman stated this is a work in progress. She screenshared the “Energy Advisory Crosswalk” and reviewed this reference doc to assist subcommittees in assessing the workload and assigning tasks. Chair Finlayson spoke to the spreadsheet and how this subcommittee will begin with residential chapters. He noted CE1 and RE1 have small portions we will bring in as we will refer to 780 CMR 1.00. CE2 and RE2 are definitions and CE6 and RE6 are reference standards and those will be cleaned up at the end once we have decided on the rest of the content. He stated what we are left with is 3, 4, and 5. Chapter 3 although there are 35ish pages, most of these pages are listing climate zones from around the US so we only need to focus on MA and climate zone 5. Also, there is not much to



change in chapter 3 and that is the reason we have been spending time in Chapter 4. The focus of today's meeting will be to finish Chapter 4 from a high-level overview from DOER and then get into Chapter 5. Associate Executive Director Chase mentioned he hopes to have the residential sections of the crosswalk done for the meeting on 1/9/26. He stated that it is a very fluid doc and can be updated or changed by the subcommittee if they want. Executive Director Gropman stated once staff includes residential updates, it is the responsibility of the subcommittee to update. Chair Finlayson noted the code change tracker will be used for reporting out and this crosswalk will be useful internally for workload. Dan Walsh commented on the subcommittee's charge and asked how we keep decisions within the guidelines. Chair Finlayson responded that not only do we have guidance from the BBRS but from the legislature as well and an example of that would be embodied carbons. Michael Browne asked if clarifying and simplification fall within our charge. Chair Finlayson answered that we must provide rationale as to the why and to justify the reasoning. Further discussion and concerns expressed about code becoming too convoluted and confusing, staying on task, and focusing on what we are charged with.

3. Review DOER Proposals

a. R408

Chair Finlayson screen shared and reviewed presentation entitled 11th edition Energy Code overview for EAC Part-2: R408 and Ch5 (R). He recapped what was reviewed at the last meeting on 12/3/25 – R402 windows, R403 balanced ventilation and ducts in conditioned space, R405 passive house, R406 HERS index and R408 simplify additional efficiency requirements. He noted for this week, the discussion will include new definition for substantial alterations, large home size threshold for HERS rating, and additional efficiency measures for additions and substantial alterations. He then noted some amendments that were in the 10th edition that we do not need such as R401.2.4 appendix RC, in R402.5.1 remove reference to Grade 1 installation in insulation installation table and R403.6 remove option 4: formula with Wind Shield Factor WSF and simplify the code.

Michael Browne expressed his opinion about these all being good moves to simplify the code and noted that HERS raters can only evaluate what they see to give feedback, but they are not code enforcement officials.

The presentation transitioned to R408. Chair Finlayson reviewed what is current in the 10th edition and what DOER will propose. He reviewed what is currently in the 10th and spoke to making R408.2.4, ducts in a conditioned space, a requirement. He outlined DOER's proposal for the 11th to simplify 2024 IECC to a limited set of options aligned with state clean energy and climate plan (CECP) and add embodied carbon using the same options from Stretch code HERS pathway. He explained the why behind the proposal including that the envelope and the space heating are the two biggest things you can do therefore they are singled out as specific options. Following was an in depth discussion on the three options presented. Chair Finlayson spoke to option one, Envelope Package proposal, includes a 15% UA improvement with thermal break, less than 2 ACH @ 50, and energy recovery/ heat recovery ventilation. He stated it is an attempt to send signals to builders to do things that we think are valuable but could be satisfied either by having continuous insulation above grade or below grade or in the case of ceiling insulation, accommodating the full span of the ceiling with a raised rafter or some other way to make sure that you don't have a thermal break where the wall plate hits the ceiling. Michael Browne asked a clarifying question about the 15% UA improvement, that it is 15% UA AND meets one of the requirements for a thermal break. Dan Walsh questioned what prevents somebody doing this now. Chair Finlayson responded you could do this now with the language in the 2024 if you picked certain points out of the table. Yet the thinking is to simplify this to less options for greater compliance. Nathan Darling commented he is not a fan of removing the options. Chair Finlayson then spoke in depth to option two, heat pump space heating, and if you are using heat pumps as your primary heating, you should get credit. Rebecca Ansolabehere posed a question about option two and if putting in a heat pump, you would want to meet the requirements of option one as well since you would want a good thermal envelope. Chair Finlayson answered that yes this is the case for existing buildings if you are retrofitting to a heat pump as the envelope is generally not well insulated. He noted he hears a lot of concerns about installing heat pumps without improving the envelope, and that you want a good envelope when you're going to a

full heat pump or primary heat pump system. He added that 2024 base code house and not looking to require one and two together, saying that two is enough but can also do one and two for a nicer house. Chair Finlayson spoke in depth to Option 3 and that it is multiple options. The approach would be that by picking any two of water heating, ERV/HRV and less than 2 ACH@50, embodied carbon insulation, embodied carbon concrete, electric cooking, dryer and EVSE, solar PV and battery storage, it is equivalent energy savings to either option one or two. This prompted discussion about recent legislation to broaden BBRs statute to consider reductions in greenhouse gases consistent with the Global Warming Solutions Act and to consider embodied carbon and energy efficiency. Board Counsel Kilb reported recent legislation passed allows BBRs to consider classes of materials and methods of construction to advance reductions in greenhouse gas emissions and reductions in embodied carbon. He noted that the legislation does not create any specific mandates thus allowing the BBRs and its subcommittees some flexibility. Chair Finlayson stated to subcommittee that if they want to spend more time with section R408, that the red line is in the packet. He flagged that in the ICC 2027, there is R408.2, which is that table with the 50 something options and then in addition to that they added a pick from the following seven as well. In the 2027, there will be the table and a pick from 7 list, whereas DOER is proposing simplification. Rebecca Ansolabehere stated she did like the idea of making the table simpler but was concerned and needed some clarification as the options chosen are more expensive and interested in hearing what the incremental costs would be. Chair Finlayson answered that they tried to pick things that were at the 2024 level, not weaker than that and that the cost question is a difficult one. He went on to state the cheapest one on the list of seven is the embodied carbon concrete yet the barrier here is not really a cost barrier but more of an education and awareness barrier as not every residential builder is aware of what embodied carbon concrete is. The most expensive option would be the solar PV option, yet a six kilowatt system will do the most to reduce your operating costs. For the others, it's generally now cheaper to put in mini splits compared to a new furnace.

a. Chapter 5 (R)

Chair Finlayson shared an overview of what changed in the 2024 code. Some significant changes noted from 2021 were Section 502: Additions - a new requirement for 5 additional efficiency credits and Section 503: Alterations - a new requirement for 3 additional efficiency credits, a new definition for substantial alterations and a new requirement for duct leakage testing which goes away in 2027. On the screen share, the changes from the red line doc for R502 additions and R503 alterations were viewed and he shared the 2027 changes as well. He recapped the DOER proposals and noted the proposal of substantial alterations instead of substantial improvements. Becca Edson from DOER was called on by Chair Finlayson to speak to substantial alterations instead of substantial improvements. She provided background to the definition request. She reported that in speaking with building inspectors and builders the term is vague and causes confusion and different interpretations. She stated that this led to DOER having a better definition for extensive alterations and level 3 alterations in terms of the energy codes because they did not want to rely on work area. She noted that while substantial improvements term is moving in the right direction, still relying on a sense of cost. She also noted this new definition is from the New Buildings Institute and has been honed to this definition which is more concrete. She explained in depth what it would include. For the envelope, can you say that 25% of the existing building thermal envelope has been altered and that includes exposing the cavity or insulation. For space conditioning equipment, if you're touching the equipment in a way that constitutes 50% or more of the total output capacity, then you have touched that and finally water heating equipment. If the equipment that puts out more than 50% has been altered or touched, then you have this part of this. She concluded if you are touching more than two of these three items, you can say that it's been a substantial alteration. Chair Finlayson noted reason why this matters is this definition of the threshold for whether you have to do those extra points or the one out of seven list. He then reviewed the proposal for alterations R503.1.5 and the seven options. Dan Walsh stated his concern that introducing a definition throws off the correlation in the code and introduces problems for those folks using the code. He went on to state that part of what he struggles with is there's nothing to support making the change, if we have a problem at all. There is no data, there's no metric to point to say the reason why

this should change is because it's going to get us this result. Nathan Darling commented on wanting to make sure a three-year period is captured for substantial alterations. He stated he does like taking the cost out of it and using 25% of the envelope but wants to make sure we capture that overtime. He noted 521 CMR verbiage. Becca Edson cited that there is a look back period in 2021 AJ101.3 but it is being jettisoned and we should make sure that this is recaptured somewhere. Chair Finlayson stated we could that we could add that to the alterations section or we could add it to chapter 5 as a whole. Chair Finlayson then spoke to the amendments that we might want to remove which included the Zero Energy Appendix and adding embodied carbons.

b. Chapter 6 (R)

Chair Finlayson proposed that instead of adopting the 2024 reference standards or a code that's going to get put into place in Massachusetts in 2027 or 2028, should just adopt the 2027 reference standards, or at least use that as a starting point, because the 2024 reference standards are already out of date. He noted this is in the packet for subcommittee to review and would welcome questions. Dan Walsh asked a question about any information available as to what the differences are with those standards in the 2027 IECC DOER wants to adopt. He asked if we could get a standard-by-standard comparison to understand what the implication is to the requirements in 2024 so that we're not creating an unintended consequence. Chair Finlayson answered that there is one significant change in that a number of the standards that were published under ANSI are no longer published under ANSI. The standards haven't necessarily changed very much, but are now pointing to ASHRAE. The other change is the reference in the 2024 will point to a 2021 or 2022 standard and in the 2027 it will point to the 2025 version of a 2022 or 2026 version of 2023 because the standards update on a three-year cycle. He noted the red line is in the packet for review. He followed with guidance that these are reference standards and they are not setting performance levels or setting stringency.

4. Discuss Other matters not reasonably anticipated 48 hours in advance of meeting
Executive Director Gropman reviewed the upcoming meeting schedule. She noted the next meeting I scheduled for January 9th.

Nathan Darling motioned to adjourn meeting, seconded by Michael Browne. A roll call vote was held, none opposed, none abstained. Motion passed unanimously.

Meeting adjourned at 12:00 PM.

Items relied upon

- Agenda
- Meeting Minutes
- Code Change Proposals