Response to questions from 2/25/25 Stretch Code Webinar

- Q: Please confirm the updated codes are retroactive for recently done projected HERs ratings for ADUs and renovations.
- A: Any permits issued on/after February 14, 2025, will follow this latest version of the Stretch & Specialized code. It is at the discretion of the AHJ (authority having jurisdiction) or the local building inspector to apply this newer version of the code to projects permitted under the previous version of the codes, though DOER would support this approach.
- Q: Will the slides and recording of this webinar be shared with attendees after?
- A: Yes these are now on our website: <u>https://www.mass.gov/info-details/2025-massachusetts-building-energy-codes</u>
- Q: Must new police stations get HERS rating?
- A: HERS ratings only apply to dwelling units. A police station (assuming larger than 20,000 SF with average ventilation at full occupancy 0.5 cfm/ft2 or less) will follow C407.1 Targeted Performance compliance pathway, or the C407.3 Passive House Certified Performance pathway.
- Q: Is there approved list for insulation products that meet the 3-point requirement for HERS?
- A: There is not an approved list, but Table R406.5.3 does list the default insulation global warming potential value for a series of common insulation products. Ultimately the 3-point HERS are granted if a project demonstrates an average calculated insulation GWP intensity less than 0 across the whole building envelope. This requires a calculation for the project and is further explained in section R406.5.2.
- Q: Embodied carbon --- max of 3-points, or 3 for each for a max of 6?
- A: Only 3 HERS points may be received for embodied carbon credits, even if both low GWP concrete and insulation products are used and documented.
- Q: What defines a historic home?
- A: A historic building is defined in the IECC2021 (and so also in the Stretch Code) as:

HISTORIC BUILDING. Any building or structure that is one or more of the following: 1. Listed, or certified as eligible for listing by the State Historic Preservation Officer or the Keeper of the National Register of Historic Places, in the National Register of Historic Places. 2. Designated as historic under an applicable state or local law. 3. Certified as a contributing resource within a National Register-listed, state-designated or locally designated historic district.

- Q: You just said New Construction has stayed the same, but this table seems to show a decrease in HERS for construction until June 30 2024 versus after July 1 2025. Just confused by what you said...
- A: The version of Table R406.5 "Maximum Energy Rating Index" in the slides showed the redline version of the updates, including the "New construction until June 30,2024" column and "New construction permits after July 1, 2024" column. The former column is now eliminated due to no longer being relevant in 2025.
- Q: What about multifamily residences with 12,000 SF or more: is Passive House the only pathway?
- A: Yes in Specialized Code communities, No in Stretch Code communities. In Stretch Code communities (reminder: a map identifying which towns use which level of code is found on our website) a multifamily building ≥4 stories and ≥12,000 SF can follow either the Targeted Performance (C407.1) or Certified Performance pathways (C401.2.2). Passive House and HERS are both Certified Performance compliance pathways. In Specialized Code communities, multifamily buildings ≥12,000 SF are required to follow Passive House (C407.3). In MassSave communities there are incentives (\$3750 per unit) for multifamily Passive House buildings.
- Q: If all interior finishes are removed from an existing single-family dwelling (due to fire/smoke damage) what is required as far as insulation? This work would be a repair, not an alteration. There is 0% work area, by definition.
- A: If it can be reasonably argued that such a project does not count as an "Extensive Alteration" (i.e., the work area does not meet 100% of the entire house), then such a project would qualify as an "alteration". Per R503.1.1 "Building envelope", Exception 2, all exposed ceiling, wall or floor cavities exposed would need to be filled with an insulation with minimum R-3.7 per inch for the depth of the cavity. If the home is counted as an "Extensive Alteration" then the home will need a HERS rating for an alternation to comply. The Building Inspector is the the Authority Having Jurisdiction (AHJ) who makes this determination.
- Q: What about circumstances where a project is phased, so as to not exceed limits imposed requiring a HERS?
- A: The scope of the project on the building permit application, and subsequent inspections determines whether a HERS rating is triggered or not. If a home undergoes a series of small renovations over several years under different permits, then it can avoid a HERS rating but it may ultimately increase the cost and disruption for the owners and the residents. The DOER recommends reviewing the zoning bylaws of the specific municipality for the project, as

some towns/cities determine the total aggregate of alterations over a time period (i.e. 5 years).

- Q: What does EPS mean?
- A: EPS is the abbreviation for expanded polystyrene, also known as 'pink board' or 'blue board' rigid insulation. It has +/- R-4 per inch, depending on the manufacturer.
- Q: How is the thickness of insulation accounted for in Table R406.5.3?
- A: The GWP is based on the metric of a square meter of each material.
- Q: What is the GWP of rock wool?
- A: "Mineral wool", listed on Table R406.5.3, is often used as a catch-all phrase for rock wool. But to be certain, the exact manufacturer's listed GWP value (or EPD sheet) should be referenced.
- Q: Is it true that carbon is measured by volume by material? As an example, flash and batt would need to account for all material in an assembly by volume.
- A: We measure it by square meter of material then multiplied by the R-value to account for the depth, but not the volume.
- Q: Do major alterations and major additions, including the existing building, need to comply with all the requirements of Table R406.2 "Requirements for Energy Rating Index" or just the max ERI of Table R406.5?
- A: In the case of major alterations, major additions, and change of use, the entire building needs to follow all the requirements of Table R406.2., with the exception that the EV ready wiring requirement is only triggered if the project includes a change to the parking area or garage space.
- Q: What's the difference between the "Base Stretch Code" and "Prescriptive Path"?
- A: In MA there are three levels of energy building code: Base, Stretch & Specialized. There is not a "base stretch code", but there are some overlaps between the base energy code and the stretch energy code: the Prescriptive Path is one Stretch Code compliance pathway that is also a pathway in the Base energy code. In the Stretch Code the Prescriptive path is limited in it's use. In the Residential code it is available for R-1 uses such as hotels and motels, and for permits for work in existing buildings: alterations, additions and change of use projects. In the commercial Stretch Code, the prescriptive path is available to non-

residential projects less than 20,000 SF; alterations that are not "major", "extensive", or "Level 3"; or additions that are not considered to be "large additions".

Q: Are all these presentations also being offered to the building trades?

- A: The DOER is doing its best to disseminate this information to as many stakeholders as possible. If you know of a specific event/group that you would like to make sure has this information, please email *stretchcode@mass.gov*
- Q: Could you prepare a VERY SIMPLE version of the updated Stretch Code for a general audience?
- A: The DOER is working on this and will have it available on the website as soon as it is ready.
- Q: Would you summarize the stakeholders who requested specific changes to the codes?
- A: We held two public listening sessions (March 27 & September 19), along with two comment periods to receive input via email. We heard from many people including: building officials, developers, private citizens, builders, industry groups, various energy efficiency organizations, architects, engineers, building envelope specialists, energy raters, Passive House certifiers, etc. Public comments are available in PDF documents on the DOER website if you wish to review them.
- Q: For the Opt-in specialized stretch code: Do you just take the stretch code and then overlay the Appendix RC to that? Do the exceptions allowed in the stretch code also apply to the opt in code?
- A: Correct The Residential Specialized Code is the Stretch Code (225 CMR Chapter 22) PLUS Appendix RC. The Commercial Specialized Code is the Stretch Code (225 CMR Chapter 23) PLUS Appendix CC. Please check out our website site, there is a clear graphic showing the exact requirements for each of the 3 levels of energy code in MA.
- Q: Does this new version include wording about the sampling method being allow in MA?
- A: The DOER does allow sampling of dwelling units in larger multi-family buildings. While not well-addressed in the Stretch or Specialized codes, the upcoming improvements to the Technical Guidance documents will include more information.

Performance testing/sampling is allowed only for units that are similar. After the first seven units have all passed, testing can then be used for a sample of one in every 7 units. Using a sampled approach to unit testing can continue until there is a unit that fails, which requires remediation and then restarting with 7 units passing the testing before sampling can be used again.

If used, sampling must follow the RESNET MINHERS sampling requirements:

602 Technical Requirements for Sampling - Chapter 6 - RESNET National Standard for Sampled Ratings

(aka Mortgage Industry National Home Energy Rating Systems Standards maintained by RESNET.) The building inspector can request a copy of the sampling process and records from the rater directly, or from the quality assurance provider for the rater.

Q: How does the code define an ADU? Are ADUs over 900 sq ft considered just an addition and need to meet those requirements?

A: Neither the Stretch or Specialized energy codes, nor the 780 CMR MA building code design "accessory dwelling unit". Instead, it is defined at the state level by MGL c.40A Sec. 1A as:

"Accessory dwelling unit", a self-contained housing unit, inclusive of sleeping, cooking and sanitary facilities on the same lot as a principal dwelling, subject to otherwise applicable dimensional and parking requirements, that: (i) maintains a separate entrance, either directly from the outside or through an entry hall or corridor shared with the principal dwelling sufficient to meet the requirements of the state building code for safe egress; (ii) is not larger in floor area than 1/2 the floor area of the principal dwelling or 900 square feet, whichever is smaller; and (iii) is subject to such additional restrictions as may be imposed by a municipality, including but not limited to additional size restrictions, owner-occupancy requirements and restrictions or prohibitions on shortterm rental of accessory dwelling units."

While the state designates an ADU as max 900 SF, local zoning bylaws may allow larger ADUs and should be consulted on a project-by-project basis. If a separate dwelling unit, larger than allowed by state/municipal ADU rules, is attached to an existing house, this would now be considered a two-family structure. If this new structure is considered to be an "extensive" or "level 3" addition, then the entire building (existing dwelling plus new dwelling) will need to receive a HERS rating per Table R406.5.

- Q: Please can you confirm if the EV Ready code is the same for the stretch and specialized code, and that there is no requirement to actually install chargers. I note the very useful new addition of allowing for charger load management of the required allocation of kilowatts to allow for charger power sharing.
- A: The EV ready code is the same --- the Specialized code references section R404.4 "Wiring for electric vehicle charging spaces" of the Stretch code. That section gives builders the choice of installing a charger (EVSE is the term used) or a NEMA rated outlet at the end of the EV ready wiring.
- Q: Is "narrowly failing" Passive House or HERS targets defined in the amendments? Or is there another pathway for determining application of this exception?

- A: Yes. Please see Section R405.3.2 (residential) and/or C407.3.2.3 (commercial)
 "Documentation for design certified Passive House projects that fail final certification".
 Both sections explain the pathway for a project to proceed to final certificate of occupancy when it was intended to be Passive House and achieved pre-certification with either PHI or Phius, but missed some of the final targets. There is no alternative pathway for HERS.
- Q: Can you confirm that the Commercial HERS Rating path also required Energy Star certification?
- A: Per C407.4.1 "Compliance", buildings shall meet or exceed Energy Star Multifamily New Construction (MFNC) program requirements.
- Q: Are there changes to the commercial Specialized Code?
- A: Please see the redlines that show the updates --- scroll to page 54 to see the Specialized Code changes:

Fall 2024 Stretch + Specialized Code Commercial Redlines

- Q: Will amendments be issued to the base energy code requirements in 780 CMR Chapter 13 where the Stretch Code has added clarifications on base requirements / additional guidance / new exceptions (such as the updated language in C505.1 regarding modeled energy use)?
- A: The DOER is only responsible for the Stretch & Specialized energy codes. The BBRS is in charge of the Base energy code and is just starting their 11th edition building code development process which will include adoption of the IECC 2024 with MA amendments.
- Q: Can you clarify if an ADU within an existing footprint (like a basement or attic) would require a HERS? Your slide only seemed to represent a new attached and detached ADU.
- A: A new ADU carved out of an existing footprint will need a HERS rating since a new dwelling unit is being created.
- Q: If you have a scenario where there is less return air than supply air to an AHU, is the energy recovery effectiveness based on design airflows or equal airflows? Similarly, is the word "enthalpy" in that code section referring to specific enthalpy (per lb of air) or to the total enthalpy (btu)?
- A: It is based on the design airflow, not equal airflow. This can be adjusted for any "exempt" exhaust that cannot go back through the wheel.