

Edson, Becca (ENE)

From: Danielle Auriemma <dvauriemma@gmail.com>
Sent: Friday, February 6, 2026 4:27 PM
To: STRETCHCODE (ENE)
Subject: Re: ADU question

Hi Becca,

Certainly. Here is some additional information to add:

- My structure was built from the foundation up in 2013/2014 and passed all necessary inspections at the time of construction (which wasn't that long ago).
- Several raters said flat out that their business does not perform HERS on existing structures. This led to having to call many HERS raters.
- The companies seemed genuinely confused by this requirement. They couldn't understand why it was being required for an existing structure that had passed prior building and electrical permit inspections.
- Those I spoke with in depth were concerned about the process of doing a HERS rating being invasive and not something their company would want to do to a structure that is in good condition. They also expressed a concern that if they did the test and we failed, then we would be looking at a major construction project and that was not something their company wanted to get involved with.
- The one company that thought they could do it and we would pass (which honestly I'm not sure if I trust because of all the other conflicting feedback I got) said it would cost \$1,850. Even if it is true that he could do it and we would pass, that seems like an undue financial burden on the homeowner to be able to do this process.

Thanks,
Danielle

On Feb 6, 2026, at 4:18 PM, STRETCHCODE (ENE) <stretchcode@mass.gov> wrote:

Hi Danielle,

If it's OK with you, I'd like to put this feedback into the public comments folder so that it can be considered in the updates. This situation is more common than we'd expected, where people are turning existing/finished spaces into ADUs. The intent of the HERS rating was to capture energy efficiency in ADUs that were being newly constructed/renovated from existing structures. Our updated codes hopefully will capture that many ADUs are created within existing spaces that require no work.

I really appreciate your feedback!

Thanks,
Becca

From: Danielle Auriemma <dvauriemma@gmail.com>
Sent: Friday, February 6, 2026 4:11 PM
To: STRETCHCODE (ENE) <stretchcode@mass.gov>
Subject: Re: ADU question

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Hi Becca,

Thank you so much for this information. For what it is worth, I called 10 HERS raters and the feedback I received is that they would not perform a HERS rating on an existing structure where renovations weren't taking place. They said it was too destructive and would not be wise. Are you aware of any HERS raters who are willing to do the rating under the new state law on an existing structure?

Danielle

On Feb 6, 2026, at 4:01 PM, STRETCHCODE (ENE) <stretchcode@mass.gov> wrote:

Hi Danielle,

Thank you for sending your question. Currently a HERS rating is required for all newly-permitted ADUs, regardless of whether or not they are stand-alone new construction or within an existing home. We have heard plenty of feedback from stakeholders that the HERS requirement should be less strict for ADUs set within existing construction, and will be considering this feedback during the public comment session on the updated Stretch code regulations that should be occurring soon. If the HERS rating is relaxed for existing construction, this update wouldn't officially go into effect until late spring or summer at the earliest. In the meantime, your best course of action would be to seek a variance from the Building Codes Appeals Board [Building Code Appeals Board \(BCAB\) | Mass.gov](https://www.mass.gov/info-details/building-code-appeals-board-bcab). You can make a case for your specific property and seek a waiver from the HERS requirement.

Thanks very much,
Becca

From: Danielle Auriemma <dvauriemma@gmail.com>
Sent: Friday, February 6, 2026 10:54 AM
To: STRETCHCODE (ENE) <stretchcode@mass.gov>
Subject: Fwd: ADU question

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Hello,

Please see my original inquiry and the response from the ADU coordinator.
Please advise.

Thanks,
Danielle

----- Forwarded message -----

From: **Morehouse, Claire (EOHLC)** <Claire.Morehouse@mass.gov>
Date: Fri, Feb 6, 2026 at 10:49 AM
Subject: RE: ADU question
To: Danielle Auriemma <dvauriemma@gmail.com>

Hi Danielle,

Thank you for your inquiry. Apologies for the confusion, while HLC promulgated the ADU regulations, the regulations do not address the stretch code apart from not superseding state or federal law. Stretch code requirements are overseen by DOER, not HLC. Please direct this question to stretchcode@mass.gov. Thank you,

Claire Morehouse (*she/her*)
Accessory Dwelling Unit (ADU) Coordinator
Executive Office of Housing and Livable Communities (EOHLC)
100 Cambridge Street, Suite 300
Boston, MA 02114
claire.morehouse@mass.gov

-----Original Message-----

From: Danielle Auriemma <dvauriemma@gmail.com>

Sent: Thursday, February 5, 2026 6:42 PM

To: Morehouse, Claire (EOHLC) <Claire.Morehouse@mass.gov>

Subject: ADU question

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Hello,

Can you please provide guidance as to whether a local municipality could require that an owner applying for an ADU permit get a HERS rating on an existing structure that was constructed in 2013/2014 and meets all other requirements under the ADU law and needs no renovations?

Thanks,

Danielle

Edson, Becca (ENE)

From: Jim Rooney <jim@horizonsmi.com>
Sent: Thursday, May 28, 2026 7:09 AM
To: STRETCHCODE (ENE)
Subject: comments

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The Massachusetts Stretch Code is making an already severe housing shortage worse. By increasing construction costs by an estimated 1.8% to 3.8%, it can add roughly \$10,000 to \$23,000 to the price of a typical single-family home—costs that do not disappear, but are passed directly on to buyers, renters, and families struggling to stay in Massachusetts. Research from MIT suggests that homes built under the code sell for about 4% more, with much of that increase tied to added construction and compliance costs. In a state where affordability is already out of reach for too many people, policies that make housing more expensive should face much greater scrutiny. Energy efficiency matters, but when regulations start driving up prices, slowing development, and limiting supply, they stop being part of the solution and become part of the problem. If Massachusetts is serious about addressing the housing crisis, it must stop treating affordability as an afterthought

Edson, Becca (ENE)

From: Chris Zimmer <czimmer@sea.us.com>
Sent: Thursday, May 28, 2026 10:12 AM
To: Edson, Becca (ENE)
Subject: C407.3.2.3.2 - fix to redline, not feedback

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Becca,

We will collectively send our feedback (and opinions!) later after reviewing the redline more and I'll send it to the Stretch Code email, however I noticed this and figured you may want to fix it in the short term under C407.3.2.3.2.

Zero Energy Ready Homes no longer exists. It is now DOE Efficient New Homes. However, Phius has paused the requirement for DOE Efficient New Homes certification as a co-req requirement. You can read more here: <https://www.phius.org/doe-efficient-new-homes-requirement-paused-multifamily-phius-projects> We basically need to still fill out a partial checklist, but not full certification. As a result, I would think code shouldn't require DOE Efficient New Homes in this section. Maybe just update it to say "provide Energy Star certification and DOE Efficient New Homes checklist or certification based on current Phius requirements" That way if Phius changes their mind again, you're covered.

- e. For projects with Phius design certification, provide final Energy Star and Zero Energy Ready Homes certificates.

f. A letter from a licensed professional engineer that states that the potential

Thanks,

Chris Zimmer

Sustainable Energy Analytics Inc.

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Edson, Becca (ENE)

From: Pang, Lam <LPang@ThorntonTomasetti.com>
Sent: Monday, June 8, 2026 12:13 PM
To: STRETCHCODE (ENE)
Cc: Rahmlow, Rebecca; Yao, Erika; Ferreira, Prudence; Du, Xiaoshu; DeMond, Rheannon; Ormond, Paul (ENE)
Subject: Stretch Code Public Comment

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Hi Stretch Code committee,

For projects that target a lower than code air leakage rate in the TEDI model and in the architectural specifications, what is the procedure if the blower door test result after substantial completion is higher than that? Section C402.5.2 gives instructions on what to do if projects are targeting code 0.35 cfm/sf at 75 Pa, but it doesn't say what to do if we are targeting lower than code air leakage and what to do about the TEDI model. Clarity on this matter would be much appreciated!

Proposed additional exception under C402.5.2:

- For projects targeting an air leakage below 0.35 cfm/ft² and the measured air leakage rate is greater than that, _____ (please provide instructions)

C402.5.2 Air leakage compliance. *Air leakage* of the *building thermal envelope* shall be tested by an *approved* third party in accordance with C402.5.2.1. The measured *air leakage* shall not be greater than 0.35 cfm/ft² (1.8 L/s × m²) of the *building thermal envelope* area at a pressure differential of 0.3 inch water gauge (75 Pa) with the calculated *building thermal envelope* surface area being the sum of the above- and below-grade *building thermal envelope*.

Exceptions:

1. Where the measured *air leakage* rate is greater than 0.35 cfm/ft² (1.8 L/s × m²) but is not greater than 0.45 cfm/ft² (2.3 L/s × m²), the *approved* third party shall perform a diagnostic evaluation in accordance with ASTM E1186. All identified leaks shall be sealed where such sealing can be made without damaging existing building components. A report specifying the corrective actions taken to seal leaks shall be deemed to establish compliance with the requirements of this section where submitted to the code official and the building owner. Where the measured *air leakage rate* is greater than 0.45 cfm/ft² (2.3 L/s × m²), corrective actions must be made to the building and an additional test completed for which the results are 0.45 cfm/ft² (2.3 L/s × m²), or less.
2. As an alternative, buildings or portions of buildings, containing Group R and I occupancies, shall be permitted to be tested by an *approved* third party in accordance with C402.5.2.2. The reported *air leakage* of the *building thermal envelope* shall not be greater than 0.27 cfm/ft² (1.4 L/s × m²) of the *testing unit enclosure area* at a pressure differential of 0.2 inch water gauge (50 Pa).

Thank you very much!

Lam T. Pang, M.Eng., P.E., P.Eng., BEMP, CPHD, LEED AP BD+C
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June 9, 2026

Public Comments on Proposed Amendments to 225 CMR 22.00

Massachusetts Stretch Energy Code and Specialized Opt-in Code for Low-Rise Residential Buildings

Submitted to: Massachusetts Department of Energy Resources

Submitted by: Adin Maynard, Power House Energy Consulting.
adin@PowerHouseEC.com 413-658-8784

Introduction

These comments address five areas of the proposed amendments to 225 CMR 22.00: (1) the exclusion of biomass heating from the All-Electric Building definition; (2) the testing and verification requirements for mechanical ventilation systems under R403.6.3; (3) the proposed Conditioned Space definition newly added to R202; (4) the documentation, sizing, and infiltration input requirements for HVAC equipment under R403.7; and (5) gaps in the ERI mandatory requirements under Table R406.2 that allow envelope and duct performance to fall below prescriptive-path levels. For each, the comment identifies the substantive concern, explains the basis, and proposes specific replacement language.

Each comment is grounded in established federal standards or industry consensus references — the ANSI/RESNET/ICC 301 and 380 standards already adopted by this code for HERS-based compliance under R406.4 (Comments 2 and 3), EPA’s New Source Performance Standards for Residential Wood Heaters (Comment 1), ACCA Manual J/S sizing procedures (Comment 4), and the structure of the 2021 IECC compliance pathways (Comment 5). **The intent is to flag inconsistencies and gaps that, if uncorrected, will reduce clarity and consistency in home performance and code compliance across the residential construction industry, including for HERS Raters verifying compliance in the field.**

Note: Comment 4 addresses Section R403.7 (Equipment sizing), which is referenced but not amended in the proposed redline. R403.7 is operationally connected to the redlined sections — it underlies the equipment sizing claim implicit in the All-Electric Building definition. The comment is offered to support the overall integrity of the code being adopted and may be considered in the current rulemaking or deferred to a future cycle at DOER’s discretion.

Comment 1 — R202 Definitions: Allow EPA-Certified Wood and Pellet Heaters as Backup Heat in All-Electric Buildings

I oppose the proposed exclusion of biomass heating from the All-Electric Building definition. I recommend that DOER add a narrow exception permitting EPA-certified wood or pellet heaters to serve as backup heat where the primary heating system is electric and sized in accordance with R403.7 to meet 100% of the design heating load.

Under any HERS-rated compliance pathway, a building's primary electric heating system must be sized and modeled to meet 100% of the design heating load. A backup wood or pellet appliance does not reduce that modeled load, does not appear in the HERS calculation as a heating energy source, does not reduce the building's modeled electric consumption, and does not affect compliance with any envelope, equipment, or efficiency provision of this code. It is functionally invisible to the energy model.

The proposed All-Electric Building definition nonetheless disqualifies a building that includes such an appliance, while permitting electric resistance backup, portable space heaters, and any plug-in heating device without restriction. There is no energy-code rationale for this asymmetry.

The asymmetry is sharper given that the same redline adds new exceptions to the All-Electric Building definition for on-site outdoor backup power generators using fuel and for on-site refuelling of vehicles or outdoor equipment. DOER has recognized that resilience justifies a narrow fuel exception in the AEB definition. The same resilience logic supports a parallel exception for biomass backup heat where the primary heating system is electric.

Wood and pellet appliances are a long-established backup heat source in rural and small-town Massachusetts, particularly in Western Massachusetts and other areas with less-reliable grid service. Excluding them from the AEB pathway pushes households toward either abandoning the AEB compliance pathway entirely, or forgoing a critical resilience asset during winter outages.

EPA certification under the New Source Performance Standards for Residential Wood Heaters (40 CFR Part 60, Subpart AAA) is a federal regulatory requirement applicable to all wood and pellet heating appliances sold in the United States. Certified appliances must demonstrate compliance through independent EPA-accredited laboratory testing, meet particulate emissions limits, and be listed on the EPA Certified Wood Heater List with measured efficiency and emissions data. This third-party-verified federal framework is a well-suited qualifying standard for backup biomass heat in an All-Electric Building.

Recommended language for the All-Electric Building definition, additional exception:

c. A secondary or backup space-heating appliance that is a wood or pellet heater listed on the U.S. EPA Certified Wood Heater List in accordance with 40 CFR Part 60 Subpart AAA, provided the primary space-heating system is electric and sized in accordance with R403.7 to meet 100% of the design heating load.

Comment 2 — R403.6.3 Testing and Verification: Add Balance Verification Requirement

As a HERS Rater, I regularly encounter newly-installed balanced ventilation systems — HRVs and ERVs — that are not in balance. Common field findings include systems commissioned at design airflow on one stream only with the other left at factory defaults; systems where supply and exhaust airflows differ by 30% or more; and systems where one stream has never been measured. Despite this, R403.6 requires that residential ventilation be provided by a "continuously operating mechanical balanced ventilation system" — yet the verification procedure in R403.6.3 measures "installed performance" generically without requiring that balance itself be confirmed.

This is a substantive code gap, not a documentation issue. It has three real consequences:

- The heat and energy recovery efficiencies required by R403.6.1.1 ($ERR \geq 50\%$ / 60%) and R403.6.1.2 ($SRE \geq 65\%$) are rated and certified under AHRI 1060 and CAN/CSA C439 at balanced airflow. A system operating significantly out of balance does not deliver its rated recovery performance, and the modeled energy savings on which compliance is based are not realized.
- In our climate zone, sustained supply-dominant operation drives warm humid interior air outward through the building envelope in winter — a recognized moisture damage pathway in tight enclosures.
- The continuous pressure differential created by a significantly unbalanced system effectively bypasses the air barrier required by R402.4.1.2 — forcing air through envelope leaks rather than through the heat recovery core. The code's investment in airtightness (≤ 3.0 ACH50 testing) underperforms when ventilation balance is not maintained.

Some newer ventilation equipment incorporates integrated airflow measurement and continuous self-balancing. The recommended language below accommodates such equipment by allowing values displayed by the unit to serve as the verification source, in lieu of terminal measurement.

Recommended revision to R403.6.3:

R403.6.3 Testing and Verification. Installed performance of the mechanical ventilation system shall be tested and verified by a HERS Rater, HERS Rating Field Inspector, a commissioning professional holding a credential accepted by the code official, or a licensed Professional Engineer. Airflow measurement shall be performed in accordance with ANSI/RESNET/ICC Standard 380, including the instrument accuracy requirements of that standard.

For balanced ventilation systems, the supply airflow and the exhaust airflow shall each be independently determined. Determination may be made through measurement at terminals

in accordance with ANSI/RESNET/ICC Standard 380, or through display of measured supply and exhaust airflows by ventilation equipment with integrated airflow measurement capability. Each measured airflow shall be within $\pm 10\%$ of the design airflow required by R403.6, and the supply and exhaust airflows shall be within $\pm 10\%$ of each other.

Comment 3 — R202 Definitions: Conditioned Space (Newly Proposed)

The proposed Conditioned Space definition is a new addition to 225 CMR 22.00; no equivalent definition appears in the adopted code. I recommend that DOER reconsider this addition and revise it to align with the methodology in ANSI/RESNET/ICC 301, which the code already adopts as the basis for HERS calculations under R406.4. As drafted, the definition creates three problems.

1. The proposed definition creates a disincentive against best-practice foundation insulation.

Insulating the foundation perimeter — bringing the basement inside the thermal envelope — is well-established practice in our climate for managing condensation risk, relative humidity, and freeze-thaw risk. Under the proposed definition, however, a basement so treated is captured as conditioned space whether or not it is actually heated or cooled to occupant comfort levels, and its area is added to Conditioned Floor Area.

Where the resulting CFA crosses a code-indexed threshold — including the 4,000 square foot trigger in RC101.2 for additional Specialized Stretch Code pathway requirements — the builder is penalized for the better envelope choice. The least-cost compliance pathway becomes skipping perimeter insulation and accepting the consequences. This is not the outcome the code is intended to produce.

2. The proposed definition creates a gap between modeled and actual energy performance.

HERS modeling, which underlies the compliance pathways in R406 and the Specialized Stretch Code, treats Conditioned Floor Area as space actively maintained at thermostat setpoint. If marginally-insulated spaces with little or no dedicated supply heat are captured as CFA on geometric criteria alone, the HERS calculation no longer reflects how the building will perform. The code's energy targets depend on buildings performing substantially as designed. A geometric definition that admits unconditioned or under-conditioned spaces into CFA undermines that premise.

3. The proposed definition is inconsistent with the standard the code already adopts for HERS calculations.

ANSI/RESNET/ICC 301 defines Conditioned Space Volume as the volume "served by a space heating or cooling system designed to maintain space conditions at 78°F for cooling and 68°F for heating" — a performance test, not a geometric one. For basements specifically, RESNET 301 requires either an ACCA Manual J, S, and either B or D analysis confirming equipment offsets the design load, or visual inspection

and the rater's judgment that equipment is capable of maintaining 68°F/78°F. The proposed MA definition provides no equivalent verification step; inclusion is automatic on geometric criteria alone.

The measurement convention also differs. The proposed text directs that area be measured to "the interior-most face of the finished wall board or wall surface." ANSI/RESNET/ICC 301 includes the full width of any wall assembly within the conditioned space, and extends to the midpoint of demising walls in attached units. A HERS Rater will therefore compute one Conditioned Floor Area for the R406.4 HERS analysis and a different Conditioned Floor Area for purposes of this code section. Downstream calculations that depend on CFA — including the ventilation rate formula in R403.6 — will produce inconsistent results.

Recommended language:

CONDITIONED SPACE. A space within a building that is directly or indirectly heated or cooled by a space-conditioning system designed to maintain interior conditions at thermostat setpoint, as determined in accordance with ANSI/RESNET/ICC 301.

CONDITIONED FLOOR AREA. The floor area of conditioned space within a building or dwelling unit, determined in accordance with ANSI/RESNET/ICC 301.

Comment 4 — R403.7 Equipment Sizing: Strengthen Documentation, Sizing, and Infiltration Input Requirements

Note: This comment addresses Section R403.7 (Equipment sizing and efficiency rating), which is *not* amended in the proposed redline. R403.7 governs the load calculations that underlie the "primary system meets the design heating load" claim implicit in the All-Electric Building definition (Comment 1) and interacts directly with R402.4.1.2 (blower door testing) and R406 (HERS-based compliance). Each of those provisions presupposes that the load calculations under R403.7 accurately reflect the as-built dwelling — but the base IECC R403.7 contains no documentation, accuracy, or verification requirements. As a HERS Rater, I find that properly executed Manual J calculations are the *exception rather than the norm in field practice*. The common pattern is that Manual J is either not performed at all, or is completed by an HVAC supply house using assumed inputs with no reference to the actual specifications of the home being built. The consequences are borne by consumers in the form of oversized equipment, higher first cost, higher energy bills, unrealized efficiency, and reduced equipment life. The problem is most acute in high-performance, low-load homes — exactly the buildings this code is intended to produce — where the impact of mismatched sizing is proportionally larger. The following three additions would close that gap.

1. Documentation upon request to the code official.

The base IECC R403.7 requires Manual J/S sizing but provides no enforcement mechanism. I recommend adopting a documentation provision modeled on jurisdiction-level amendments already in use (e.g., Austin Energy Code R403.7.1): the load calculation, equipment selection, and supporting assumptions shall be available for submission to the code official upon request. This does not require review of every project — it provides the code official a verification path when warranted.

2. Sizing tolerance referenced to ACCA Manual S.

R403.7 currently allows sizing "in accordance with ACCA Manual S" but does not explicitly cap oversizing in the code text. I recommend adding language that equipment shall be sized within the tolerances established in ACCA Manual S, without "next nominal size" rounding beyond those tolerances. The Energy Star Single-Family New Homes National HVAC Design Report provides a working precedent — it establishes county-keyed outdoor design temperature limits, tolerances between design report assumptions and as-built conditions, and Manual S-aligned sizing limits. The MA code does not need to adopt the Energy Star report verbatim, but the structure could be referenced as supporting practice.

3. Infiltration input shall reflect the design air leakage rate.

Manual J load calculations are highly sensitive to the infiltration input, and that input is set at design time, well before any blower door test of the as-built dwelling. The categorical Construction Quality defaults that contractors commonly apply (Loose, Average, Semi-tight) significantly overstate infiltration for new dwellings built to current MA code, which under R402.4.1.2 must achieve ≤ 3.0 ACH50. The result is overstated heating and cooling loads and oversized equipment, which in turn undermines HERS-modeled energy performance, increases first cost, and shortens equipment life. The fix is to require that the Manual J infiltration input reflect the air leakage rate the dwelling is designed and required to achieve — either by inputting the maximum ACH50 permitted under R402.4.1.2 of this code (or a tighter design-target if the project is committed to one), or, where the load calculation software does not accept direct entry of ACH50, by selecting the "Tight" Construction Quality category as the minimum acceptable equivalent. Major Manual J software platforms are evolving toward direct ACH50 entry, but the categorical fallback should remain available for transitional use.

Recommended language (new subsections under R403.7):

R403.7.1 Documentation. Heating and cooling equipment sizing calculations performed under R403.7, including supporting assumptions for design temperatures, infiltration, internal gains, and envelope characteristics, shall be available for submission to the code official upon request.

R403.7.2 Sizing tolerance. Heating and cooling equipment shall be sized within the tolerances established in ACCA Manual S, without rounding to a larger nominal size beyond those tolerances.

R403.7.3 Infiltration input. The infiltration input in Manual J load calculations shall be no looser than the maximum air leakage rate permitted by R402.4.1.2 of this code, or the project's design-target air leakage rate if tighter. Where the load calculation software does not accept direct entry of ACH50, the "Tight" Construction Quality category, or its equivalent in other approved methodologies, shall be used.

Comment 5 — R406.2 Table: Add Air Leakage and Duct Provisions to ERI Mandatory Requirements

I recommend that DOER amend Table R406.2 to add R402.4.1 (Building thermal envelope air leakage) and R403.3 (Ducts) to the ERI mandatory requirements list, and reserve R402.4.1.2.1. This closes a gap that allows envelope and duct performance under the ERI path to fall below the prescriptive path.

Specifically, R402.4.1.2.1 allows envelopes up to 5.0 ACH50 on the ERI path (versus the 3.0 ACH50 cap on the prescriptive path under R402.4.1.2), and Table R406.2 omits R403.3 duct leakage thresholds entirely.

Air leakage and duct integrity have effects the energy model does not capture: moisture damage risk in cold-climate wall assemblies, indoor air quality, occupant comfort, equipment cycling behavior, and long-term envelope durability. These warrant hard thresholds regardless of compliance path.

Recommended language:

R402.4.1.2.1 Reserve this subsection.

Table R406.2 — Add the following rows:

R402.4.1 — Building thermal envelope air leakage

R403.3 — Ducts

Closing

I appreciate the opportunity to comment on these proposed amendments. The recommendations above are offered in support of a code that performs as designed, aligns with the consensus standards it already references, and respects established building science practice in our climate.

Edson, Becca (ENE)

From: Kevin Ring <kring@sea.us.com>
Sent: Tuesday, June 16, 2026 3:20 PM
To: STRETCHCODE (ENE)
Subject: Stretch Code Public Comment

CAUTION: This email originated from a sender outside of the Commonwealth of Massachusetts mail system. Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Dear DOER

I would like to offer commentary and proposed revisions to the definitions of All Electric Building and Mixed Fuel Building. In my opinion the text right now is overly wordy, ambiguous, and contradictory.

The definition of All Electric Building states in the first line "...with no on-site *combustion equipment*..." Italics indicates a defined term. I presume the intent is to state that combustion is not allowed in an All Electric Building. However, the definition of "combustion equipment" specifically excludes *clean biomass heating system*. By definition, Clean Biomass Heating is not Combustion Equipment. By following this logic, because a clean biomass heating system is not combustion equipment, it is allowed in an All Electric Building.

Also naming in the definition of All Electric Building the specific devices that might use these prohibited fuels ("space heating, water heating, cooking, drying appliances") invites one to ask whether the use of some *unnamed* device is somehow allowed. For example, Mass Save calls a propane fireplace an "Amenity" in order to justify allowing it in their definition of an All Electric Home. One could argue that a gas or propane fireplace is used only for ambiance, not

for space heating, and hence it is an amenity instead of an appliance and it should be allowed in an All Electric building. For that matter, are gas lamps allowed?

IN FACT, I recently came upon an All Electric Home with a gas fireplace in Needham, a Specialized Code city. To be sure the fireplace is an "amenity", not used for space heating, the Building Inspector compelled the builder to install two large exhaust fans attached directly to the fireplace chassis that expel all of the fireplace's heat from the house. Not only is this grossly wasteful, the two fans induce immense infiltration in the coldest of weather when the fireplace would be in use! The homeowner has a gas fired "amenity" that dramatically increases the home's heat loss whenever it is in use.



In summary and conclusion, if DOER intends to exclude combustion of any type, even clean biomass heating systems, from All Electric Buildings, they should remove the words "combustion equipment" from the definition of All Electric Building and they should not attempt to name the devices that use the prohibited fuels. Keep the language concise and unambiguous.

For the definition of All-Electric Building I propose to replace all of the text before the Exceptions with:

"A building with no on-site use of, capacity for, or piping for fossil, solid, or *biomass* fuel."

(Biomass is a defined term so it must be italicized)

Further, the definition of Mixed-Fuel Building also names *combustion equipment* and goes on to name the same exceptions called out earlier in All Electric Building. "Combustion equipment" introduces ambiguity and there is no need to repeat language already provided elsewhere.

I propose to change the definition of Mixed-Fuel Building to "A building that is not included in the definition of *All Electric Building*."

This follows the same logic as the ICC's definition of Commercial Building ".. all buildings that are not included in the definition of "Residential Building."

Respectfully

[Kevin Ring](#)

[HERS Rater](#)

[Sustainable Energy Analytics Inc.](#)

Quality Information Driving Energy Conservation Decisions

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Edson, Becca (ENE)

From: Chris Zimmer <czimmer@sea.us.com>
Sent: Wednesday, June 17, 2026 8:08 AM
To: STRETCHCODE (ENE)
Cc: Kevin Ring; Jang Yoon
Subject: Comments on Proposed Changes

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Ian, Becca and Team,

Thank you for reading and considering our comments. Let us know if you have any questions. I mentioned some of these on the call, but also wanted to send via email. I'm also including a detailed comment from my colleague Kevin about the definition of an All Electric Building.

1. HERS As an option for Change of Use - Of course *I'm 100% biased* on this, but as I said on the call, the way the revised code is written a builder in a change of use situation can comply with prescriptive requirements OR EnerPhit. That's a big jump in requirements from prescriptive to a passive house option. Why not make HERS an **option** for change of use but Prescriptive the default? Most of these projects will still want Mass Save rebates which means a HERS model and testing will be needed anyway.

2. "Conditioned Space" definition and ANSI/RESNET/ICC 301 - This is helpful for those that couldn't look up the definition in the IECC, but will still cause confusion now that it's front and center. This definition of "conditioned space" is for determining three main items in my opinion:

- if an ADU is under 900 sq ft (measuring to inside edge of walls)
- if a single family house is under 4,000 sq ft (measuring to inside edge of walls)
- if a multifamily building is under 12,000 sq ft (Phius threshold - inside edge of walls, entire building CFA, not just units)

Architects often already measure from the inside edge. I think it is crucial to point out that ANSI/RESNET/ICC 301-2022 for HERS Ratings measures to the outside edge of the exterior walls. Otherwise you have no insulation to factor into the model. Phius WUFI/METr modeling also measures to the outside edge of walls. This means a project that is "on the cusp" in a Specialized Code town for example, could be under 4,000 sq ft of "conditioned space" per code, but the HERS Rating could show 4,200+ sq ft when accounting for the exterior wall thickness. That is of course the difference between 4kw of solar and likely 20kw plus. It would be nice if you can comment on it somehow so I don't have to spend time educating and arguing with building inspectors.

CONDITIONED SPACE. An area, room or space that is enclosed within the *building thermal envelope* and that is directly or indirectly heated or cooled. The measurement of area should be taken to the interior-most face of the finished wall board or wall surface. Spaces are indirectly heated or cooled where they communicate through openings with conditioned spaces, where they are separated from conditioned spaces by uninsulated walls, floors or ceilings, or where they contain uninsulated ducts, piping or other sources of heating or cooling.

3. **C407.3.2.3.2** - Zero Energy Ready Homes no longer exists. It is now DOE Efficient New Homes. However, Phius has paused the requirement for DOE Efficient New Homes certification as a co-req requirement. You can read more here: <https://www.phius.org/doe-efficient-new-homes-requirement-paused-multifamily-phius-projects> We basically need to still fill out a partial checklist, but not full certification. As a result, I would think code shouldn't require DOE Efficient New Homes in this section. Maybe just update it to say "provide Energy Star certification and DOE Efficient New Homes checklist or certification based on current Phius requirements" That way if Phius changes their mind again, you're covered.

e. For projects with Phius design certification, provide final Energy Star and Zero Energy Ready Homes certificates.

f. A letter from a licensed professional engineer that states that the potential

4. **The definition of All Electric Building.** It is overly wordy, ambiguous, and contradictory.

The definition of All Electric Building states in the first line "with no on-site combustion equipment..." Italics indicates a defined term. The definition of combustion equipment specifically excludes clean biomass heating system. This means that a clean biomass heating system is not combustion equipment, and it hence it is allowed in an All Electric Building.

Also naming the specific devices that might use the prohibited fuel (space heating, water heating, cooking, drying appliances) invites one to ask whether the use of some unnamed device is somehow allowed. For example, Mass Save calls a propane fireplace an Amenity. An amenity is not an appliance and one could argue that it is used only for ambiance, not space heating.

IN FACT, I recently came upon an All Electric Home with a gas fireplace in Needham. To be sure the fireplace is an amenity and not used for space heating, the Building Inspector compelled the builder to install two large exhaust fans that expel all of the fireplace's heat from the house, not to mention the infiltration induced by these fans in the coldest of weather when the fireplace is in use!

If DOER intends to exclude even clean biomass heating systems from All Electric Buildings, they should remove the words "combustion equipment" from the definition of All Electric Building and they should not attempt to name the devices that use the prohibited fuels.

For the definition of All-Electric Building I propose to replace all of the text before the Exceptions with: "A building with no on-site use of, capacity for, or piping for fossil, solid, or biomass fuel."
(Biomass is a defined term so it must be italicized)

Further, the definition of Mixed-Fuel Building also names combustion equipment and goes on to name the same exceptions called out earlier in All Electric Building. "Combustion equipment" introduces ambiguity and there is no need to repeat language already provided elsewhere.

I propose to change the definition of Mixed-Fuel Building to
"A building that is not included in the definition of All Electric."
This follows the same logic as the definition of Commercial Building ".. all buildings that are not included
in the definition of "Residential Building."

Chris Zimmer

Sustainable Energy Analytics Inc.

271 Waverley Oaks Rd Suite 206, Waltham, MA 02452

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June 17, 2026

Proposed Stretch Code & Specialized Code Comments

Submitter: Lauren Gunther

225 CMR 22.00: Low-Rise Residential Stretch Code

1. R202 All-Electric Building Definition

- a. Based on the IECC definition of a residential building, Group R-2 buildings that are three stories or less in height buildings may include a rooftop generator.
- b. Suggestion: Add a new exception “c” to explicitly allow rooftop generators for Group R-2 buildings and permit a fuel pipe serving the rooftop generator to be located within the building.

2. R202 Conditioned Space

- a. Suggestion: Use “Interior Conditioned Space” for greater clarity (more aligned with Phius “Interior Conditioned Floor Area”).
- b. Suggestion: Review code language for consistency in how conditioned space is referenced. Current use of “sq ft” can be unclear without specifying whether it refers to interior conditioned space.

3. R202 Mixed-Fuel Building Definition

- a. Missing a period at the end of exception “a”.
- b. See suggestions above on “All-Electric Building” definition.

4. R401.2.5 Additional Energy Efficiency

- a. Suggestion: Add a new item “3” to clarify that the additional energy efficiency requirement applies to all other compliance pathways.
Additional explanation in the technical guidance would improve clarity.

5. Table R406.5 Maximum Energy Rating Index

- a. Suggestion: Even though Change of Use is removed from the table, clarify in technical guidance if Change of Use projects have the option of compliance with HERS and can use the same maximum HERS ratings as alterations and additions.

225 CMR 23.00: Commercial Stretch Code

1. C202 All-Electric Building Definition

- a. Missing a period at the end of exception “a”.
- b. Suggestion: Add “or rooftop” after “on-site” and permit a fuel pipe serving the rooftop generator to be located within the building.

2. C202 Conditioned Space

- a. Suggestion: Use “Interior Conditioned Space” for greater clarity (more aligned with Phius “Interior Conditioned Floor Area”).
- b. Suggestion: Review code language for consistency in how conditioned space is referenced. Current use of “sq ft” can be unclear without specifying whether it refers to interior conditioned space.

3. C202 Mixed-Fuel Building Definition

- a. See suggestions above on “All-Electric Building” definition.

4. C406.14.1 Documentation for Low GWP Concrete Mix Credit

- a. Missing reference to “DOER Technical Guidance Attachment E”.

5. Table C407.4 Maximum Energy Rating Index

- a. Since “Change of use” is crossed out in table, C505 should be crossed out in item “b” below.
- b. Suggestion: Even though Change of Use is removed from the table, clarify in technical guidance if Change of Use projects have the option of compliance with HERS and can use the same maximum HERS ratings as alterations and additions.

6. CC101.5 Mixed Fuel pathway

- a. See suggestions above on C202 “All-Electric Building” definition.

225 CMR 22.00 & 23.00: Chapter 5

1. General Comments

- a. A comprehensive update to Chapter 5 for low-rise residential, multi-family, and commercial buildings could improve clarity. Currently, references to Chapter 4 can make it more difficult to interpret energy code requirements for existing buildings.
- b. Additional flexibility for existing buildings would be helpful, similar to the proposed revisions under C402.5.2 (Air Leakage Compliance Exceptions).
- c. Further clarification around “Change of Use” and the definition and application of “modeled energy use” would support more consistent understanding and implementation.



June 20, 2026

Submitted via email to stretchcode@mass.gov

Ms. Becca Edson
Massachusetts Department of Energy Resources
100 Cambridge Street, 9th floor
Boston, MA 02114

Re: Stretch Code Public Comment

Dear Ms. Edson,

On behalf of [Northeast Energy Efficiency Partnerships](#) (NEEP), we are pleased to submit comments to the Massachusetts Department of Energy Resources (DOER) on the proposed revisions to the Stretch and Specialized Code.¹ We commend DOER for continued progress with respect to the implementation of the Stretch Code and Municipal Opt-In Specialized Code. These forward-thinking codes are integral to ensuring energy-efficient, affordable, resilient, and healthy residential and commercial buildings across the Commonwealth. The efforts of DOER are also vital to moving Massachusetts closer to its goal of achieving a net-zero economy by 2050.

History shows that major code updates and introductions require attention and refinement to ensure successful implementation and effectiveness. Although the proposed update includes only modest revisions, **we commend DOER's continued engagement with the enforcement and building community and commitment to responding to challenges with code implementation in a timely manner.** While we appreciate the thoughtful revisions in this update, several areas would benefit from additional clarification to ensure consistent interpretation and effective enforcement across the Commonwealth.

We offer areas for further improvement, including:

1. Clarifications to the proposed updates to ensure requirements are applied and enforced as intended;

¹ These comments are offered by NEEP Staff and do not necessarily represent the view of NEEP Board of Directors, sponsors, or partners. NEEP is a 501 (c)(3) non-profit organization.



2. Forward-looking stretch code updates to align with proposed amendments to the 11th edition Massachusetts Building Code;
3. Recommendations from the MA Net Zero Buildings Coalition, facilitated by NEEP, during previous stretch code update cycles that remain relevant and warrant further consideration

Clarifications to proposed updates

Provide additional clarification to ensure requirements are applied and enforced as intended.

We identified several areas where additional clarification could support practitioners and promote consistent implementation and streamlined enforcement by code officials:

- Clarify qualifications for residential projects that include both alterations and additions to trigger HERS rating compliance. R503.1.5 Extensive Alterations and Level 3 Alterations now states that “projects including both alterations and additions, if the alteration exceeds 1,000 sq ft, and the addition exceeds 600 sq ft” “shall require the building or dwelling unit to comply with the maximum HERS ratings for alterations, and additions” Please clarify if the trigger for HERS rating compliance includes the minimum alteration and addition in a single dwelling unit or across an entire building.
- Remove the proposed *dwelling* definition in the residential code; it is repetitive in some areas of the code and creates unintended restrictions in others. For example, the proposed definition for ADU includes a “self-contained unit....on the same lot as a principal **dwelling**.” In this case, the dwelling definition restricts the definition of an ADU to only include lots with one or two dwelling units as the principal residence, a specification which may be more restrictive than the ADU law intended. **Principal dwelling**, while not defined in the stretch code, does not include such restrictions as defined in [760 CMR 71.00 Protected Use ADUs](#). In other areas, the dwelling definition creates redundant language. For example, RC105.1 General describes “New detached one- and two-family **dwelling**s, and townhouses with not less than 600 sq.ft.” Removing the definition of dwelling would avoid unintended restrictions and redundant language.
- Clarify the use of R401.2.4 Appendix RC as a compliance path. As written, the intent of the compliance path is unclear and could be interpreted as allowing the unamended 2021 IECC Appendix RC as a compliance path. ERI values in the 2021 IECC Appendix RC do not meet the stringency of the stretch code. This language should be amended to specify compliance



with the requirements of Appendix RC Massachusetts Municipal Opt-in Specialized Code and R404 as amended.

- The modification to R406.5.2 to require new single dwelling units or R-use buildings containing multiple dwelling units to demonstrate a total Global Warming Potential (GWP), rather than average GWP intensity, of less than 0 across the whole building envelope to achieve the insulation embodied carbon credit is now inconsistent with the requirements for R406.5.3 Documentation for insulation embodied carbon credit. Documentation requirements still allow reporting for the insulation embodied carbon credit to be averaged across a multi-dwelling unit building. This language should be modified to reflect the changes to qualify for the credit.
- Clarify where possible that the Specialized Opt-in code applies to new buildings only. For example, amend the updated text “RC101.2 Application. Residential buildings shall comply with Section R404.4 (EV wiring)” to “RC101.2 Application. **New residential buildings in Specialized Opt-in code communities** shall comply with Section R404.4 (EV wiring).”
- RC101.2 Application, Exception 1 allows “Group R-1 occupancies containing sleeping units where the occupants are primarily transient in nature such as hotels (transient) and motels (transient) [to] comply with R401.2.1 Prescriptive compliance option including R401.2.5 Additional Energy Efficiency.” This exception immediately follows the requirement for “R-use buildings with total conditioned floor area greater than 12,000 sq.ft. [to] comply with the provisions of Section R405 (Passive House).” Please clarify if the Exception 1 allowance for compliance with the prescriptive path applies to all Group R-1 buildings or only to Group R-1 buildings with total conditioned floor area greater than 12,000 square feet.
- Clarify Table C407.1.1.5 Thermal Energy Demand Intensity limits to avoid confusion. We recommend amending the text “All other $\leq$ 75,000-sf” to read “All other between 40,000 and 75,000-sf.”

Consider forward-looking updates

Forward-looking updates will align the stretch code with proposed changes to the 11th edition of the Massachusetts State Building Code (11th edition) to keep pace with evolving changes to the base energy code. The following amendments have been proposed by DOER and approved



by the Energy Advisory Subcommittee (EAS) and the Board of Building Regulations and Standards (BBRS) for inclusion in the proposed version of the 11th edition that will be presented for public comment. Duplicating these amendments in the stretch code will meet its intent to maintain enhanced energy efficiency relative to the base code once it is adopted in early 2028. While the following list covers residential code amendments, commercial code amendments proposed for the 11th edition should similarly be considered for the stretch code once they have been approved by the EAS and BBRS for public comment.

- Require that space conditioning equipment and ductwork shall be located inside conditioned space for dwelling units with basements or conditioned crawlspaces, with exceptions for single package systems and 10 feet or 10 percent of ductwork permitted to be located outside conditioned space. In proposing this amendment, DOER cited a recent evaluation for Mass Save that identified ducts as a high source of non-compliance and energy loss. Moreover, this change is already integrated into the proposed draft of the 2027 IECC which will be the base for the 12th edition MA building code.
- Reduce the maximum vertical fenestration U-factor in Tables R402.1.2 and R402.1.3 from 0.3 to match the proposed changes to the 11th edition. The 2024 IECC, which is the model code for the 11th edition, reduces the maximum fenestration U-factor to 0.28. Furthermore, an amendment proposed by DOER would further reduce the U-factor to 0.25 for new windows, 0.27 for replacement windows, and would increase the maximum fenestration U-factor to 0.3 for windows subject to a historic district commission review. Energy Star windows are currently widely available at a U-factor as low as 0.22, double paned and with multiple styles and frame materials. We recommend that the stretch code mirrors the changes proposed to the 11th edition because these elevated requirements are financially feasible and this change will maintain the stretch energy efficiency relative to the base code once the 11th edition is adopted in early 2028.

Consider previous recommendations to strengthen implementation

The following recommendations from previous stretch code update cycles remain relevant.

The following concerns were raised in public comment letters signed by the MA Net Zero Buildings Coalition, facilitated by NEEP, dated April 2025 and September 2024:



- **Blended Code and Documentation:** One of the recurring requests from stakeholders is that Massachusetts create a "blended code" that integrates base code language with the updated Stretch and Specialized Codes for ease of reference. We strongly urge DOER to prioritize the completion of this document and to ensure it provides access to technical guidance and practical tools, including links to compliance documentation (e.g., COMCheck) and thermal bridge databases specific to Massachusetts.
- **Energy Modeling Assistance:** We continue to hear from building practitioners about the need for clearer guidance and collaboration on energy modeling for compliance. Creating partnerships and providing tools for energy model review would significantly aid professionals in adhering to the updated code requirements.
- **Increased Support for Stakeholder Engagement:** A key area that requires attention is the expansion of resources to engage a more diverse range of stakeholders, particularly small businesses and under-resourced professionals who may struggle to navigate the complexity of these updated codes. Smaller contractors working in rural areas of the state with fewer projects that require compliance may need additional support to implement new requirements without causing work delays that can reduce profitability. Consistent, accessible support from DOER in all areas of the state are essential to ensuring equitable compliance and adoption.
- **Curtainwall De-rating for Thermal Breaks:** Section C503.2.4 offers general guidance on thermal de-rating for walls with thermal bridges, but it does not fully address the unique thermal performance challenges of curtainwall systems. It's important to address the complexity of tables for determining curtainwall de-rating for thermal breaks because the current format can lead to confusion and errors in energy code compliance. Simplifying these tables would improve clarity for designers and builders, ensuring more accurate assessments of thermal performance and encouraging broader adoption of energy-efficient practices.
- **Change of Use in Existing Buildings:** Section C505.1 lacks clarity around 'change of use' requirements, particularly in cases where there is an increase in energy use. For instance, the 2025 Technical Guidance document suggests that an office building which increases its ventilation to meet lab program requirements would qualify as a 'change of use', even though it may not constitute a change of use per the MA building code. However, designers



have been told by DOER that a building that is increasing its ventilation to meet minimum IAQ standards (e.g., an existing building lacking a ventilation system) would not need to meet the 'change of use' requirements per the Stretch Code. More clarity about which scenarios trigger a 'change of use' per the Stretch Code is needed to ensure consistency in code enforcement and avoid misapplication.

Taken together, these refinements will help ensure the Stretch and Specialized Codes are both forward leaning and practical for the range of practitioners across the state. In conclusion, we appreciate DOER's continued dialogue with stakeholders and examination of how to ease code implementation for the building and enforcement community. We look forward to continued conversation to address remaining priority issues that are essential for the successful implementation of these codes. By ensuring these remaining concerns are addressed, Massachusetts will continue to lead the nation in building a sustainable, affordable, and equitable future for all its residents and businesses.

Thank you for your attention and for your ongoing work in this critical area.

Sincerely,

A handwritten signature in black ink, reading 'Charlotte Weigel', is shown within a light gray rectangular border. The signature is written in a cursive, flowing style.

Charlotte Weigel

Manager, Codes and Standards

Northeast Energy Efficiency Partnerships

Edson, Becca (ENE)

From: Harold Leaming <HLeaming@townofrutland.org>
Sent: Monday, June 22, 2026 9:29 AM
To: STRETCHCODE (ENE)
Subject: Stretch code public comment

CAUTION: This email originated from a sender outside of the Commonwealth of Massachusetts mail system. Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Hi Becca, First of all thank you for your presentation last month in Shrewsbury. In the beginning of the stretch code development and presentation to the cities and town who voted for this code. The stretch code was for new construction only, then it changed to additions more than 1000 sf, then it became more than half the area of the home. While this was a progression I feel this was a overreach.

Now that we have a stretch code for ADUs I feel this is contrary to what the “affordable Homes act” was all about. The Affordable Homes Act was to provide relief for Vulnerable people to access affordable housing in a way that would be substantial less cost. The IECC has guidelines for the thresholds of compliance, I feel the DOER should take into consideration the housing shortage in the commonwealth and ta the DOER requirements to attempt to help allleviate this crisis. In otherwords scale back the stretch code and use the prescriptive method of the base IECC to make the ADUs a little more affordable as the law intended.

Harold Leaming
CBO

Code

Consultants

HTH1970@netzero.net

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www.districtenergy.org

June 21, 2026

Massachusetts Department of Energy Resources (DOER)

Ms. Becca Edson
100 Cambridge Street, 9th Floor
Boston, MA 02114

Re: Public Comment – 2026 Stretch Code Update and DEEP Guidelines

Dear DOER Team,

The [International District Energy Association \(IDEA\)](https://www.districtenergy.org/) appreciates the opportunity to provide comments on the proposed 2026 Stretch Code updates and the associated Decarbonization and Efficient Electrification Plan (DEEP) Guideline and District Energy System Order of Conditions (OoC) pathway.

IDEA is a non-profit trade association representing nearly 3000 district energy stakeholders across North America and internationally. In Massachusetts, our membership reflects a diverse and highly engaged constituency advancing decarbonized thermal energy systems, including eleven college/university and healthcare campus energy systems (including a major medical center) and two large utilities. These members, own, operate, and support many of the Commonwealth's most significant campus and urban energy systems.

We commend DOER's leadership in developing the DEEP and OoC pathway and appreciate the collaboration with the Boston Green Ribbon Commission Higher Education Working Group, AICU Mass, and institutional system owners. We strongly support the core concept: a DOER-approved, enforceable system-level decarbonization plan should enable buildings served by that system to avoid duplicative building-level electrification and electric-readiness requirements for loads addressed at the district scale. Through aggregation of thermal loads and resultant economies of scale, district energy systems solve decarbonization holistically. It is important that the Stretch Code facilitate continuation and increased deployment of district energy systems in the Commonwealth.

IDEA supports a framework that:

- Treats DEEP/OoC relief as load-specific rather than whole-building exemption, ensuring other building code requirements remain in force.
- Focuses on system-level outcomes such as declining fossil fuel use, emissions reductions, and increasing electrified and recovered heat.
- Avoids duplicative reporting by leveraging existing state and local energy reporting frameworks.
- Uses annual reporting with periodic milestone reviews aligned with the multi-year nature of district energy infrastructure projects.

Comments on the DEEP Guideline

We offer the following key recommendations to strengthen the DEEP pathway:

1. Define and Maintain “Qualified DES”

DOER should clearly define a “Qualified District Energy System” as one with an OoC in good standing and maintain a confirmation or registry process to support code enforcement while protecting sensitive data.

2. Ensure Technology Neutrality

The DEEP pathway should remain flexible and avoid prescribing specific system architectures. District energy systems may achieve decarbonization through diverse configurations, including electrification, renewable thermal, heat recovery chillers, ambient loops, and thermal storage.

3. Emphasize System Performance

Compliance should be based on measurable system outcomes, including energy inputs, emissions intensity including marginal emissions performance, electrification share, and overall efficiency, rather than excessive component-level reporting.

4. Recognize Multi-Year Implementation

District energy transitions often involve phased development and longer duration planning and implementation. DOER should incorporate staged approvals, including provisional OoCs and milestone-based compliance so that incremental progress is properly recognized and not penalized inadvertently.

5. Maximize Building-Level Relief

The Guideline should clearly state that building electrification and electric-readiness requirements are not required for loads served by a Qualified DES and covered by an OoC.

6. Address Highly Ventilated and Highly Glazed Buildings

The DEEP pathway should provide meaningful relief for specialized buildings—such as laboratories, research, healthcare and hospitals, and glass-intensive buildings—ensuring requirements do not unintentionally undermine district-scale decarbonization strategies.

7. Replace Rigid Production Caps

Rigid production caps should be replaced with **performance-based metrics**, such as emissions intensity trajectories and electrification milestones, to avoid constraining beneficial system growth.

8. Enable Reliability and Transitional Flexibility

The framework should allow limited use of backup or transitional fossil fuel systems for safety and reliability without penalizing long-term decarbonization progress. Many Massachusetts institutions have invested in technologies for enhanced resilience and demand response. As grid congestion increases, it may become even more important to consider tools to address peak demand growth.

9. Support Equivalent Demand Reduction Strategies

Alternative compliance pathways should be accepted for complex buildings where prescriptive retrofit standards are not feasible, including commissioning, controls optimization, and capital renewal programs.

Comments on Stretch and Specialized Code Amendments

To ensure effective implementation, IDEA recommends that the code:

- Clearly define “Qualified DES” and related terminology within the code itself.
- Require simple documentation of OoC status during permitting without requiring building officials to re-evaluate DEEP technical details.
- Provide explicit exceptions for DES-served loads across electrification, performance, and electric-readiness provisions.
- Ensure consistency across sections governing highly ventilated and highly glazed buildings, avoiding duplicative requirements.
- Extend DES-related relief to existing buildings, alterations, and change-of-use projects, focusing compliance triggers on increased fossil fuel use rather than electrification.

Core Recommendation

Thermal loads served by a Qualified District Energy System and included in a DOER-approved OoC should be deemed compliant with applicable building-level electrification, performance, and electric-readiness requirements for those loads, while all other building systems remain subject to the code.

This concept is essential to ensuring that system-level decarbonization investments are not undermined by duplicative or conflicting building-level requirements.

Conclusion

These recommendations will help ensure that the DEEP/OoC pathway is practical, enforceable, and aligned with the Commonwealth’s climate goals. By recognizing the role of district-scale solutions, DOER can enable cost-effective, large-scale emissions reductions while avoiding stranded investments and unnecessary duplication.

IDEA and our Massachusetts members stand ready to support DOER in refining and implementing this important framework. Please don’t hesitate to reach out to us if we can offer assistance. Thank you again for your leadership and consideration.

Sincerely,

A handwritten signature in black ink, reading "Robert P. Thornton". The signature is fluid and cursive, with the first name "Robert" and last name "Thornton" clearly legible.

Robert P. Thornton, President & CEO



DOER Stretch Code Committee
c/o Commissioner Mahoney
100 Cambridge Street, 9th Floor; Boston, MA 02116

Re: 225 CMR 22.00 & 23.00

June 22, 2026

Leslie B. Otten, Owner
Maine Energy Systems
8 Airport Rd; Bethel, ME 04217

To whom it may concern,

Thank you for the opportunity to provide testimony on the Commonwealth's stretch code, 225 CMR 22.00 & 23.00. Maine Energy Systems wholeheartedly agrees that climate change is real and has the potential to cause irreparable damage to both our planet and society. It is therefore imperative that we, whenever possible, make concerted efforts to reduce our carbon emissions. Responsibly utilizing wood as a heating fuel is one such proven decarbonization opportunity.

We were therefore pleased to see that the DOER has chosen to retain eligibility for modern wood heat (referred to as "clean biomass systems" in the code) for mixed-fuel buildings. Modern wood heat systems are proven decarbonizers, as documented by the US EPA, DOE, as well as within the Commonwealth's own regulatory language. As such, the DOER has for years enacted 225 CMR 16.00 the Alternative Energy Portfolio Standard (APS), demonstrating confidence in fuel sourcing, technological performance, and decarbonization benefits.

However, Maine Energy Systems is less comfortable with the narrowing of wood's eligibility within the proposed Code. It is worth recognizing that in light of disappointing performance, ASHP installers are now recommending wood & pellet stoves to supplement ASHPs; an action that has been predicted by both DOER and DCR to significantly increase wood stove installations. Supplemental wood heat is also much more affordable than electric resistance heating, which is arguably the costliest backup to air-source heat pumps. We therefore suggest that the DOER allow for an exemption for wood stoves installed as supplemental heating systems.

I thank the Committee for exercising its duty to ensure that the Commonwealth's building code is crafted to encourage green energy choices. Modern wood heating is virtuous and deserves its inclusion.

Should you have any questions, I can be reached at 207-824-7402.

Sincerely,

Leslie B. Otten
Owner, Maine Energy Systems



Jonathan Parrott, Ph.D.
Flat Rock Farm
15 Goose Lane, Chesterfield MA. 01012

June 22, 2026

DOER Stretch Code Committee
c/o Commissioner Mahoney
100 Cambridge Street, 9th Floor, Boston, MA 02116

To whom it may concern,

Thank you for the opportunity to provide testimony on the Commonwealth's stretch code, 225 CMR 22.00 & 23.00. I strongly believe that climate change is real, is human caused, and has the potential to cause significant societal damage. It is therefore imperative that citizens of the Commonwealth, whenever possible, reduce carbon emissions. It is a proven fact that responsibly heating with wood is one of the most effective decarbonization strategies. This fact is particularly palatable (although no more scientifically valid) when the fuel is identifiably part of the waste stream.

I am gladdened to see that the DOER has chosen to follow the science and retain the eligibility for "clean biomass systems" within mixed-fuel buildings. Modern wood heat is a proven decarbonizer, as documented by the US EPA, DOE as well as within the Commonwealth's own regulatory language. Notably the DOER has for nearly a decade enacted the thermal portion of 225 CMR 16.00 the Alternative Energy Portfolio Standard (APS), an act that connotes confidence in fuel sourcing, technological performance, as well as decarbonization virtues.

I am, however, somewhat less pleased with the narrowing of conventional wood heating's eligibility within the proposed Code. In response to disappointing cold weather performance heat pump installers are now recommending wood as a supplement to ASHPs. It is worth noting that this assurance is far more affordable than electric resistance heating, the costliest backup to air-source heat pumps. I think that the Code should be broadened to accommodate all wood fuel appliances if installed as supplemental heating systems.

Thank you for diligently working to ensure that the Commonwealth's building obliges green energy choices including the responsible use of wood heating.

Sincerely,

Jonathan T. Parrott, Ph.D.
Flat Rock Farm,
15 Goose Lane, Chesterfield MA. 01012

Edson, Becca (ENE)

From: Lauren Gunther <lgunther@dimellashaffer.com>
Sent: Tuesday, June 23, 2026 10:00 AM
To: Edson, Becca (ENE); STRETCHCODE (ENE)
Cc: Finlayson, Ian (ENE); Ormond, Paul (ENE)
Subject: Re: Stretch Code Public Comment

CAUTION: This email originated from a sender outside of the Commonwealth of Massachusetts mail system. Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Hi @Edson, Becca (ENE),

Thanks for the chat just now. Please see below regarding my comments on ADUs within existing buildings:

For consistency in the energy code, reconsider applying the existing building (major alteration/addition) HERS rating to ADUs within existing residential buildings, rather than treating them as new construction. This would improve alignment and provide greater flexibility.

Thanks,
Lauren

Lauren Günther AIA, CPHC, LEED AP, Fitwel *(she/her/hers)*

Director of Sustainability

Direct: 617-778-0173 | Mobile: 617-470-1970

DIMELLASHAFER.COM

From: Edson, Becca (ENE) <Becca.Edson@mass.gov>
Sent: Wednesday, June 17, 2026 10:53 AM
To: Lauren Gunther <lgunther@dimellashaffer.com>; STRETCHCODE (ENE) <stretchcode@mass.gov>
Cc: Finlayson, Ian (ENE) <ian.finlayson@mass.gov>; Ormond, Paul (ENE) <paul.ormond@mass.gov>
Subject: RE: Stretch Code Public Comment

Received. Thank you!

From: Lauren Gunther <lgunther@dimellashaffer.com>
Sent: Wednesday, June 17, 2026 10:05 AM
To: STRETCHCODE (ENE) <stretchcode@mass.gov>
Cc: Finlayson, Ian (ENE) <ian.finlayson@mass.gov>; Ormond, Paul (ENE) <paul.ormond@mass.gov>; Edson, Becca (ENE)



Northeast Hearth, Patio, and Barbecue Association

June 23, 2026

Commissioner Elizabeth Mahony
Massachusetts Department of Energy Resources
100 Cambridge Street, Suite 1020
Boston, MA 02114

RE: Stretch Energy Code & Specialized Opt-In Code comments

Dear Commissioner Mahony,

The Northeast Hearth, Patio & Barbecue Association (NEHPBA), representing small businesses, manufacturers, retailers, and certified installation technicians across the Commonwealth, appreciates the opportunity to submit formal comments regarding updates to the Massachusetts Stretch Energy Code and Chapter 13 of the State Building Code. While our membership supports the Commonwealth's long-term environmental objectives, we are deeply concerned by building code pathways that create functional prohibitions against gas- and solid-fuel-burning hearth appliances. The rapid municipal adoption of the Specialized Opt-In Code has triggered severe market friction. Without essential small-business protections and technical exemptions, these provisions threaten to impose compounding economic harm on local retailers, stifle housing affordability, and compromise emergency residential resilience.

The Massachusetts hearth industry is predominantly composed of multi-generational, family-owned specialty retailers and independent contractors whose livelihoods are threatened by full electrification mandates. Forcing full electrification in new construction and substantial renovations eliminates the market for secondary zone-heating features, which currently represent over 60% of regional hearth dealer revenue. Furthermore, the Home Energy Rating System (HERS) framework treats secondary combustion devices as structural source-energy liabilities rather than efficient localized thermal zones. This modeling bias forces developers to eliminate localized hearth assets entirely to achieve a passing HERS score, such as the target score of 52 or lower required by current regulations. NEHPBA requests that DOER institute a dedicated energy modeling credit or neutral baseline treatment for supplemental hearth systems meeting modern EPA or ANSI efficiency benchmarks.

Additionally, relying on a single-source energy infrastructure introduces profound public safety vulnerabilities during extreme New England winter storms. High-efficiency gas hearth systems operating on battery backups and EPA-certified wood or pellet stoves provide independent, high-output thermal generation during extended electrical blackouts, safeguarding families in vulnerable rural and coastal communities where grid re-energization can take several days.

On the development side, rigid mandates and complex performance compliance loops push mechanical design costs past the point of feasibility, stalling projects and driving real estate capital out of state. These regulatory pressures exacerbate an existing structural crisis: Massachusetts builds housing at a significantly lower rate than the U.S. average, ranking as the 6th-lowest state in the nation for housing permits per capita. Building permit data for 2024 highlights this deficit, showing that Massachusetts permitted only 201 new housing units per 100,000 residents compared to the U.S. average of 281—a production rate roughly 28% lower than the national baseline.



Hearth, Patio & Barbeque Association Affiliate



Northeast Hearth, Patio, and Barbecue Association

This limited production is a major reason home prices remain among the highest in the country. As of 2026, the median price of a single-family home in Massachusetts is roughly \$640,000 statewide. In fact, the most recent statewide data from The Warren Group showed a median sale price of \$645,000 in April 2026, up 2.4% from a year earlier. Given that the state estimates it needs roughly 220,000 additional homes over the next decade to meet demand, restrictive building code frameworks must not introduce additional cost-prohibitive barriers that stall development.

To mitigate commercial harm while respecting the Commonwealth's energy goals, NEHPBA formally requests three actionable regulatory adjustments within 225 CMR 22.00/23.00 and 780 CMR 13.00:

- Explicitly clarify that decorative and supplementary zone-heating appliances do not trigger full fossil-fuel penalties, provided the primary space-heating system utilizes an approved cold-climate heat pump or clean biomass system.
- Adjust energy modeling guidelines to credit the high thermal zone efficiency of modern direct-vent gas inserts and EPA-certified solid fuel stoves, rather than modeling them as unmitigated energy liabilities.
- Establish universal exemptions under existing building stretch code provisions so small businesses can perform essential safety retrofits and insert upgrades without triggering cost-prohibitive structural compliance loops.

The hearth, patio, and barbecue industry remains an essential component of the Massachusetts small business economy, historical character, and emergency preparedness network. We stand ready to work collaboratively with DOER, the Board of Building Regulations and Standards, and all relevant technical committees to ensure that code updates protect public safety and energy goals without eliminating our member businesses. Thank you for your time, consideration, and attention to these critical concerns.

Sincerely,

Karen L. Arpino
Executive Director
Northeast Hearth, Patio & Barbecue Association



Hearth, Patio & Barbeque Association Affiliate



June 23, 2026

DOER Stretch Code Committee
c/o Commissioner Mahoney
100 Cambridge Street, 9th Floor
Boston, MA 02116

Re: Comments on 225 CMR 22.00 & 23.00 — Clean Biomass Eligibility

Dear Commissioner Mahoney and Members of the Committee,

The Pellet Fuels Institute (PFI) is the North American trade association representing manufacturers of wood pellet fuel. Our members operate pellet manufacturing facilities across New England and the broader Northeast, producing a domestically sourced, carbon-neutral heating fuel used by hundreds of thousands of households throughout the region. We appreciate the opportunity to comment on the Commonwealth's stretch code and the treatment of clean biomass heating systems within it.

PFI strongly supports the inclusion of high-efficiency pellet boilers and furnaces — classified as “clean biomass heating systems” under 225 CMR 22.00 — within the code's mixed-fuel compliance pathway. The 0.08 lb/MMBtu PM_{2.5} threshold and the 85% thermal efficiency floor are meaningful, performance-based standards that ensure only modern, clean-burning central pellet systems qualify. We commend the Committee for anchoring eligibility in verified performance rather than fuel type alone. That is precisely the right framework — and it is one the data show should extend to high-efficiency pellet stoves and inserts as well. EPA-certified pellet room heaters are tested under 40 CFR Part 60 Subpart AAA, and a review of the certified product list is instructive: of the 101 EPA-certified pellet stoves with sufficient data to convert to lb/MMBtu, more than half already perform at or below the 0.08 lb/MMBtu threshold DOER established for central systems — without any adjustment to the standard.

We are therefore disappointed that the code does not recognize these appliances when installed as supplemental heating alongside air-source heat pumps. DOER and DCR have both acknowledged that ASHP adoption is likely to drive increased wood stove installations as backup heat — particularly as cold-climate performance limitations become apparent to homeowners. The Commonwealth should not treat all supplemental wood heat as equivalent: a certified, high-efficiency pellet stove is a categorically different device from an uncertified cordwood fireplace. DOER does not need to lower its bar to include qualified pellet stoves — it simply needs to apply the same bar. Excluding products that already meet the 0.08 lb/MMBtu threshold from clean biomass recognition is inconsistent with the performance-based logic this code is otherwise built on. We urge the Committee to revisit this gap.

The stakes extend well beyond appliance policy. The wood pellet manufacturing industry is a cornerstone of the Northeast's forest products economy. Regional pellet facilities purchase millions of tons of wood residuals annually — sawdust, shavings, and mill byproducts that would otherwise be landfilled or burned as waste. Across the region, pellet manufacturers support rural forestry jobs, sustain working forests, and keep wood fiber in productive use.

Code decisions made in the Commonwealth carry outsized influence on investment in pellet manufacturing capacity, retailer networks, and installer training across the entire Northeast supply chain. When the stretch code creates eligibility for central pellet systems but leaves supplemental pellet stoves in regulatory limbo, it sends a mixed signal that undermines confidence in the market and, by extension, in the regional industry that serves it.

We ask the Committee to extend the clean biomass eligibility framework to cover EPA-certified pellet stoves and inserts when installed as supplemental heating in otherwise electrified buildings. The performance data supports it. The regional forest products economy depends on it. And the Commonwealth's own energy planning anticipates exactly the growth in supplemental wood heat that this provision would support.

Thank you for your consideration.

Sincerely,

Tim Portz

Executive Director
Pellet Fuels Institute
tim@pelletheat.org



Airtight Energy Consulting, Inc.
17 New South St, Suite 306E
Northampton, MA 01060

June 23, 2026

Dear Department of Energy Resources (DOER):

Thank you for the opportunity to comment on the proposed Stretch & Specialized Code changes for 2026. The proposed changes include a number of sensible clarifications and exceptions, but we do have concerns about some of the changes. Below please find a list of comments on the proposed changes and how we think the language could be adjusted to better meet the dual needs for energy efficiency and cost-effective design and construction of new and existing buildings.

RESIDENTIAL

R202: All Electric Building

The new definition of all electric buildings makes it unclear where a wood-burning fireplace or wood stoves are acceptable in an all-electric building. It would depend on whether these devices are considered heating equipment or not. We recommend that wood-burning fireplaces and wood stoves be listed as exceptions, as these devices are used primarily for comfort and decoration, not heating.

R404.4 Wiring for EV Ready Spaces

While it is helpful for townhomes to have the option of following the commercial energy code EV ready requirements instead of residential, developments consisting of multiple 2-unit buildings would also benefit from this option. We recommend that developments consisting of 6 or more units of 2-unit buildings also be allowed to use the commercial EV ready requirements.

R406.5/R505 Change of Use Projects

We strongly oppose the elimination of the HERS index requirement for residential change of use projects. The idea that change of use projects need not upgrade insulation, air tightness, or windows when converting buildings to residential spaces from commercial spaces seems out of sync with the state's goal of achieving net zero emissions by 2050. The new construction requirements in the stretch and specialized energy code eek out small percentage improvements compared to the base code whereas change of use projects represent an opportunity to decrease energy consumption by 25%, 50%, or even 75%. Leaving buildings leaky and uninsulated with metal framed windows not only means missing a once in a generation opportunity to reduce carbon emissions but dooms the residents to uncomfortable and expensive spaces to live in. This is especially concerning in specialized code communities, where the community has chosen to enforce the most strict energy code available. Achieving a HERS index of 65-75 in a change of use project is a reasonable and practical approach for reducing energy consumption.

To allow for more trade-off options in change of use projects, we believe that multifamily units (R-2, R-3, R-4) should not be required to provide 4 kW of solar electric capacity per unit to get the 5 HERS index point credit. Instead, they should be able to take this credit when providing 0.75 W/sqft. This figure is consistent with RC104.4.2, Onsite Renewable Energy for Other Group R Occupancies, which was developed to be an alternative to the 4 kW requirement for single family homes, two family homes, and townhomes in the specialized energy code mixed fuel pathway.

R406.5.2 / R406.5.4 Embodied Carbon Credit

We recommend that the language of the Low GWP concrete mix credit be adjusted to clarify that this credit should be applied on a whole-building basis rather than a per-unit basis. Adding the term "whole building" to the language in R406.5.2 would help plus changing the second half of the first sentence in R406.5.4 to "the HERS rater of the building must submit specific EPDs for concrete used in the building."

COMMERCIAL

C103.2.2 COMcheck Submittal and Simulation Guidelines

This section states that projects under 20,000 square feet shall submit a COMcheck envelope report. However, COMcheck does not work well as a Component Performance Alternative tool for most projects. COMcheck only allows one psi value for each type of thermal bridge, which is inadequate for many projects. It also does not report the average

vertical U-value or compare it to the allowable vertical U-values for low glazed or high glazed wall systems. Instead, we recommend that projects under 20,000 square feet be required to submit the same UA backstop documentation as larger projects or at least be allowed to submit the same UA backstop documentation as larger projects.

C402.2.2.1 Roof Assembly

The new C402.2.1 is confusing – it is unclear whether the values listed are intended to take the place of the values in the table C402.1.4 or whether they are requirements in addition to table C402.1.4. If intended to be alternatives, the language should specifically state this. If intended to be in addition, it is unclear why the language is needed since the U-value table already provides a clear threshold for compliance.

Assuming these are intended to be alternatives to meeting the prescriptive roof/ceiling U-values, we support the introduction of these R-values as practical alternatives to the U-values in table C402.1.4. They are particularly needed for change of use projects where the existing structure may prevent any practical cost-effective approach for meeting U-values in C402.1.4. A whole building UA trade-off approach for change of use projects may be another way to address the needs of these projects.

C402.2.3 & C402.2.4 Floors & Slab on Grade Floors

The language as written appears satisfactory for new construction projects. However, we support the introduction of practical alternatives for change of use projects, which could include either an exception to the slab on grade requirement altogether and/or the option for a whole building UA trade-off to deal with existing floor/slab assemblies that cannot be insulated to the level of new construction due to cost or structural constraints. (similar to the whole building UA trade-off in the base code). We believe that the requirement for adding slab insulation to existing buildings undergoing a change of use is the biggest hurdle in the energy code for the re-use of existing buildings.

C402.5.2 Air Leakage Compliance

We support the inclusion of exception #4 since there are many addition projects that are impractical or impossible to blower door test. However, we also recommend that individual additions under a certain size be automatically exempted without needing the design professional to write a letter or the building official to approve in writing. For example, a reasonable threshold could be additions under 2,500 square feet as the cost and complexity of testing or pursuing exceptions can be difficult for designers of small projects to achieve.

The concept of exception #5 as an optional approach when normal blower door testing is not feasible is appreciated. However, the way this language is written "shall show compliance by" rather than "may show compliance by" appears to eliminate whole building blower door testing that meets the 0.35 CFM75/sqft new construction standard. While there are some projects that need an exception, many projects are able to achieve the new construction airtightness levels and this should still be considered a valid method of showing compliance with airtightness requirements. We recommend changing the word "shall" to "may" in the first sentence. Finally, the last option on the list, item (d), should clearly state that it is for additions only and not other project types as the language is not clear enough to ensure that interpretation.

C402.7.2.1.2 Cladding Systems

Based on the derating factors in the table, it appears these values are intended to cover systems like Z-girts, clips, brick ties, and other cladding attachment systems that have significant area and impact on the effectiveness of continuous exterior insulation. However, it is unclear whether nails and screws are considered attachment systems. We recommend language be added that specifically excludes the derating of cladding systems for nails and screws (often used with fiber cement siding) as long as the quantity of nails or screws does not significantly exceed manufacturer guidelines.

C402.7.3.1 Prescriptive Psi Values

Based on the derating factors in the table, it appears the psi values listed are intended to cover metal framed and concrete buildings that have details with extreme thermal bridging. When designing a wood-framed building, these derating factors are excessive. The details in small wood framed buildings typically do not match anything in the BC Hydro database and these projects do not have a budget to afford custom 2D thermal bridge modeling. It is recommended that an additional column be added to the table for wood-framed buildings and that wood frame additions and buildings under a certain size (5,000 square feet, perhaps) be exempt from derating the continuous insulation since the energy impact from thermal bridging in very small wood frame buildings is very minor but the cost and complexity of evaluating thermal bridges on these small buildings is high.

C407.4 / C505 Change of Use ERI Path

We strongly oppose the elimination of the change of use heading to the ERI table. The "explainer" document states "there is no HERS option for change of use." However, this is not correct. All R-use projects have the option to use the ERI path or the Passive House path, including Change of Use projects. Giving these projects a special, more lenient HERS index target than new construction is essential for compliance for many projects

that we work on. The ERI path is a helpful performance-based compliance approach that avoids many of the prescriptive requirements that are difficult for change of use projects to comply with, including floor/slab insulation, roof insulation, additional efficiency credits, and a variety of others. By using the HERS/ERI path, change of use projects achieve an energy efficient building by improving the efficiency of walls, windows, airtightness, ventilation systems, service water heating, and other measures.

In terms of the specific HERS index targets for change of use (as well as additions and alterations), it is unclear how much solar electric capacity must be provided to use the solar electric credit. To allow for more trade-off options in existing building projects, we recommend that buildings should be able to take this 3-point credit when providing 0.25 W/sqft. This figure is consistent with C406.5.1 Basic Renewable Credit.

To provide further flexibility for change of use projects, we believe that change of use projects should be exempt from the ENERGY STAR checklist requirement for ERI path projects in C407.4.1.

C505 Change of Use

In addition to allowing the ERI path as an option for change of use projects, there are other adjustments that could help make change of use projects more feasible, including:

1. Allowing whole building UA trade-offs as an alternative to roof/ceiling and floor/slab requirements in chapter C402.
2. Eliminating minimum skylight fenestration area requirements in section C402.5.2
3. Eliminating additional efficiency requirements in section C406

Sincerely,

A handwritten signature in black ink that reads "Mark Newey". The signature is written in a cursive, flowing style.

Mark Newey
Managing Principal
Airtight Energy Consulting, Inc.



Massachusetts Tree Farm Program
13 Pond Road
Hawley, MA 01339
(413) 339-5526
gcox@crocker.com

June 23, 2026

Becca Edson
Department of Energy Resources
100 Cambridge St, 9th Floor
Boston, MA 02114

RE: Proposed Updates to the Massachusetts Stretch Code

Nearly 500 woodlands in Massachusetts are sustainably managed as Tree Farms meeting the current *Standards for Sustainability* of the American Tree Farm System. These woodlands contain more than 100,000 acres of growing forest, most of which are privately owned and tax paying.

As part of the management of their woodlands, Tree Farmers routinely thin their woods by removing lower quality or defective trees to allow better trees more room and sunlight to grow. This obviously generates a lot of cordwood, some of which they burn in their homes for heat, and some which they sell to others for the same purpose.

We have been made aware that the proposed changes to the Massachusetts Stretch Code makes no provisions for allowing modern high efficiency wood or pellet stoves in dwellings and other buildings. While it does allow modern wood heat systems such as pellet heating systems and wood chip fueled systems, it doesn't include modern high efficiency wood or pellet stoves.

The Commonwealth has focused its energy efforts on converting fossil fuel heating systems to heat pump technology, a one size fits all approach which fails to recognize the exploding costs for electricity for most homeowners. Even with a heat pump discount, Massachusetts has the highest electric rates in the U.S.

Even if the rates were reasonable, heat pumps are not well adapted to many older homes that are not sufficiently insulated and sealed for energy efficiency. Such inefficient homes are quite common in rural towns in the state. As temperatures drop in winter, heat pumps become less and less efficient at extracting heat, and use more and more electricity to do so. While heat pumps can heat homes at temperatures below 20 degrees, the electricity cost becomes exorbitant.

In our experience, wood and pellet stoves are commonly installed by cost conscious homeowners, particularly in rural areas, who already have fossil fuel heating systems and are seeking to reduce their heating costs by using a more affordable fuel source. Fuel cost surveys consistently show that wood fuel is the cheapest source of BTUs. This past winter, when cold temperatures drove up fuel usage and electricity costs, spurred much greater usage of wood stoves as a cost control measure.

To illustrate, see [TAKING THE HEAT: As energy costs soar, homeowners are seeking ways to stay warm without breaking the bank. - The Boston Globe](#)

We think that high efficiency, low emission, modern wood stoves should be allowed under the Stretch Code as a supplemental heating source. The EPA's Burnwise Program has calculated the energy efficiency of more than 400 Wood and Pellet Stoves and list it in their Wood Heating database online at [Woodstove Database | Burnwise | US EPA](#).

Many of the listed heaters are more efficient than many fossil fuel systems now in use, and they are much more efficient and lower emissions than many older wood stoves now in use. Indeed, one of the most important reasons to allow high efficiency wood stoves is to encourage homeowners to replace older, less efficient, more polluting stoves from the 1970s and 1980s. DOER used to have a grant program to encourage replacing the old polluting stoves but it foolishly has been dropped.

Allowing modern wood and pellet stoves as a supplemental heating source would also provide more residents with emergency heat should major storms knock out power for extended periods during the winter months. Wood stoves can provide backup heat even when the power is off, but heat pump systems draw too much power for most emergency generators. In December 2008 a major ice storm knocked out power to virtually all communities in northern and western Mass. for 1 to 2 weeks with temperatures dropping into the low single digits during much of that period. Residents with backup wood heat were much more comfortable than those without.

Thank you for the opportunity to comment

Gregory Cox
Mass Tree Farm Committee

Edson, Becca (ENE)

From: Chris Zimmer <czimmer@sea.us.com>
Sent: Wednesday, June 24, 2026 7:08 AM
To: STRETCHCODE (ENE)
Cc: Kevin Ring; Yoon Jang; STRETCHCODE (ENE)
Subject: ADU comment

CAUTION: This email originated from a sender outside of the Commonwealth of Massachusetts mail system. Do not click on links or open attachments unless you recognize the sender and know the content is safe.

An additional comment regarding ADUs. ADUs that are added to a basement or attic tend to be more like an addition than an ADU facing various challenges compared to detached or mostly detached ADUs. I'd recommend considering allowing this type of ADU to have a higher HERS allowance (maybe the same as reno/additions).

To be clear I'm suggesting ADUs that are created where either the floor or roof of the ADU shares greater than 50% of the roof or floor with another existing dwelling unit.

ADUs that are added off of the back of a house and only share one vertical wall should remain at the current HERS requirement.

Chris Zimmer
Sustainable Energy Analytics

Sent from my iPhone

On Jun 17, 2026, at 10:54 AM, STRETCHCODE (ENE) <stretchcode@mass.gov> wrote:

Received. Thank you!

From: Chris Zimmer <czimmer@sea.us.com>
Sent: Wednesday, June 17, 2026 8:08 AM
To: STRETCHCODE (ENE) <stretchcode@mass.gov>
Cc: Kevin Ring <kring@sea.us.com>; Jang Yoon <jyoon@sea.us.com>
Subject: Comments on Proposed Changes

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DOER Stretch Code Committee
c/o Commissioner Mahoney
100 Cambridge Street, 9th Floor, Boston, MA 02116

To whom it may concern,

Thank you for the opportunity to provide testimony on the Commonwealth's stretch code. BTEC recognizes the threat posed by climate change and sees the importance in reducing carbon emissions. Therefore, BTEC is understandingly happy to see that the DOER has chosen to follow the science and retain the eligibility for "clean biomass systems" within mixed-fuel buildings. This choice recognizes published carbon benefits as documented by the US EPA, DOE and within the Commonwealth's own regulatory language. The DOER has for years accepted the thermal portion of 225 CMR 16.00 the Alternative Energy Portfolio Standard (APS), signaling confidence wood fuel, the technologies that burn it, as well as its carbon neutrality.

BTEC is less pleased with the restricting of wood (cord & pellet) stoves within the proposed Code. Please note that across New England heat pump installers now commonly recommend pairing their compressors with a "back up or peaking" system. This advice often leads consumers to use wood stoves as a supplement to their ASHPs. Driving this choice is the fact that along with being carbon neutral, supplementary wood heat is far more affordable than electric resistance heating, the least attractive backup to air-source heat pumps. BTEC suggests that the Code be broadened (beyond recognizing clean biomass) to accommodate all wood fueled appliances provided that they be installed as supplemental heating systems.

Thank you for ensuring that the Massachusetts building code facilitates green energy choices including the responsible use of wood heating.

Sincerely,

Bill Bell, Executive Director
BioThermal Energy Council

From: Alexander Moriarty <amoriarty@shrewsburyma.gov>
Sent: Wednesday, June 24, 2026 9:19 AM
To: STRETCHCODE (ENE)
Subject: Stretch Code Public Comment

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The incorporation of a definition of ADU does not remove the confusion or inconsistencies in the energy code. A 900 sf structure built as a stand alone residence faces the same logistical challenges as an ADU of equal size. The determination that an Accessory Dwelling can perform worse than an equivalent sized New Construction Dwelling appears arbitrary and capricious.

I propose striking "Accessory dwelling Unit" language from the energy code language and replacing this section with a defined scope of Dwelling Units 900 SF or smaller. This language allows for a reduced requirement for all ADU's covered by 760 CMR as well as tiny homes, and stand alone structures that are equivalent in size.

TABLE R406.5 MAXIMUM ENERGY RATING INDEX

	Maximum HERS Index score ^{a,b}			
	New construction permits after July 1, 2024	New Construction with R406.5.2 embodied carbon credit	Accessory Dwelling Units <i>Accessory Dwelling Units^d & Tiny Homes</i>	Major alterations, or additions, or <i>change of use^c</i>

R202 Add the following definitions:

ACCESSORY DWELLING UNIT. A self-contained housing unit, inclusive of sleeping, cooking and sanitary facilities on the same lot as a principal dwelling, and that: (i) maintains a separate entrance; (ii) is not larger in floor area than that allowed by the Municipality in the local ADU definition, or 900 square feet, whichever is greater.

Informational note:
Definition of Accessory Dwelling Unit is based on the MGL c. 40A, Sec. 1A definition.

Assistant Building Inspector

Town of Shrewsbury

508-841-8512

<https://shrewsburyma.gov/1364/Town-Hall-Hours>

Please keep in mind that the Massachusetts Secretary of State and the Massachusetts Attorney General consider email to be public record and, therefore, subject to the Massachusetts Public Records Law, G.L.c.66 106 10.

Edson, Becca (ENE)

From: Building Inspector <building.inspector@wnewbury.org>
Sent: Wednesday, June 24, 2026 9:39 AM
To: STRETCHCODE (ENE)
Subject: Redline comments

CAUTION: This email originated from a sender outside of the Commonwealth of Massachusetts mail system. Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Good morning,

Please see my comments on the indicated sections below:

R202 ACCESSORY DWELLING UNIT Definition

Including local ADU definitions will result in each city and town potentially having a different threshold for compliance based on the square footage of an ADU. While the intent appears to be to address both Protected Use ADUs and locally regulated ADUs, treating them the same for purposes of this code section could create significant confusion and inconsistent application across jurisdictions. The definition of Accessory Dwelling Unit should remain consistent statewide and utilize the definition established by EOHLC in 760 CMR 71.

R202 CONDITIONED SPACE Definition

This definition already exists within the Energy Code general definitions section. I am not sure it is necessary to duplicate the definition in this section as well.

Table R406.5 Maximum Energy Rating Index (and similar tables) – Footnote d

This footnote requires clarification. The portion that reads, "...does not matter with respect to the HERS rating," should be expanded to clearly state that the existing dwelling unit is not required to be included in the HERS rating calculation. This would eliminate potential confusion regarding the scope of the rating.

R503.1.5 Extensive Alterations and Level 3 Alterations, Item 3 (and similar sections)

This provision appears either redundant or potentially confusing. Item 1 states that the work must meet the IRC definition of an extensive alteration and exceed 1,000 square feet. Item 3 states that the requirements apply if the alteration exceeds 1,000 square feet and meets certain additional criteria. As written, it could be interpreted either that any alteration exceeding 1,000 square feet is subject to the requirements, or that Item 1 applies only to extensive alterations while Item 3 applies regardless of the level of alteration. Additional clarification is needed to ensure consistent interpretation and enforcement.

R505 Change of Occupancy or Use – R505.1 General

The language should address situations where an existing permitted living space, such as an in-law apartment or a finished basement or attic, already functions as a complete dwelling unit but is not currently permitted as a Protected Use ADU. In many cases, the conversion to a compliant ADU may require only limited modifications, such as providing compliant emergency egress or separating utility services.

Requiring such spaces to fully comply with all current energy code requirements could discourage the creation of legal, rentable ADUs because the cost of compliance may be prohibitive. For example, compliance could require upgrades to wall insulation R-values, window U-factors, blower door testing, and other measures that are unrelated to the limited scope of work necessary to establish the ADU. Consideration should be given to providing a pathway for these

conversions that focuses on the actual work being performed rather than requiring full compliance of the entire existing space.

Thank you for your consideration of these comments. I appreciate the continued effort to solicit stakeholder input and improve the code.

Sam Joslin, CBO
Building Commissioner-Zoning Officer
978-363-1100 x1121
Building.Inspector@WNewbury.org



The Secretary of the Commonwealth's Office has determined that most e-mails to and from municipal offices and officials are public records. Consequently, confidentiality should not be expected.

Edson, Becca (ENE)

From: Eric Tetreault <eric.tetreault@andoverma.us>
Sent: Wednesday, June 24, 2026 11:25 AM
To: STRETCHCODE (ENE)
Subject: Red Line Energy Code comments.

CAUTION: This email originated from a sender outside of the Commonwealth of Massachusetts mail system. Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Please see my comments on the indicated sections below:

R202 ACCESSORY DWELLING UNIT Definition

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The language should address situations where an existing permitted living space, such as an in-law apartment or a finished basement or attic, already functions as a complete dwelling unit but is not currently permitted as a Protected Use ADU. In many cases, the conversion to a compliant ADU may

require only limited modifications, such as providing compliant emergency egress or separating utility services.

Requiring such spaces to fully comply with all current energy code requirements could discourage the creation of legal, rentable ADUs because the cost of compliance may be prohibitive. For example, compliance could require upgrades to wall insulation R-values, window U-factors, blower door testing, and other measures that are unrelated to the limited scope of work necessary to establish the ADU. Consideration should be given to providing a pathway for these conversions that focuses on the actual work being performed rather than requiring full compliance of the entire existing space.

Regards

Eric Tetreault, CBO
Local Inspector
Town of Andover
36 Bartlet Street
978 623 8624

For inspection requests call 978 623-8603
[Request an Inspection for a Building permit](#) (Permit # required)

Office Hours M-F 7-8 am

PUBLIC RECORD REQUESTS-
<https://andoverma.gov/1202/Andover-Central>

Edson, Becca (ENE)

From: Vigneault, Branden <bvigneault@readingma.gov>
Sent: Wednesday, June 24, 2026 12:00 PM
To: STRETCHCODE (ENE)
Subject: Stretch code concerns

CAUTION: This email originated from a sender outside of the Commonwealth of Massachusetts mail system. Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Hi,

I am forwarding comments on the energy code redline below in blue due to concerns and clarity:

R202 ACCESSORY DWELLING UNIT Definition

Including local ADU definitions will result in each city and town potentially having a different threshold for compliance based on the square footage of an ADU. While the intent appears to be to address both Protected Use ADUs and locally regulated ADUs, treating them the same for purposes of this code section could create significant confusion and inconsistent application across jurisdictions. The definition of Accessory Dwelling Unit should remain consistent statewide and utilize the definition established by EOHLC in 760 CMR 71.

R202 CONDITIONED SPACE Definition

This definition already exists within the Energy Code general definitions section. I am not sure it is necessary to duplicate the definition in this section as well.

Table R406.5 Maximum Energy Rating Index (and similar tables) – Footnote d

This footnote requires clarification. The portion that reads, “...does not matter with respect to the HERS rating,” should be expanded to clearly state that the existing dwelling unit is not required to be included in the HERS rating calculation. This would eliminate potential confusion regarding the scope of the rating.

R503.1.5 Extensive Alterations and Level 3 Alterations, Item 3 (and similar sections)

This provision appears either redundant or potentially confusing. Item 1 states that the work must meet the IRC definition of an extensive alteration and exceed 1,000 square feet. Item 3 states that the requirements apply if the alteration exceeds 1,000 square feet and meets certain additional criteria. As written, it could be interpreted either that any alteration exceeding 1,000 square feet is subject to the requirements, or that Item 1 applies only to extensive alterations while Item 3 applies regardless of the level of alteration. Additional clarification is needed to ensure consistent interpretation and enforcement.

R505 Change of Occupancy or Use – R505.1 General

The language should address situations where an existing permitted living space, such as an in-law apartment or a finished basement or attic, already functions as a complete dwelling unit but is not currently permitted as a Protected Use ADU. In many cases, the conversion to a compliant ADU may require only limited modifications, such as providing compliant emergency egress or separating utility services.

Requiring such spaces to fully comply with all current energy code requirements could discourage the creation of legal, rentable ADUs because the cost of compliance may be prohibitive. For example, compliance could require upgrades to wall insulation R-values, window U-factors, blower door testing, and other measures that are unrelated to the limited scope of work necessary to establish the ADU. Consideration should be given to providing a pathway for these

conversions that focuses on the actual work being performed rather than requiring full compliance of the entire existing space.

Thank you for your consideration of these comments. I appreciate the continued effort to solicit stakeholder input and improve the code.

Thank You,

Branden Vigneault | Building Commissioner
Town of Reading
Public Services Department
781.942.6609

Building Dept Hours:

Mon., Wed., Thurs. 7:00 am – 5:30 pm

Tue. 7:00 am – 7:00 pm

Fri. Closed

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Edson, Becca (ENE)

From: Eric Bowlin <ebowlin@shrewsburyma.gov>
Sent: Wednesday, June 24, 2026 12:15 PM
To: STRETCHCODE (ENE)
Subject: stretch code red line comment

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Specifically referencing R202 accessory dwelling units and related HERS scores.

ADU should not be defined in the building code. ADU is a specific zoning regulation and as such should not be in the building code in any way. **ALL references to ADU's in the stretch code should be removed.** The building and energy code does not differentiate based on zoning.

Furthermore, the section about HERS ratings for ADU's should be removed and replaced with HERS scores based on building size not on building use.

Let me give several examples to demonstrate the absurdity of having ADU as part of the building code

1) a person who owns a single family home on land that happens to be zoned for multi family. This person plans to build a 900sf unit. This person has two options, 1) build a 900sf dwelling using the towns zoning or 2) build the identical 900sf structure using the states zoning law. Both are legal, both structures are identical, but one has a different HERS requirement than the other. **Why is the exact same structure regulated differently simply because of which zoning code applies to it?** The difference quite literally is a label on the plans and suddenly the HERS requirements are drastically different.

2) A person has a large lot of land near a lake or on a mountain. They plan to build two small structures such as two lake houses or two retreats, etc. They can legally divide the land and build fully conforming houses. Given the environment, they plan to build one large and one small home. Alternatively, they can build a large home and an ADU. Under both situations the larger home is regulated the same but in the second example, the smaller structure has different HERS requirements. Again, **why is an identical structure with an identical use being subject to more or less stringent requirements based solely on which zoning path is used to build it?**

3) A person owns a lot near a popular vacation area and plans to build a small home to use as a rental to serve the beach, mountain, lake etc. The house will be under 900 sf. If the person builds this legally conforming as a primary use, they are subject to a more stringent HERS score. **The identical structure built on a lot with another single family home would be subject to lesser restrictions**

4) A developer owns a large piece of land and plans to build small homes to use as work force housing near a well known mill or factory. Each house would be 900 sf. Upon learning of the difficulty of attaining a 42 HERS, the builder realizes that if he builds fewer houses but makes them larger, he can build more

economically. **By applying HERS scores of large homes equally on small homes, the law dissuades the development of small and affordable homes.**

5) A new administration is elected in the state and new legislators decide to change or even eliminate the zoning law. Will the building code once again have to change? What happens when a new administration after that changes the law again. **Will the building code have to change with the political wind?**

The better approach would be to apply a new HERS category for all buildings under X square feet. It may even make sense to have multiple levels of HERS based on small, medium, or large structures. But it never makes sense to have different HERS requirements for identical structures because the person uses one zoning law for approval vs a different zoning law for approval.

Having 2 or 3 HERS categories for small, medium, and large houses would solve all of the issues related to how HERS is calculated and remove any need to create definitions for ADUs. It would also prevent the twisting and warping of the building code to fit convoluted and ever-changing zoning laws. Furthermore, it would promote the development of smaller home ownership instead of just the renting of smaller apartments accessory to the large home.

Eric Bowlin
Assistant Building Inspector
Town of Shrewsbury
508-841-8512

Edson, Becca (ENE)

From: Ngo, Tammy <TNgo@brplusa.com>
Sent: Wednesday, June 24, 2026 12:50 PM
To: STRETCHCODE (ENE)
Subject: Public comment - Commercial back-up generators

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Hello,

I hope this email finds you well. I would like to submit a public comment on the proposed revisions to the Stretch and Specialized codes.

Under Section C202 (Definitions) and Section CC101.3 (Compliance), the proposed exceptions for back-up generators do not go far enough. Fuel oil piping and emergency back-up generators should be allowed inside commercial buildings, including mixed-fuel and all-electric buildings. The proposed restriction is especially concerning for labs, healthcare, generators, and other similar uses and systems.

Thank you,
Tammy Ngo



TAMMY NGO, WELL AP, PE, CPHC | Associate | Sustainable Design
TNgo@brplusa.com | Direct: 617.925.8426
PEOPLE. PERFORMANCE. PARTNERSHIP. PASSION. PURPOSE.

Edson, Becca (ENE)

From: Bill Sanborn <bsanborn@essexma.org>
Sent: Wednesday, June 24, 2026 1:32 PM
To: STRETCHCODE (ENE)
Subject: comments on code changes

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Please take into the comments below concerning changes to the energy codes, I agree with these comments and hope you review them carefully before approving them.

For the record, I have over 25 years of code enforcement.

William A Sanborn
Building Commissioner
Town of Essex, Ma

Edson, Becca (ENE)

From: Leslie Anderson <leslie@pgane.org>
Sent: Wednesday, June 24, 2026 1:32 PM
To: STRETCHCODE (ENE)
Subject: Stretch Code Public Comment
Attachments: PGANE_MA_Stretch_Code_Highlighted_Sections.docx

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Leslie Anderson | President and CEO

Propane Gas Association of New England

1024 Suncook Valley Highway, Unit C-5

P.O. Box 1071

Epsom, NH 03234

O: 888-445-1075

C: 207-745-5969



PGANE Review – Massachusetts Stretch & Specialized Code Proposed Changes

The following sections from the proposed Massachusetts Stretch and Specialized Code amendments have been identified as having potential operational, regulatory, or market impacts on the propane industry. Key language has been highlighted in yellow.

225 CMR 22.00 – Residential Redline – ALL-ELECTRIC BUILDING

A building with no on-site combustion equipment for fossil, solid, or biomass fuel use or capacity including fossil, solid or biomass fuel use in space heating, water heating, cooking, or drying appliances. Exceptions: a. On-site outdoor back-up power generators using fuel. b. On-site refuelling of vehicles or outdoor equipment using fuel.

225 CMR 22.00 – Residential Redline – COMBUSTION EQUIPMENT

Any equipment or appliance used for space heating, service water heating, cooking, clothes drying and/or lighting that can use fuel gas, fuel oil or solid fuel and that is not a clean biomass heating system.

225 CMR 22.00 – Residential Redline – FUEL GAS

Fuel gas includes natural gas, manufactured gas, liquified petroleum gas or a mixture of these. Informational note states this typically refers to natural gas and propane.

225 CMR 22.00 – Residential Redline – MIXED-FUEL BUILDING

A building that contains combustion equipment or includes piping for such equipment. Exceptions include on-site outdoor back-up power generators using fuel and outdoor equipment refueling.

225 CMR 23.00 – Commercial Redline – Future Electrification Requirements

For mixed fuel building following Appendix CC, construction documents showing electric HVAC retrofit design prepared by the HVAC engineer. Contract documents shall show future replacement of combustion equipment based HVAC system with an equivalent all electric system.

225 CMR 23.00 – Commercial Redline – District Energy System

A system for transferring heat energy from a centralized location to a distributed network of buildings through a system of pipes for the purposes of building space heating and/or space cooling and/or service water heating.

225 CMR 23.00 – Commercial Redline – Decarbonization and Efficient Electrification Plan (DEEP)

A commitment to phase out the use of fossil fuels and electric resistance heating.

DOER Explainer – Mixed Fuel Clarifications

Clarifying all-electric and mixed fuel buildings; clarifying exceptions for back-up power generators and vehicle refueling and outdoor equipment refueling.

DOER Explainer – Electrification Readiness

Modifying the pre-wiring requirements for future electrification to allow much more flexibility to show compliance with electric readiness.

PGANE Observations

- The proposed code changes continue the trend toward electrification-readiness and future electric conversion requirements.
- Propane systems remain permissible but are increasingly categorized as mixed-fuel systems requiring additional compliance measures.
- The preservation of backup propane generator exemptions is favorable and should be supported.
- Future-electric retrofit design requirements may increase construction costs and discourage propane system selection.
- District Energy System language introduces long-term fossil-fuel phaseout policy considerations.

Other notes for consideration:

Based on the attached redlines and explainer, the proposed changes are described by DOER as modest, but they continue to move Massachusetts building compliance toward electrification-readiness and away from long-term fossil-fuel infrastructure.

The most important propane impacts are:

1. Propane remains allowed, but is increasingly treated as a “mixed-fuel” condition requiring additional compliance steps. The residential code defines fuel gas to include liquefied petroleum gas/propane, and mixed-fuel buildings include buildings with combustion equipment or piping for such equipment. Back-up generators and outdoor equipment refueling are expressly excluded from triggering mixed-fuel status.
2. New mixed-fuel residential buildings using propane space heating, water heating, cooking, or dryers must meet stricter HERS thresholds than all-electric buildings. The mixed-fuel pathway shows HERS 42, compared with HERS 45 for all-electric.
3. Propane appliances in residential mixed-fuel buildings must be pre-wired for future electric replacement. This includes heat-pump space heating circuits,

250V/40A circuits near propane cooking appliances, 250V/30A circuits near propane dryers and water heaters, and water-heater space sized for future heat-pump water heaters.

4. Commercial mixed-fuel buildings face similar future-electrification requirements. For mixed-fuel buildings following Appendix CC, construction documents must show future replacement of combustion HVAC systems with equivalent all-electric systems, including electric infrastructure, space allotments, and supporting structural/architectural elements.
5. District Energy System changes are a strategic concern. The proposed DES language requires a Decarbonization and Efficient Electrification Plan that includes a commitment to phase out fossil fuels and electric resistance heating.
6. Backup propane generators are protected in the definitions. This is a positive clarification and should be supported, but PGANE should ask DOER to preserve this exception without narrowing it.
7. The 6-month concurrency period is useful for builders, inspectors, and propane contractors. Projects filed during that period may use either the amended code or the prior February 2025 edition, but not a mix of both.



June 24, 2026

Ian Finlayson
Deputy Director, Energy Efficiency Division
Department of Energy Resources
100 Cambridge Street, Suite 1020
Boston, MA 02114

A Better City's Comments on Proposed Changes to the Specialized and Stretch Energy Codes

Deputy Director Finlayson:

Thank you for creating the opportunity for A Better City members to discuss their experiences in complying with the specialized and stretch energy codes in January 2026. We also appreciate the follow up with some members in one-on-one meetings to understand the specific challenges they are facing in implementing these codes in more depth. The following comments, on behalf of A Better City's nearly 130 member businesses and institutions, are a summary of some of the comments from these meetings in addition to two comments specifically related to Section CC101.2, and CC101.3 and C202.

Section CC101.2, R-2: As currently stated, R-2 use (including multifamily) greater than or equal to four stories above grade and greater than 12,000 sf, and R-2 use portions greater than 12,000 sf in mixed-use buildings must follow the C407.3 Passive House compliance pathway. A Better City members have requested that this section includes the C401.2.1 Prescriptive and Performance compliance pathway.

Section CC101.3 (Compliance) and Section C202 (Definitions): The proposed exceptions for back-up generators in these sections do not go far enough. Fuel oil piping and emergency back-up generators should be allowed inside commercial buildings, including mixed-fuel and all-electric buildings. The proposed restriction is especially concerning for labs, healthcare, generators, and other similar uses and systems. Emergency generators in hospitals are already comprehensively mandated and governed by nationally recognized codes and standards, including NFPA, FGI, and CMS requirements. Any attempt to regulate these systems through state or municipal building codes will create direct conflicts in enforcement and compliance, introducing risk to hospital accreditation and regulatory standing. A Better City members strongly oppose any state or municipal efforts to modify or overlay the existing regulatory framework governing emergency generators. This equipment operates strictly in a standby capacity (normally off) and represents a negligible source of emissions. At the same time, these systems are indispensable to life safety, ensuring uninterrupted clinical operations during power loss events. Limiting or altering their deployment could introduce a material risk to patient care and safety while offering negligible emissions benefits. Also, at present, no technically equivalent alternative exists that can replicate the reliability, responsiveness, and regulatory compliance of these systems.

General Comments: Most of the comments provided in both the A Better City member meeting in January 2026 and subsequent one-on-one meetings have not been responded to in the modest proposed revisions. In summary, these are some of the comments made at those meetings:

- **Domestic Hot Water Heating:** This remains the biggest challenge for users in the large residential sector as there are currently no obvious technology solutions and cost premiums are high. For high-rise



multifamily there is nothing on the market to make domestic hot water at this scale except resistance heat which is not the greenhouse gas emissions reduction strategy anticipated with the codes.

- **Passive House:** Code users identified that the energy efficiency savings for Passive House new construction were vastly less than modeled. In addition, the costs were significantly more than projected.
- **Electric Vehicle Charging:** An owner who opted to build EV charging infrastructure more than code requirements is working with a local fire department who now wants to hold the owner to an extreme hazard level of fire protection because of the large number of chargers. As this trend continues, regulators and code users alike should be aware of this new challenge.
- **Excellent Versus Very Good Codes:** The energy codes have been aspirational in the past; they have cost a little more, but the technology was there and building teams knew how to make the required changes. Performance requirements in this specialized code have gone beyond the current technologies' ability to meet the demand at scale, especially for high rise multifamily, highly ventilated, and commercial buildings. Owners are unable to make the numbers pencil.

Thank you for your ongoing partnership and leadership. For any questions, please contact Yve Torrie (ytorrie@abettercity.org).

Sincerely,

A handwritten signature in black ink that reads 'Y.L. Torrie'.

Yve Torrie

Director of Climate, Energy, & Resilience

Edson, Becca (ENE)

From: Dion, Martine <mdion@smma.com>
Sent: Thursday, February 26, 2026 2:14 PM
To: Ormond, Paul (ENE)
Cc: Edson, Becca (ENE); Prokupets, Lana
Subject: February 2025 update to Stretch Code C403.5

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Hello Paul, Becca,

We have a code interpretation issue that may trigger major costs in our High School projects with already very efficiency hybrid GSHP/AtWHP (with water loop) system.

Section C403.5 requires economizers for air or water systems. We are questioning the requirement for additional economizers at the distribution level under C403.5.3.

- System description:
 - Hybrid GSHP and AtWHP, with a water loop which add efficiency. GSHP and AtWHP each have an heat exchanger prior to the central water loop, which may also be considered to add efficiency.
 - From the water loop, the system serves three pathways:
 1. To DOAS/AHU with air side economizers -compliant with C403.5.2
 2. To an heat exchanger then to water source heat pumps (interior distributions)
 3. To the domestic hot water heat pump (heat exchanger included)
- Are AtWHP systems interpreted as exempt as it is air source HP, under exemption 5? Why does exemption 5 only mentions “VRF” and not other air source systems?
- Why aren’t the GSHP also exempted?
- We do not have a chilled water system in this project, so C403.5.1 does not apply.
- Does the C403.5.3 requirement apply to our hybrid GSHP/AtWHP system? For example, we have 2 large HS (500,000 and 600,000 SF) that would be required to include economizers on a large amount of the 450+ water source heat pumps as part of the 3rd level distribution loop. This adds considerable space requirements, upfront costs and services/maintenance costs. The project is a EUI 25 NZE project, without those economizers. We don’t see the benefits of these additional economizers as part of the distribution system, as the main system is already highly efficient. Please clarify.

C403.5 Economizers.

Economizers shall comply with Sections C403.5.1 through C403.5.5. An air or water economizer shall be provided for the following cooling systems:

1. Chilled water systems with a total cooling capacity, less cooling capacity provided with air economizers, as specified in Table C403.5(1).
2. Dedicated outside air systems
3. Individual fan systems with cooling capacity greater than or equal to 54,000 Btu/h (15.8 kW) in buildings having other than a Group R occupancy, the total supply capacity of all fan cooling units not provided with economizers shall not exceed 20 percent of the total supply capacity of all fan cooling units in the building or 300,000 Btu/h (88 kW), whichever is greater.
4. Individual fan systems with cooling capacity greater than or equal to 270,000 Btu/h (79.1 kW) in buildings having a Group R occupancy. The total supply capacity of all fan cooling units not provided with economizers shall not

exceed 20 percent of the total supply capacity of all fan cooling units in the building or 1,500,000 Btu/h (440 kW), whichever is greater.

Exceptions: Economizers are not required for the following systems.

- 1. Where more than 25 percent of the air designed to be supplied by the system is to spaces that are designed to be humidified above 35°F (1.7°C) dew-point temperature to satisfy process needs.*
- 2. Systems expected to operate less than 20 hours per week.*
- 3. Systems serving supermarket areas with open refrigerated casework.*
- 4. Systems that include a heat recovery system in accordance with Section C403.10.5.*
- 5. VRF systems installed with a dedicated outdoor air system.*

Thanks and Regards,

Martine

Martine Dion, FAIA, LEED AP BD+C
Principal / Director of Sustainable Design
work: 617.520.9461 / cell: 857.492.1517



1000 Massachusetts Avenue, Cambridge MA 02138



June 24, 2026

Elizabeth Mahony, Commissioner
Department of Energy Resources
100 Cambridge Street, 9th Floor
Boston, MA 02114

RE: NAIOP Comments on the 2026 Proposed Updates to the Massachusetts Commercial Stretch Energy Code and Specialized Opt-in Energy Code

Dear Commissioner Mahony:

NAIOP Massachusetts, the Commercial Real Estate Development Association, appreciates the opportunity to comment on the Spring 2026 proposed updates to the **Massachusetts Stretch Energy Code and Specialized Opt-in Energy Code**. We share the Commonwealth's commitment to advancing decarbonization and recognize the significant work that has gone into developing these proposed revisions.

NAIOP is grateful to the Department of Energy Resources (DOER) for incorporating real world feedback into these proposed updates. NAIOP offers the below comments in the hope that they can be incorporated into the final regulations.

Commercial Code (225 CMR 23.00)

I. NAIOP Opposes Proposed Provisions Affecting Backup Generators in Sections C202 and CC101.3

C202: All-Electric Building

NAIOP is deeply concerned that the proposed definition for "All-Electric Building" effectively prohibits the use of indoor fuel-powered generators. There are practical reasons to locate generators indoors rather than outside, particularly for dense urban projects where roof and yard space is limited. Indoor placement can also reduce noise pollution for neighboring properties and allow for more accessible maintenance.

More importantly, this poses a serious problem for mission-critical facilities – including hospitals, laboratories, and advanced manufacturing plants – which are required by national codes to maintain backup generators. In these facilities, backup power is essential for safe and reliable operations during an emergency. For these reasons, NAIOP strongly recommends amending this language to allow indoor fuel-powered generators.

C202: Mixed-Fuel Building

In the definition of “Mixed-Fuel Building,” Exemption A requires emergency backup generators to be located outside, which raises the same concerns described above.

Beyond these concerns, Exemption A also classifies any building with interior fuel-piping as Mixed-Fuel, even when all other systems are all-electric. This is an important issue because emergency generators are commonly placed on the roof and often rely on fuel-piping that runs through the interior of a building. As a result, an otherwise all-electric building could be classified as Mixed-Fuel based solely on standby fuel piping. NAIOP believes that language should be incorporated both ensuring that backup generators may be located inside and clarifying that the presence of standby fuel piping does not classify a building as Mixed-Fuel.

CC101.3 Compliance, Mixed Fuel Pathway

NAIOP is also concerned with Section CC101.3, which establishes compliance requirements for Mixed-Fuel Buildings and excludes emergency generators from that classification only if they are located outdoors and have no fuel piping or combustion equipment inside the building.

For the reasons described in the previous sections, these conditions are extremely difficult to meet in practice. Buildings that then fail to qualify for these exclusions are subject to the more stringent requirements of the Mixed-Fuel pathway, including on-site renewable energy mandates and heightened equipment efficiency standards. This places a disproportionate burden on developers pursuing all-electric designs, particularly because, based on NAIOP member feedback, no technically equivalent alternative currently exists that can replicate the reliability, responsiveness and regulatory compliance these systems provide. As a result, this language could ultimately disincentivize the outcomes the Codes are intending to promote.

II. NAIOP Opposes the Passive House Mandate for Buildings over 12,000 SF in Section CC101.2

The proposed revisions under Section CC101.2 would require R-2 multifamily buildings over 12,000 square feet to comply with the Specialized Opt-in Code exclusively through the C407.3 Passive House pathway. This change would eliminate the compliance pathway optionality currently available to developers and design teams. This change is significant from both a cost and complexity standpoint and would remove flexibility the project teams have relied on under the existing code. NAIOP is deeply concerned that removing flexibility previously available to developers and designers while increasing project costs and implementation challenges will only serve to make housing development more difficult.

III. NAIOP Supports Sections C407.1.1.5; CC106.1; and C402.5.2

C407.1.1.5 TEDI Limits

NAIOP supports the addition of a separate TEDI limit for buildings under 40,000 square feet. This change directly addresses feedback from project teams who have encountered challenges meeting the existing TEDI thresholds on smaller projects, and NAIOP is grateful for its incorporation into the proposed draft. Establishing a dedicated limit for this building size category is a practical and welcome improvement. NAIOP urges DOER to retain this language, unamended, in the finalized Codes.

C106.1 Additional Electric Infrastructure

NAIOP supports the proposed modifications to the Additional Electric Infrastructure section of the Municipal Opt-in code, and hopes that these modifications will be retained, unamended, in the finalized Codes. The revised language provides design professionals with greater flexibility to plan and design future electrification infrastructure.

C402.5.2 Air Leakage Compliance

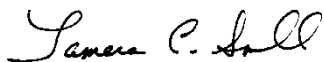
NAIOP would also like to record strong support of the proposed additional exceptions included within Section C402.5.2 Air Leakage Compliance, which provide alternative compliance options and increased flexibility for air leakage testing of projects undergoing Alterations, Additions, and roof replacement work.

NAIOP strongly encourages DOER to incorporate this feedback into the finalized codes. Practical requirements are necessary to keep new development feasible and support the production of housing and commercial space in the Commonwealth.

NAIOP Massachusetts represents the interests of companies involved with the development, ownership, management, and financing of commercial and multifamily properties. NAIOP has over 1,800 members involved with office, lab, industrial, mixed use, multifamily, retail, and institutional space across the Commonwealth. NAIOP's membership includes both market rate and affordable multifamily housing developers.

Please contact me or NAIOP's Senior Vice President of Policy and Public Affairs, [Anastasia Daou](#), if you have any questions.

Sincerely,



Tamara Small
Chief Executive Officer
NAIOP Massachusetts, The Commercial Real Estate Development Association



MASSACHUSETTS FOREST ALLIANCE

249 Lakeside Avenue, Marlborough Massachusetts 01752-4503
www.MassForestAlliance.org | (617) 455 - 9918 | info@MassForestAlliance.org

June 24, 2026

Becca Edson
Department of Energy Resources
100 Cambridge St, 9th Floor
Boston, MA 02114

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Christopher Egan
Executive Director

Ms. Edson:

We're writing with some thoughts on proposed updates to the Massachusetts Stretch Code. Thanks for your willingness to accept public feedback on these changes.

We were pleased to see that you retained eligibility for modern wood heat (referred to as "clean biomass systems" in the code) for mixed-fuel buildings. This makes a lot of sense. Modern wood heat systems are proven decarbonizers, especially with wood that has already been cut for another purpose or chipped. Pellets made from sawdust are a perfect example, as sawdust will release its carbon in a short timeframe, so using it to displace fossil fuels offers a significant carbon benefit. Wood chips made as a byproduct of sawmill or wood product use, such as end cuts, slabs, and other residues are in a similar position.

DOER has years of experience monitoring the wood supply for the Alternative Energy Portfolio Standard (APS), which these systems are eligible for, so you can be confident of both the sustainability of the fuel sourcing and the decarbonization benefits.

We're less certain about the potential removal of other wood heat systems from these standards. Many air-source heat pump installers have recommended wood stoves or pellet stoves as a supplemental heat source – in fact, DOER staff have predicted a rise in wood and pellet stove installations as a result. A wood stove can run without electricity on the coldest days, helping decrease power usage in our future winter-peaking grid. Supplemental heat from a wood or pellet stove is also much cheaper for Massachusetts residents compared to electric resistance heating, which is often used as the massively inefficient, power-hungry backup to air-source heat pumps on the coldest days – stressing the grid even further.

It's unclear to us whether a supplemental heating source like a wood or pellet stove is or isn't allowed under these proposed changes, as some language refers to "primary" biomass heating systems, while other language does not use the word "primary" and would seem to then apply to supplemental heating systems as well. DOER should work to reduce this potential confusion and explicitly permit these stoves as a supplemental/backup heating source.

Advocating for a Strong, Sustainable Forest Bioeconomy

If DOER *is* attempting to effectively ban wood and pellet stoves in any community that adopts the stretch code or specialized code, that would be a decision that would cause significant public pushback and pressure on politicians, as we saw when New York state contemplated this not long ago. Regulators and politicians panicked and frantically reversed course in the face of massive opposition that united voters across the political spectrum. This would be an extremely risky choice, particularly in an election year.

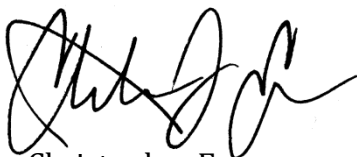
There is also the issue of the rural electric grid. We have corporate members in rural towns that have relied on generators, because **they couldn't get enough electricity from the weak rural electric grid to run their everyday business operations**. Often, we find policymakers in Boston haven't given a moment of thought to the implications of policies in rural areas. What works fine in suburban and urban areas may not be realistic or may have significant added costs in rural areas. Upgrading the rural grid to handle electric heat and transportation for all would be extremely costly and add to utility bills at a time when the administration and legislature are searching for any possible avenue to reduce these costs.

Finally, masonry heaters may be able to meet the stringent requirements for clean biomass systems in the code. These heaters burn a load of cordwood at extremely high temperatures (up to 2,000 degrees Fahrenheit) for a short period, which burns off gases and particulates, and thus greatly reduces emissions. Their much cleaner exhaust is sent through long, winding channels before exiting the home, allowing the masonry elements to absorb the heat, which they slowly radiate out into the living space for up to 24 hours. As a result, masonry heaters are the most efficient cordwood systems, typically 85-90% efficient. Like a wood stove, they also run without any electricity – protecting against extended power loss where even solar and batteries combined would struggle to run a whole-house air-source heat pump system for more than a short time. This is an old technology that has been reborn in recent years in Europe but is now arriving here as well.

However, DOER would need to change the definition of clean biomass systems to make them eligible, as the stretch code only permits pellet boilers (and also wood chip boilers in commercial settings). We believe you should look further into these systems, and we stand by ready to help you do so.

Thank you for your consideration of these comments. Should you have any questions, I can be reached at cegan@massforestalliance.org or 617-645-1191.

Sincerely,

A handwritten signature in black ink, appearing to read 'Chris Egan', with a stylized, cursive script.

Christopher Egan
Executive Director



NORTHEAST HOME ENERGY RATING SYSTEM ALLIANCE

PO Box 808
Northampton, MA 01061

6/24/26

Department of Energy Resources
c/o Becca Edson
100 Cambridge Street, 9th Floor
Boston, MA 02114

Dear Ms. Edson,

These comments are submitted on behalf of the Northeast Home Energy Rating System Alliance (NEHERS)'s Energy Code Committee. The NEHERS Alliance was formed in 1998 to foster, unify and promote HERS programs in the Northeast and we represent over 250 rater members, plus over 50 RFI, Modeler, and HERS Rater candidates in training. The Energy Codes Committee is responsible for reviewing the Residential Energy Code with respect to HERS Raters concerns and taking actions where appropriate to attempt to improve the clarity and implementation of the Residential Energy Code.

The biggest concern that our members have expressed relates to the change in definition of Conditioned Space in Section R202.

This approach differs from the 2021 IRC definition and methodology used for conditioned floor area calculations and does not align with current HERS modeling practices or the methodologies commonly used for energy modeling and HVAC load calculations, which generally utilize exterior building dimensions when determining conditioned floor area. As written, the proposed definition would require the deduction of exterior wall thickness when calculating conditioned floor area, ADU size, and addition size.

While this change may better align with real estate appraisal methods and living area calculations under ANSI Z765, it creates inconsistencies with HERS ratings, energy code compliance, and heating and cooling load calculations. The result could be two different conditioned floor area values for the same building depending on the purpose of the calculation, which may lead to confusion and unintended compliance issues.

In addition, this change could affect the applicability of code provisions and compliance pathways that are based on square footage thresholds. For example, ADU size determinations, addition size calculations, and other provisions that rely on conditioned floor area could produce different results depending on whether the area is measured to the interior or exterior face of the walls. This may create uncertainty for designers, builders, raters, and code officials when determining compliance.

These public comments are intended to express a snapshot of the biggest concerns of the HERS industry about the proposed amendments, and we encourage our members to submit their own additional comments for clarification.

The Northeast HERS Alliance appreciates the opportunity for public comment, and we encourage the DOER to reach out to us with any questions or concerns,

Thank You!

A handwritten signature in black ink that reads "Michael Rossi". The signature is written in a cursive, flowing style.

Michael Rossi

NEHERS Energy Code Committee Chair

On behalf of the NEHERS Energy Code Committee



June 24, 2026

Commissioner Elizabeth Mahony
Department of Energy Resources
100 Cambridge Street, 9th Floor
Boston, MA 02114

ELECTRONIC SUBMISSION: stretchcode@mass.gov

Dear Commissioner Mahony,

On behalf of Vicinity Energy ("Vicinity"), we would like to thank you and the team at the Department of Energy Resources ("DOER") for publishing the recent Guideline on District Energy Systems under the Massachusetts Stretch and Specialized Codes (225 CMR 22.00 and 23.00) ("Guidelines"). We greatly appreciate DOER's engagement and collaboration with Vicinity throughout this process.

We are proud of the important role district energy plays in decarbonizing buildings in the Commonwealth of Massachusetts and remain committed to supporting and advancing the state's efforts to reduce greenhouse gas emissions through practical, affordable solutions.

Electrification is central to Vicinity's decarbonization strategy. Rather than relying on fossil fuels, Vicinity is transitioning to electric-powered technologies, including an electric boiler, industrial-scale heat pumps, and thermal energy storage, to produce clean steam, known as eSteam™, for distribution to customers. In 2024, Vicinity's electric boiler came online, marking a significant milestone in reducing emissions from district energy systems in Boston and Cambridge.

We appreciate the revisions to Section C407.2.1 regarding electrification and documentation requirements for highly ventilated buildings, particularly the provision allowing district energy systems ("DES") operating under an approved Order of Conditions ("OoC") to serve these facilities. Laboratories, hospitals, and similar building types often face unique ventilation requirements that can limit the practicality of heat recovery. This update removes a significant barrier and provides a more flexible, cost-effective pathway for these facilities to advance the Commonwealth's decarbonization goals while supporting affordable sustainability.

Absent to this revision, many highly ventilated buildings would be required to install redundant heating systems at considerable expense, diminishing both the economic and environmental benefits that district energy systems are designed to provide. By contrast, experience in Europe has demonstrated that modern district energy networks powered by centralized, industrial-scale heat pumps can achieve coefficients of performance ("COP") that exceed the efficient electrification benchmarks established in the February 2025 Stretch and Specialized Code updates. This change appropriately recognizes the value of these systems and creates a practical pathway for highly ventilated buildings to meet—and potentially exceed—the Commonwealth's emissions reduction targets through qualified district energy solutions.



Additionally, we appreciate the inclusion of clarifying language in Section C202 General Definitions related to the Decarbonization and Efficient Electrification Plan ("DEEP").

A key component to Phase II of Vicinity's electrification plan is the installation of our first heat pump: a water-source industrial-scale heat pump, the largest industrial-scale system in the world. Using the Charles River as a renewable heat source, the system will generate steam by transferring thermal energy from the river into Vicinity's district energy network. Importantly, the project has been designed with environmental protection as a priority: it will safeguard the river ecosystem and return water at a cooler temperature. Construction is currently underway and the heat pump will be operational by early 2028. It will be the first of several heat pumps in both Cambridge and Boston.

Similar systems are already operating successfully in cities such as Glasgow, Copenhagen, and Drammen, Norway, demonstrating the effectiveness and scalability of large-scale river-source heating technologies. The integration of this industrial-scale heat pump into Vicinity's clean energy portfolio, will help solidify Massachusetts as an international leader in clean district energy and affordable sustainability, while directly supporting the Commonwealth's climate goals.

Thank you again for your continued leadership and partnership. As the owner and operator of the nation's largest portfolio of district energy systems, Vicinity remains committed to advancing innovative district energy solutions that support the Commonwealth's climate objectives while demonstrating that decarbonization and affordable sustainability can go hand in hand.

Sincerely,

A handwritten signature in black ink, appearing to read "KH", written in a cursive style.

Kevin Hagerty
CEO

Edson, Becca (ENE)

From: davisgm@comcast.net
Sent: Wednesday, June 24, 2026 3:12 PM
To: STRETCHCODE (ENE)
Subject: Stretch Code Public Comment

CAUTION: This email originated from a sender outside of the Commonwealth of Massachusetts mail system. Do not click on links or open attachments unless you recognize the sender and know the content is safe.

I have the following comments or recommendations:

- Clarification if de-rating of cavity and continuous insulation is not required as part of RESCheck for residences in 225 CMR 22
- Clarify definition of allowed commercial low energy uses that may not be required to be within thermal envelope such as: auto repair spaces, auto body shops, low energy required storage spaces, warehouses for 225 CMR 23

GLENN R. DAVIS, A.I.A.

DAVIS / ARCHITECTS

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View our website www.glenndavisarchitects.com

Visit www.artseekerconcierqe.com to view Architect site sketches

25 ans (2001-2026) de creation architecturale

Edson, Becca (ENE)

From: Granetz, Brian <Brian.Granetz@skanska.com>
Sent: Wednesday, June 24, 2026 3:12 PM
To: STRETCHCODE (ENE); Edson, Becca (ENE)
Subject: Stretch and Specialized Energy Code Comments

CAUTION: This email originated from a sender outside of the Commonwealth of Massachusetts mail system. Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Hello,

Please see my comments below regarding the proposed stretch and specialized energy code changes.

Residential Code

Section R406.5 ERI-based compliance and Table R406.5 MAXIMUM ENERGY RATING INDEX – The added footnote “d” requires all ADU’s meet the same HERS rating regardless of whether they are a conversion of an existing building or a new structure. Achieving the specified HERS ratings in conversions can prove challenging when working in existing buildings. I recommend allowing ADU conversions within existing structures be required to meet the HERS ratings specified under the “Major alterations or additions” category.

TABLE RC102.2, RC103.2, & RC104.2, MAXIMUM HERS RATING INDEX – Recommend revising the wording of the proposed footnote “c” to clarify that the specified HERS rating is only applicable to detached new ADU’s, as the proposed language appears to be in conflict with the current and proposed wording of **RC101.1 Scope** and **R101.2 Application**, which state that existing buildings are exempt from the Specialized Opt-in code and shall comply with Chapter 5. The footnote “c” is also missing from the table.

Commercial Code

Section C202 GENERAL DEFINITIONS, ALL-ELECTRIC BUILDING – Recommend striking the word “outdoor” within the definition of **ALL-ELECTRIC BUILDING, Exception b**. Back-up power generators may be located indoors for a variety of reasons including limited roof space / competing uses, improved acoustics, and preferable maintenance access.

Section C203 GENERAL DEFINITIONS, MIXED-FUEL BUILDING – Recommend striking the word “outdoor” within the definition of **MIXED-FUEL BUILDING, Exception a**, and eliminating the reference to fuel oil piping and combustion equipment located inside the building. Back-up power generators may be located indoors for a variety of reasons as described above. It is also commonplace for emergency generators to be located on the roof of a building, with fuel oil piping running through the building to serve the generator. This is particularly true in urban areas with limited outdoor space, and is also preferable from an acoustic and air quality perspective. Emergency generators are typically required by the Building Code to meet life safety and standby power requirements, and there is not currently a practical alternative. As written, the definition would classify these buildings as “Mixed-Fuel” even when all other building systems are all-electric, adding additional stringency to multifamily projects and disincentivizing the implementation of all- electric building systems.

Section CC101.3 Compliance, Item 3 Mixed Fuel pathway – Recommend striking the word “outdoor” within the definition of **MIXED-FUEL BUILDING, Exception a**, and eliminating the reference to fuel oil piping and combustion equipment located inside the building for the same reasons as described above. As written, the definition would classify buildings with indoor emergency generators and/or indoor fuel oil piping serving emergency generators as “Mixed-Fuel” even when all other building systems are all-electric. There are numerous buildings permitted in Boston within the past year that meet these criteria. Specific to the Municipal Opt-In code, this change adds additional stringency associated with the Mixed-Fuel Building Pathway, including on-site renewable energy requirements and more stringent equipment

efficiency requirements. These items will have a disparate impact on buildings in urban environments, disincentivizing the implementation of all-electric building systems and the adoption of the Municipal Opt-In code.

Thanks,

Brian Granetz

Senior Manager – Development
Skanska USA Commercial Development

101 Seaport Boulevard, Suite 200
Boston, MA 02210, United States
Mobile +1 617 448 1488

Skanska USA

usa.skanska.com

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Think twice before you press "print."

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BUILDING DEPARTMENT
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Public Comment on 225 CMR – Energy Code Requirements for Accessory Dwelling Units Within Existing Buildings

To Whom It May Concern:

We are submitting these comments regarding the implementation of 225 CMR and its impact on the creation of Accessory Dwelling Units (ADUs), particularly those established within existing spaces of existing buildings.

Massachusetts has taken significant steps to encourage the development of ADUs as a means of increasing housing opportunities. However, certain provisions within 225 CMR may unintentionally create barriers to the conversion of existing spaces into legal ADUs. In many cases, existing basements, attics, in-law apartments, or other permitted living areas are well-suited for conversion to code-compliant ADUs with only limited modifications. Requiring these spaces to fully comply with current energy code requirements can significantly increase project costs and may discourage property owners from creating legal rental units.

Table R406.5 Maximum Energy Rating Index – Footnote d

This footnote would benefit from additional clarification. The language stating that the existing dwelling unit "does not matter with respect to the HERS rating" may be interpreted differently by designers, HERS raters, code officials, and applicants.

To avoid confusion, the footnote should explicitly state that the existing dwelling unit is not required to be included in the HERS rating calculation for the ADU. Clear language identifying the scope of the rating would improve consistency in application and enforcement throughout the Commonwealth.

R503.1.5 Extensive Alterations and Level 3 Alterations – Item 3

This section appears redundant or potentially confusing.

Item 1 establishes that the work must meet the IRC definition of an extensive alteration and exceed 1,000 square feet. Item 3 states that the requirements apply when the alteration exceeds 1,000 square feet and meets certain additional criteria.

As written, the provision could be interpreted in two different ways:

1. Any alteration exceeding 1,000 square feet is subject to the requirements regardless of whether it qualifies as an extensive alteration; or



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2. The requirements only apply to alterations that meet the definition of an extensive alteration, with Item 3 providing additional qualifying conditions.

Additional clarification would help ensure uniform interpretation and enforcement by local building departments and design professionals.

R505 Change of Occupancy or Use – R505.1 General

This section should specifically address situations where an existing permitted living space already functions as a complete dwelling unit but is not currently recognized as a Protected Use ADU.

Examples include existing in-law apartments, finished basements, finished attics, or other legally constructed spaces that contain sleeping areas, bathrooms, kitchens, and living spaces. In many cases, conversion to a compliant ADU may require only limited improvements such as emergency escape and rescue openings, smoke and carbon monoxide protection upgrades, utility separation, or other life-safety improvements.

Requiring these existing spaces to fully comply with all current energy code requirements may make many ADU projects financially infeasible. Compliance may necessitate substantial upgrades to wall insulation, ceiling insulation, window performance, air sealing, blower door testing, and other building envelope components that are unrelated to the limited scope of work necessary to establish the ADU.

Because ADUs are often relatively small units, achieving the required HERS ratings can be particularly challenging within existing buildings. The ratio of exterior envelope area to conditioned floor area can make compliance difficult without extensive and costly upgrades to otherwise serviceable building components. These costs may outweigh the economic benefits of creating the ADU and ultimately reduce the number of housing units added to the Commonwealth's housing stock.

Thank you for your consideration of these comments.

Respectfully submitted,

Dennis Morel
Building Inspector
City of Newburyport, Massachusetts



Becca Edson
Department of Energy Resources
100 Cambridge Street, 9th floor
Boston, MA 02114

June 24, 2026

By Electronic Submission to stretchcode@mass.gov.

Re: Massachusetts Stretch and Specialized Energy Code Updates 2026

The Department of Energy Resources (DOER) is currently accepting comments on the proposed updates to the Massachusetts Stretch and Specialized Stretch Energy Codes. The updates are intended to align the code with the Commonwealth's climate goals, improving energy performance, expanding electrification pathways, and provide additional guidance for renovations, additions, and alternative compliance pathways. The City of Boston has adopted the Specialized Stretch Code and therefore the proposed updates will automatically apply to the City's code.

Overall, the City of Boston is supportive of the updates to the Stretch and Specialized Stretch Energy Codes and believe the updates move the code in a positive direction to further support the Commonwealth's building decarbonization goals. For example, the City supports proposed clarifications related to thermal envelope requirements¹ and DOER's efforts to provide greater clarity on biomass and solid-fuel provisions², and compliance requirements for renovations and additions.

Regarding changes made to clarify the requirements for buildings utilizing District Energy Systems, the City is generally supportive of updates that further clarify requirements for district energy systems and decarbonization pathways³, which can support long-term emissions reductions and reduce peak demand overall. For example, the clarification for Decarbonization and Efficient Electrification Plan (DEEPs) to phase out electric resistance heating in favor of more efficient electrification technologies.

However, the City believes additional clarity may be helpful, particularly for buildings connected to district steam systems or alternative thermal energy networks that are relying on an approved DEEP pathway and District Energy System Order of Conditions. While the proposed revisions improve understanding of how these buildings may initially qualify under the code, questions remain regarding how building classifications may be affected if a district energy provider's Order of Conditions and/or DEEP is subsequently modified, delayed, revoked, or

¹ MA 2025 Commercial Stretch code and Specialized Opt-in code (IECC2021 with MA amendments) DOER Proposed Updates Draft 12-17-25 (Page 5 & 11).

² MA 2025 Commercial Stretch code and Specialized Opt-in code (IECC2021 with MA amendments) DOER Proposed Updates Draft 12-17-25 (Page 4).

³ MA 2025 Commercial Stretch code and Specialized Opt-in code (IECC2021 with MA amendments) DOER Proposed Updates Draft 12-17-25 (Page 5).



otherwise fails to meet applicable requirements. In particular, it seems these buildings would then be subject to the classifications “all-electric” and “mixed-fuel” but it is unclear the compliance pathway forward. Additional guidance on how compliance and building classification would be treated in these circumstances would provide greater certainty to project proponents and code officials. The City recommends that DOER provide clearer definitions or decision-making criteria such as guidelines to show illustrative examples and support consistent implementation across stakeholders involved.

Finally, through experience, the City has identified continued reliance on cross-references between residential, commercial, Stretch Code, and Specialized Stretch Code provisions. For example, certain provisions require users to navigate multiple code sections to determine applicable requirements which increases the likelihood of inconsistent interpretation. The City recommends reducing any unnecessary cross-referencing where feasible and providing a more consolidated guidance document or compliance check lists to reduce administrative burden and any confusion for applicants, designers, local code officials, and developers.

The City of Boston supports the overall direction of the proposed code updates and believes these updates will further advance building decarbonization, energy efficiency, and alignment with the Commonwealth’s and Boston’s climate goals. The comments and recommendations above are intended to improve clarity, consistency, and enforceability of the Specialized Stretch Energy Code and support successful implementation across municipalities and various projects.

Sincerely,

Oliver Sellers-Garcia
Green New Deal Director, Office of Mayor Michelle Wu
Commissioner of the Environment Department, City of Boston



Becca Edson
Department of Energy Resources
100 Cambridge Street, 9th floor
Boston, MA 02114

June 24, 2026

By Electronic Submission to stretchcode@mass.gov.

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The City of Boston supports the overall direction of the proposed code updates and believes these updates will further advance building decarbonization, energy efficiency, and alignment with the Commonwealth’s and Boston’s climate goals. The comments and recommendations above are intended to improve clarity, consistency, and enforceability of the Specialized Stretch Energy Code and support successful implementation across municipalities and various projects.

Sincerely,

Oliver Sellers-Garcia

Green New Deal Director, Office of Mayor Michelle Wu
Commissioner of the Environment Department, City of Boston

Edson, Becca (ENE)

From: Diedrich Harms <diedrich.a.harms@gmail.com>
Sent: Wednesday, June 24, 2026 4:16 PM
To: STRETCHCODE (ENE)
Subject: Stretch Code Public Comment

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Greetings,

The current code removes section C402.1.3 for the R Value component method, however ANSI 90.1 utilizes R Values to determine C and F factors. Additionally, the code does not define these values or how to calculate them, requiring access to a separate document that is concealed in a foot note.

Recommend the code directly include provisions for floors and below grade walls to avoid confusion and to simplify compliance.

Best,
Diedrich

6/24/26

The Department of Energy Resources
100 Cambridge Street, 9th Floor
Boston, MA 02114

MA STRETCH ENERGY CODE UPDATE PUBLIC COMMENTS

Please accept these public comments on behalf of the Mass Save CSCS Initiative. This items are FAQs received from our Energy Code Technical Support Hotline and do not appear to be addressed in the proposed updates:

1. Please provide code clarity: For projects that include alterations to existing conditioned space being altered and converted to an ADU's.
 - Does this scenario require ERI compliance if the work is not considered an Extensive or level 3 Alteration?
 - If so, would it have to comply with ADU column or the Major Alteration column of Table R406.5?
2. Please simplify the language found in R503.1.5.
 - Proposed new language:
R503.1.5 Extensive Alterations and Level 3 Alterations.
Alterations that meet any of the following criteria shall require the building or dwelling unit to comply with the maximum HERS ratings for alterations, and additions shown in Table R406.5:
 1. Alterations that exceed 1000 sq ft and exceed 50% of the existing conditioned floor area of the dwelling unit
 2. Alterations that meet or exceed 100% of the existing conditioned floor area of the dwelling unit
 3. For projects including both alterations and additions, if the alteration exceeds 1,000 sq ft, and the addition exceeds 600 sq ft.Exception: Work areas in which the alteration work is exclusively plumbing, mechanical or electrical shall not be included in the computation of the alteration.
3. Please provide code clarity: Do Specialized Code buildings using the ZE buildings path require pre-wiring for future electrification? The definition of NZ building states "...where fossil fuels are utilized , a building fully pre-wired for future electrification...". This definition for NZ buildings has caused some confusion around the ZE path.
4. Please provide code clarity: Does compliance with R502.1.1 (Large Additions) or R503.1.5 (Extensive Alterations and Level 3 Alterations) require compliance with Table R406.2? Compliance with R406.5 is clear and footnote (b) to Table R406.5 would suggest

compliance with R406.2 is required but it is not clear. Some mention of Table R406.2 in footnote (c) would easily clear up confusion around this question

Edson, Becca (ENE)

From: Bobby de Sousa <bobbydesousa@gmail.com>
Sent: Wednesday, June 24, 2026 4:38 PM
To: STRETCHCODE (ENE)
Subject: Stretch Code Public Comment

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Please see my public comments to the stretch energy code updates below:

1. Fix potential loophole: Currently R503.1 requires compliance with R503.1.1 through R503.1.4 and omits compliance with R503.1..5. This could be interrupted as meaning that R503.1.5 is not required.
2. Fix potential loophole: The DOER Proposed change to R505.1 requires compliance with R503.1.1 through R503.1.4 and omits compliance with R503.1.5. If not intentionally, this would mean that R503.1.5 is not applicable to Change of Occupancy or Use. .

--

Thank You,
Bobby de Sousa

June 24, 2026

Elizabeth Mahony
Commissioner
Department of Energy Resources
100 Cambridge Street, 9th floor
Boston, MA 02114

Via: stretchcode@mass.gov cc: Paul Ormond (paul.ormond@mass.gov)

RE: Boston Green Ribbon Commission Higher Education Working Group (HEWG)
comments on the Massachusetts Department of Energy Resources Stretch & Specialized
Commercial Code Proposed Changes and Guideline for District Energy Systems

Dear Commissioner Mahony:

The Boston Green Ribbon Commission Higher Ed Working Groups wishes to thank you for inviting review and comment on proposed changes to the Energy Code, especially as they relate to district energy systems and for the State's continued leadership on climate action. We appreciate prior collaboration among DOER, the Boston Green Ribbon Commission Higher Education Working Group, Association of Independent Colleges and Universities in Massachusetts (AICU Mass), and institutional district energy system owners to develop a practical pathway for building-level relief where decarbonization is being implemented at the district system scale, via a District Energy System Order of Conditions (OoC) pathway.

We remain committed to working together to advance our shared net-zero goals and strongly support the core concept of a Decarbonization and Efficient Electrification Plan (DEEP) as the basis for a District Energy System Order of Conditions (OoC). As Owners and operators of district energy systems as well as the buildings those district systems serve, we have practical feedback on the proposed code changes as well as the companion Draft Guidelines for District Energy Systems. We have provided detailed feedback on the proposed code changes and highlighted the sections of the Draft Guideline for District Energy Systems we would like to further discuss. We feel we have shared goals of having a policy framework that provides an achievable decarbonization plan that is outcome-based, flexible, pragmatic and administrable by building officials.

Stretch & Specialized Commercial Code Proposed Changes

Item 1: Section C202 General Definitions. Definition for DECARBONIZATION AND EFFICIENT ELECTRIFICATION PLAN (DEEP).

The proposed definition is recommended to rely on DOER's Guideline on District Energy Systems for the required content for a DEEP rather than in a term definition.

Recommended change to the Code to remove the details on the DEEP and put pragmatic guidance in the guidance document. In addition, we suggest DOER define "Qualified DES" and "non-qualified DES" directly in both the code and guideline.

Suggested revision:

DECARBONIZATION AND EFFICIENT ELECTRIFICATION PLAN (DEEP). A long-term plan to decarbonize and efficiently electrify a district energy system submitted to the Department of Energy Resources (DOER) as a condition of receiving a District Energy System Order of Conditions and detailed further in DOER's Guideline on District Energy Systems.

~~A DEEP shall contain the following information:~~

- ~~1. A detailed plan, containing intermediate milestones and supporting documentation, to decarbonize and efficiently electrify a district energy system by 2050 with intermediate progress milestones;~~
- ~~2. A commitment to phase out the use of fossil fuels and electric resistance heating;~~
- ~~3. Detailed descriptions of existing DES infrastructure, operations, growth projections, and end users;~~
- ~~4. A commitment to annual reporting of milestones including actual production by energy source; and~~
- ~~5. Other information necessary to ensure the decarbonization and efficient electrification a district energy system by 2050 and any intermediate milestones.~~

Item 2: Section C202 General Definitions. Definition for DISTRICT ENERGY SYSTEM ORDER OF CONDITIONS.

The proposed definition is recommended to rely on DOER's Guideline on District Energy Systems Part C to establish administrative procedures for Order of Conditions, not as part of a term definition. It is recommended the final sentence is not included.

Recommended change:

DISTRICT ENERGY SYSTEM ORDER OF CONDITIONS. A document issued by the Commonwealth of Massachusetts Department of Energy Resources which regulates the decarbonization and efficient electrification of all energy inputs of a district energy system for the purposes of building energy code compliance based on the information provided in a district energy system's decarbonization and efficient electrification plan. ~~The Department of Energy Resources may revoke a district energy system order of conditions for failure to comply with a condition specified therein.~~

Item 3: Exceptions for highly ventilated buildings. New requirements are proposed to highly ventilated buildings connecting to a district energy system requiring the building to install heat pumps, which is duplicative building-level electrification. Regardless of if the district energy system is heat recovery enabled or not, if the system has a district energy system order of conditions in good standing from the Commonwealth of Massachusetts Department of Energy Resources, the exemption for installing heat pumps on a building should be applied consistently since the order of conditions will have already gone through the diligence of approving the DEEP and establishing enforceable district level electrification over time.

Recommended Version:

C407.2.1 Electrification and documentation for highly ventilated buildings. Buildings using the Relative Performance Pathway (C407.2) because average ventilation at full occupancy is greater

than 0.5 cfm/sf shall have space heating electrified in accordance with Section C401.4.1 and shall submit design documents showing ventilation system design and air flow rates as required

Exceptions:

1. Space heating uses provided by a *heat recovery enabled* district energy system ~~which is transitioning to a heat recovery enabled district energy system and~~ subject to a district energy system order of conditions in good standing from the Commonwealth of Massachusetts Department of Energy Resources.
- ~~2. Prior to 1 January 2035, space heating uses in an existing building provided by a district energy system subject to a district energy system order of conditions in good standing from the Commonwealth of Massachusetts Department of Energy Resources. From 1 January 2035 through 31 December 2045, these space heating uses shall be electrified in accordance with Section C401.4.1 except 25% of the building's peak space heating may be reduced to 10%.~~
- ~~3. Prior to 1 January 2035, space heating uses in a new building provided by a district energy system subject to a district energy system order of conditions in good standing from the Commonwealth of Massachusetts Department of Energy Resources. Such systems shall be electrified in accordance with Section C401.4.1, except 25% of the buildings peak space heating may be reduced to 10%. From 1 January 2035 through 31 December 2045, these space heating uses shall be electrified in accordance with Section C401.4.1, except 25% of the building's peak space heating may be reduced to 15% by Section C103.2 part 16.~~

Draft Guideline for District Energy Systems

In addition to our comments to the proposed code changes, there are several sections in the Guideline for District Energy Systems (Guidelines) we would appreciate the opportunity to discuss further with DOER.

Overall, the guiding recommendations are to;

- Focus DEEP review on system outcomes: declining fossil fuel heat production, increasing recovered/efficient electrified heat, overall system efficiency, peak-load management, and milestone progress.
- Enable flexibility over time by being technology-neutral and recognizing the realities of developing a multi-decade plan. Allow for unknown or underdeveloped technology advancements.
- Avoid duplicative reporting by using existing MassDEP, EIA, APS, BERDO, BEUDO, LBER, and other energy/emissions reporting wherever possible.

Specific sections we would like to discuss include;

- **Section B. Decarbonization and Efficient Electrification Plans**

- Provide flexibility for reliability, transition, and innovation, especially in thermal energy storage (1.a Minimum Standards for Heat Recovery Enabled DES and Non-Heat Recovery Enabled DESs and 1.b Additional Minimum Standards for Heat Recovery Enabled DESs)
- Support strong demand reduction, but allow alternatives to EnerPHit, REVIVE, or Passive House retrofit standards where those standards are not feasible for laboratories, hospitals, museums, historic buildings, central plant facilities, or specialized academic uses. Accept equivalent strategies such as ASHRAE audits, recommissioning, controls upgrades, heat recovery, lab ventilation optimization, envelope renewal, building performance standard compliance plans, and measurable capital renewal programs. (1.c Demand Reduction Minimum Standards for DES Served Buildings Owned or Operated by the DES Provider and 2.f Demand Reduction Strategies)
- For initial DEEP approval, require enough system and component information to validate the pathway, but avoid requiring excessive component-level details and design as the primary ongoing compliance metric (2.a Existing Conditions and 2.b Future Decarbonized Conditions and 2.e Equipment Design and Specifications)
- Recognize multi-year infrastructure implementation to treat planning, feasibility studies, utility coordination, permitting, design, procurement, construction, distribution upgrades, and building conversions as valid interim milestones. (2.c Transition and Milestones)
- Replace rigid production caps with managed growth and emissions trajectories (2.d Maximum DES Growth and Utilization)

- **Section C. District Energy System Order of Conditions**

- Use a systems-performance approach to DEEP content and reporting.
- Avoid duplicative reporting by using existing MassDEP, EIA, APS, BERDO, BEUDO, LBER, and other energy/emissions reporting.

- **Section D. Examples of Buildings Connecting to Qualified DES and Buildings Connecting to not Qualified DESs**

- Enhanced relief for highly ventilated and highly glazed existing buildings connected to DESs.

On behalf of the HEWG, we thank you for your partnership and we look forward to continued collaboration on achieving shared goals to address climate change. We look forward to discussing our comments in more detail.

Sincerely,

Boston Green Ribbon Commission Higher Ed Working Group Co-chairs

Dennis Carlberg, AIA, LEED AP BD+C
Chief Sustainability Officer &
Associate Vice President for Climate Action
Boston University

Jacob Glickel
Director of Sustainability Operations
Northeastern University

cc: Heather Henriksen, Harvard University
Steve Lanou, MIT
Julie Newman, MIT
Dano Weisbord, Tufts University
Lindsey Butler, Boston Green Ribbon Commission
John Cleveland, Boston Green Ribbon Commission
Azanta Thakur, Boston Green Ribbon Commission

June 24, 2026

To: Massachusetts Departments of Energy Resources
100 Cambridge Street, 9th floor, Boston, MA 02114.

From: Massachusetts Energy Marketers Association

Subject: **Comments – Massachusetts Stretch Code & Specialized Code**

On behalf of the Board of Directors and membership of the Massachusetts Energy Marketers Association (MEMA), we respectfully submit the following comments regarding the Massachusetts Stretch Energy Code and Specialized Energy Code.

Founded in 1955, MEMA is the statewide trade association representing the heating oil, diesel fuel, propane, and renewable liquid biofuel industries throughout the Commonwealth. Our membership includes retail heating oil and propane companies that collectively serve more than 800,000 homes and businesses across Massachusetts, wholesale fuel suppliers, renewable liquid biofuel and biodiesel producers and distributors, leading U.S. manufacturers of oil- and propane-fired heating equipment, and state-certified heating and cooling technicians.

In addition to providing traditional heating fuels, many of our member companies also sell, install, and service electric heat pump systems.

Association Position on Energy Affordability and Electrification Policies, Laws, and Regulations in Massachusetts

The Massachusetts Stretch Energy Code and Specialized Energy Code (225 CMR 22.00) represent a significant component of the Commonwealth's strategy to reduce greenhouse gas emissions and transition away from fossil fuels for space heating.

While MEMA supports efforts to improve energy efficiency and reduce emissions, we believe the current regulatory framework has contributed to substantially higher construction costs, created significant barriers to the installation of heating oil and propane systems in new construction, and added to an already challenging energy affordability environment for Massachusetts residents and businesses. The cumulative effect of these policies is that the costs associated with climate change mitigation are increasingly being borne by homeowners, renters, and employers across the Commonwealth.

The affordability of home heating and energy remains a major concern for Massachusetts families and businesses. Likewise, the cost of installing high-efficiency heating systems—whether in existing homes or new construction—continues to rise. These concerns are widely shared by residents, policymakers, legislators, and Governor Maura Healey’s administration.

Massachusetts residents already face some of the highest electricity costs in the nation, with the Commonwealth consistently ranking among the states with the highest retail electric rates. Monthly utility bills are increasingly burdened by delivery charges and program assessments that fund a variety of public policy initiatives, including the approximately \$4.5 billion Mass Save program and infrastructure investments associated with transportation electrification.

Historically, Mass Save provided incentives for a variety of high-efficiency heating technologies, including oil, propane, and natural gas systems. Today, however, program incentives are overwhelmingly directed toward electric heat pumps. As a result, many homeowners effectively subsidize a program through monthly utility surcharges while receiving limited support for heating technologies other than electrification. This shift has narrowed consumer choice even though Massachusetts residents continue to fund the program through charges collected by the six Mass Save Program Administrators: National Grid, Eversource, Liberty, Unitil, Berkshire Gas, and Cape Light Compact.

MEMA also questions the assumption that widespread electrification alone will deliver the environmental benefits often claimed by its proponents. While electric heat pumps are frequently characterized as “clean” technologies, the environmental impact of electrification depends heavily on the source of the electricity used to power them. On most days, the region’s electric grid remains heavily dependent on natural gas and other fossil-fuel generation resources, while renewable resources continue to represent a relatively modest share of the overall electricity supply.

Furthermore, the ability of the electric grid to accommodate substantial increases in demand resulting from building and transportation electrification remains uncertain. The operational challenges experienced during the winter of 2025–2026 underscored the long-term reliability and capacity concerns facing the region’s electric system. As Massachusetts pursues aggressive electrification goals, policymakers must carefully consider whether the existing grid infrastructure can reliably and affordably support the significant increase in electricity demand that these policies are intended to create.

Suggested Code Revisions

For these reasons, MEMA urges state regulators and policymakers to pursue a more balanced, technology-neutral approach to emissions reductions—one that preserves consumer choice, promotes energy affordability, recognizes the contributions of renewable liquid fuels, and ensures that reliability and cost impacts are fully considered before imposing additional restrictions on heating technologies used by Massachusetts residents and businesses.

We recommend that MA DOER allow new homes using high-efficiency propane furnaces, propane boilers, or advanced oil-fired equipment to qualify under a separate performance path if they meet a specified energy-use target.

Instead of focusing on fuel type, the code could focus total annual energy consumption building envelope performance and carbon emissions per square foot. This would let builders choose the lowest-cost heating technology for the site while still meeting state efficiency goals.

We also believe MA DOER should ease electric-readiness requirements for certain systems. Current provisions require future heat-pump circuits and designated equipment locations even when a builder installs oil or propane equipment.

The code could be amended to waive some future-electrification wiring requirements for homes installing ultra-high-efficiency propane or oil systems and allow for smaller electrical services where full heat-pump conversion is unlikely.

MA DOER should also recognize the importance of biofuel blends in heating oil and the emergence of renewable propane.

MA DOER should coordinate with MassDEP on the development of a Clean Heat Standard and the code might consider crediting renewable propane, biodiesel blends for heating oil and future low-carbon liquid fuels. Builders could earn compliance credits when installing equipment certified to operate on those fuels.

Respectfully submitted,

Michael Ferrante | President

Massachusetts Energy Marketers Association | 36 Jonspin Road | Wilmington, MA 01887

June 23, 2026

RE: 2026 Stretch Code Update Comments

On behalf of the Propane Gas Association of New England (PGANE), which represents propane marketers, suppliers, equipment manufacturers, and distributors across Massachusetts, we appreciate the opportunity to provide comment regarding the Massachusetts Department of Energy Resources' (DOER) proposed changes to the Stretch & Specialized Codes. Our members provide clean-burning and critical energy to residential, commercial, industrial, and agricultural customers across the Bay State.

The Commonwealth of Massachusetts boasts a robust propane market, having nearly 258,000 retail accounts and accounts and 106,000 primary home heating customers. Massachusetts' propane industry provides thousands of good-paying jobs and generates more than \$1 billion in economic activity annually.¹

While PGANE supports efforts to make buildings more efficient and environmentally-friendly, the proposed Massachusetts Stretch & Specialized Code amendments would make several changes that would alter the buildings marketplace – residential homes and commercial buildings – that our members serve. To be clear, we share DOER's desire to reduce greenhouse gas (GHG) emissions and improve the energy efficiency of the built environment. However, as outlined below, there are several provisions in the proposal that are worrisome to PGANE and the hundreds of propane marketers that serve the commonwealth. Importantly, DOER should welcome any and all means to reduce emissions from building stock. Codes should focus on improving efficiency and shrinking the carbon footprint of buildings, not simply fuel-switching to preferred energy sources.

I. 225 CMR 220 – Residential

The current code changes seek to require additional compliance measures for buildings that utilize propane for end-use applications, such as space heating, water heating, and cooking applications. We believe the code should not require a lower Home Energy Rating System (HERS) index score for propane buildings over all-electric buildings.

As proposed, mixed-fuel buildings must achieve a lower HERS Index score than their all-electric counterparts.² To achieve a lower HERS score and adhere to more stringent standards, builders must spend more time and money on things such as tightening the building envelope, upgrading doors and windows, increasing insulation levels, installing more efficient appliances, or adding onsite renewable energy resources. None of these things on their own are necessarily bad things. However, DOER is making the construction of propane-fueled

¹ Propane's Impact on Economy, 2021 Massachusetts, National Propane Gas Association, (2024), https://www.npga.org/wp-content/uploads/2024/05/Massachusetts_2024.pdf

² MA 2025 Commercial Stretch code and Specialized Opt-In code, Massachusetts Department of Energy Resources, (December 17, 2025), <https://www.mass.gov/doc/225-cmr-2300-redline/download>

buildings more expensive than equivalent all-electric structures. And it's doing so under a false premise. Chiefly, that electric buildings powered by grid electricity are more efficient and environmentally-friendly than those powered by propane or natural gas.

A. Grid Electricity

Bay Staters have long relied on propane for space and water heating, fireplaces, cooking, and clothes drying. The direct use of propane is a clean and efficient way to consume energy. It is important to remember that electricity, unlike propane, is a secondary energy source that must first be created. Grid electricity is extremely inefficient and energy is lost during each step of the production and delivery process. For example, 81 percent of Massachusetts' in-state generation for bulk electricity comes from burning fossil fuels, including natural gas and petroleum.³ The efficiency of a typical natural gas plant, however, is only 44 percent; the efficiency of a petroleum-fired power plant is a paltry 30 percent.⁴ Following power generation, additional energy is lost during the transmission and distribution of that electricity to an outlet for an end-use purpose.⁵ These inherent inefficiencies mean that more GHGs, as well as air pollutants, are released.

For context, the federal government's Energy Star Program gives propane a source-site ratio of 1.01, compared to 2.80 for electricity from the grid.⁶ This means it takes 2.80 units of electricity to produce and deliver one unit of energy to a home, compared to only 1.01 for propane. As such, it should be no surprise that conventional propane has a carbon intensity (CI) score of 77 in Massachusetts,⁷ far lower than the commonwealth's CI score for utility-scale electricity. Importantly, DOER needs to utilize source, not site, energy metrics when evaluating the true energy efficiency of various fuels and applicable building stock. Relying only on how much electricity is used within a building ignores all of the additional energy required to produce and deliver that electricity to a home or building for an end-use application. Utilizing a full fuel-cycle analysis, it is clear that the direct use of propane is a clean and climate-friendly way to consume energy. DOER officials should focus less on the type of energy used to power a building and more on its overall energy efficiency and emissions. And building codes should reflect this. As currently proposed, these building codes will, in many cases, simply shift emissions from one sector of the economy (buildings) to another (power generation).

B. All-Electric Buildings Definition

As currently proposed, an all-electric building may include buildings that use primary fuels, including propane, for outdoor energy applications, such as grills, decorative heaters, pool heaters, and backup power

³ Electricity Data Browser: 2024 Annual Massachusetts, U.S. Energy Information Administration, (2026), <https://www.eia.gov/electricity/data/browser/#/topic/0?agg=2.0.1&fuel=vtvv&geo=002000000002&sec=008&freq=A&start=2021&end=2022&ctype=linechart<ype=pin&rtype=s&maptype=0&rse=0&pin=>

⁴ Table 8.1. Average Operating Heat Rate for Selected Energy Sources, U.S. Energy Information Administration, (2024), https://www.eia.gov/electricity/annual/html/epa_08_01.html

⁵ *How much electricity is lost in electricity transmission and distribution in the United States?*, U.S. Energy Information Administration, (November 7, 2023), <https://www.eia.gov/tools/faqs/faq.php?id=105&t=3>

⁶ *Energy Star Portfolio Manager, Technical Reference*, U.S. Environmental Protection Agency, (August 2023), <https://portfoliomanager.energystar.gov/pdf/reference/Source%20Energy.pdf>

⁷ *Understanding Carbon Intensity – New England*, Propane Education and Research Council, (2022), <https://propane.com/resource-catalog/resources/understanding-carbon-intensity-new-england/>

generators.⁸ This definition is appropriate and should remain unchanged in the finalized code. Outdoor equipment is distinct and separate from interior building energy applications and should be treated as such by the applicable building codes.

C. Biomass Definition

The proposed definition of “biomass” for code compliance purposes is good and should not be revised. It is correct to include gases and liquids within this broader definition as they can be produced from non-fossilized materials, including fats, oils, greases, forest wastes, and animal residue. This recognition is important as our industry continues to make investments in the production and consumption of renewable propane. In addition to retaining all of the same environmentally-friendly attributes as traditional propane, renewable propane has an even lower carbon intensity.⁹ In California, renewable propane being used as a vehicle fuel has a carbon intensity score as low as 20.5, far less than other energy sources.¹⁰ Renewable propane is chemically identical to our conventional molecule and can be used as a drop-in replacement in all building combustion applications – furnaces to cooktops.

D. Net Zero Building Definition

The definition of a net zero building is problematic and should be revised. Mixed-fuel buildings can and do achieve net zero energy building designations. The updated definition of a net zero building states that “where fossil fuels are utilized, a building fully pre-wired for future electrification.” A net zero building simply produces as much renewable energy onsite as its total energy consumption annually. There is no reason, going forward, a mixed-fuel building that adheres to these standards also needs to be pre-wired for future electrification efforts. Net zero homes and buildings are already much more expensive to design and build than traditional buildings. Further increasing construction costs will unfairly and unnecessarily push the market away from efficient mixed-fuel buildings that seek this beneficial status.

I. 225 CMR 23.00 – Commercial

Revisions to DOER’s original proposal seeks to require that, starting in January 2035, district energy systems installed in commercial buildings shall be electrified.¹¹ District energy systems are an extremely efficient and cost-effective means to provide space heating, water heating, and steam to multiple interconnected buildings simultaneously. While most of these systems are served by natural gas, propane provides an option to power district energy systems in parts of the commonwealth that are not served by utility natural gas. Heating water, especially in large amounts, is very energy-intensive and propane’s high Btu content makes it a perfect fuel source to serve this application. However, state mandates to electrify these systems in the near future will cause most building owners to forgo the consideration of propane. Instead of requiring a commitment to

⁸ MA 2025 Residential Stretch code and Specialized Opt-in code (IECC2021 with MA amendments), Massachusetts Department of Energy Resources, (August 29, 2025), <https://www.mass.gov/doc/225-cmr-2200-clean/download>

⁹ *Staff Summary, Renewable Naphtha and Renewable Propane from Distillers’ Corn Oil, Used Cooking Oil, and Rendered Animal Fat*, California Air Resources Board, (April 30, 2021), https://ww2.arb.ca.gov/sites/default/files/classic/fuels/lcfs/fuelpathways/comments/tier2/b0189_summary.pdf

¹⁰ *Id.*

¹¹ MA 2025 Commercial Stretch code and Specialized Opt-in code (IECC2021 with MA amendments), Massachusetts Department of Energy Resources, (December 17, 2025), <https://www.mass.gov/doc/225-cmr-2300-clean/download>

phase out the use of fossil fuels in these systems, DOER should, instead, seek commitments by building owners to increase the total energy efficiency of these systems and reduce aggregate GHG emissions.

A. Section CC 106 – Wiring for Future Electrification

Code officials have created a new section within the stretch energy code that requires an all-electric retrofit design approved by code officials. It also requires that the electric service installed within the building shall be “sufficient to accommodate the all-electric retrofit design,” and requires a paper trail to show the future replacement of combustion equipment-based systems with equivalent electric alternatives.

This wiring requisite for building stock in applicable municipalities will again increase the design and construction of propane-powered buildings, including those that are already extremely energy efficient and environmentally-friendly. It is expensive to procure and install high-capacity electrical panels and subsequent electric equipment for the purpose of providing electricity to end-use applications that are not yet in service. All-electric buildings are not required to pay for the installation of the supply equipment for thermal fuels – propane or natural gas – and it doesn’t make sense to place this electrification burden on mixed-fuel buildings either.

Thank you very much for the opportunity to provide comments on these proposed Massachusetts Stretch & Specialized Codes.

Sincerely,

Leslie Anderson
President
Propane Gas Association of New England



Date: 24 June 2026

To: Paul Ormond and Ian Finlayson, Department of Energy Resources

From: Christopher N. Grey, Matthew J. Colturi, Mary C. Arntzen, and Other Contributors.
Simpson Gumpertz & Heger, Inc. (SGH)

Subject: Code Comments, 225 CMR 23: Massachusetts Commercial Stretch Energy Code
Comments on 2025 MA Stretch and Specialized Code

The following document summarizes our comments on the 2025 Massachusetts Commercial Stretch Energy Code, including new proposed redlines dated 17 December 2025. We include 18 comments. Each comment provides general background commentary and recommendations.

1. NEW COMMENTS FOR 2026 PUBLIC COMMENT PERIOD

Comment 1. Section C401.2.2, Item 2 – HERS Compliance

General Comment: The proposed redlines reference RESNET MINHERS Interim Addendum 78i for sampling. The purpose of this addendum is to eliminate sampled ratings for single-family homes and townhouses. Sampling procedures are established in RESNET MINHERS Chapter 6 per Addendum 46.

Recommendation: We recommend revising the redline text to reference RESNET MINHERS Addendum 46.

Comment 2. Section C402.5.2 – Air Leakage Compliance

General Comment:

The addition of Exceptions 4 and 5 regarding air leakage compliance for existing buildings (alterations, additions, and change of use) lacks clarity and specificity on how alternate compliance methods are met. Further, the language identifying who is responsible for determining the practicality of the air leakage test and required approval is narrow. Exceptions requiring the written approval of the code official to forego testing effectively require a variance review process for each project that is prone to inconsistent implementation between code officials and jurisdictions.

- The following provisions exist in new versions of the model energy standards and codes that do not require measurement of air leakage for alterations:
 - ASHRAE 90.1-2022 (Addendum av published 31 December 2024):
“**Section 5.1.4.6 Air Barrier.** Building envelope assemblies altered... shall have a continuous air barrier... The air barrier shall be made continuous with

- an existing air barrier where present in adjacent assemblies provided access is unobstructed. Measurement of air leakage... shall not be required.”
- IECC 2024:
“**C503.2.7 Air barrier.** Altered building thermal envelope assemblies shall be provided with an air barrier... Such air barrier need not be continuous with unaltered portions of the building thermal envelope. Testing requirements... shall not be required.”
 - The options provided in Exception 5 could be transferred to the technical guidance document, given that existing code sections more precisely define these provisions.
 - Exception 5b notes that alternate compliance with the air leakage requirement can be shown by testing representative sections, but representative sections are not clearly defined. The terminology “representative...portions” is referenced in Section C402.5.2.1 regarding testing portions of large (>50,000) new construction buildings, however, representative sections for these building types may be different.
 - Exception 5c notes several diagnostic (qualitative) air leakage tools, but lacks reference to industry standards for such testing. Section C402.5.2 Exception 1 references ASTM E1186 (smoke and infrared) for diagnostic testing, which can be identified as required testing in the air barrier design and documentation per Section C402.5.1.1 Item 5.
 - Exception 5d does not reference any explicit deliverables that would qualify as “demonstrating how existing and new air barrier is being connected”, where framework is outlined in Sections C402.5.1.1 and C402.5.2.3

Recommendation: We recommend revising C402.5.2 Exceptions 4 and 5 to the following:
Exception 4: For projects following Section C502, conduct air leakage testing in accordance with C402.5.2.1 or C402.5.2.2, as applicable, unless in the written opinion of the registered design professional or as approved in writing by the code official, air leakage testing is not practical due to enclosure limitations in which case the buildings shall be permitted to comply with Sections C402.5.1 and C402.5.2.3.

Exception 5: Air leakage testing in accordance with C402.5.2.1 is not required for existing building projects following Sections C503, C504, and C505 unless the project includes 100% replacement of the building enclosure’s air barrier including all walls, fenestrations, and roofing systems in which case projects shall be permitted to conduct air leakage testing both before and after planned improvement to demonstrate a reduction in post-improvement measured air leakage rate from pre-improvement air leakage rate. Projects following Sections C503, C504, and C505 where the air barrier is being altered shall be permitted to comply

with Sections C402.5.1 and C402.5.2.3, and shall include connections between new and existing air barrier.

Commentary:

Existing buildings undergoing repairs, alterations, and change of occupancy or use are more challenging to meet the requirements for whole building air leakage testing. In circumstances that do not include 100% of the building enclosure being altered, it is reasonable to instead require field verification in lieu of whole building air leakage testing. In addition, for some additions it may be reasonable to perform whole building air leakage testing of the addition; in some cases, the addition may be an extension of the existing space where it is not practical to perform testing. In these cases, verification is an acceptable alternative.

Comment 3. Section C402.7.1 – Derating and Thermal Bridges, General

General Comment: Current code requires thermal bridging be accounted for at all conditioned space. Auxiliary back of house spaces detached from the building thermal envelope and primary conditioned space typically include freeze protection, which qualifies as conditioned space. Lower interior setpoints reduce the temperature difference across exterior wall assemblies, thereby reducing the energy loss significance of a thermal bridge. The effect of thermal bridges, which are calculated for fully conditioned spaces, is disproportionately applied to semi-heated spaces where lower setpoints are maintained for freeze protection purposes. Further, space conditioning equipment for small spaces is driven by worst-case failure tolerance and transient conditions (e.g. door opening, rapid recovery from cold-soaked condition). Spaces requiring freeze protection can often fall outside of the main building envelope, such as electric closets or fire protection rooms located within non-conditioned garages or similar non-conditioned structures. The benefit of thermal breaks is reduced in semi-heated spaces, and thermal breaks can be impractical to construct at the floor level of semi-heated spaces located within structures such as garages where continuous concrete slabs are integral to the structure. It is reasonable to provide pre-calculated assembly U-factors, C-factors, and/or F-factors at semi-heated spaces to comply prescriptively with the requirements set forth in Table C401.2, without taking into account the effect of thermal bridges.

Recommendation: Add the following exception to Section C402.7.1 or Section C402.7.3: Non-regularly occupied semi-heated spaces, as defined by ASHRAE 90.1-2019, that are separated from the primary conditioned building thermal envelope and serve only auxiliary or support functions, not exceeding 500 ft² or 5% of the conditioned floor area, whichever is less. Heating systems serving these spaces shall be equipped with automatic temperature controls.

Comment 4. Section C505 – Change of Occupancy or Use

General Comment:

As the code language is currently written, we understand that if there is a change of use/occupancy that increases energy usage in a space, that space must be upgraded to meet new code (with some exceptions). We have encountered challenges on various projects with this requirement, including the following considerations:

- Existing buildings completed within the last 10 years may not meet current requirements and may require replacing relatively new materials to meet the new code requirements
- Some projects are interior-only type projects (i.e. fit-outs) that do not impact the exterior, and it can be challenging to upgrade the exterior (particularly when fit-outs are only on portions of buildings vs. the entire building)
- Projects with unitized curtain wall façade systems spanning past floor lines can make it challenging to make upgrades to localized spaces.
- Tenant improvements may be made by tenants on the interior, but upgrades may require building owner decisions, making upgrades challenging.
- Unclear understanding of what represents an increase in energy usage (i.e. what to compare it to for baseline and how to quantify impact).

We feel it is reasonable to approach change of occupancy or use projects depending on the type of project and the elements impacted. For example, a whole building project that affects the exterior may be more reasonable to require exterior upgrades; for interior-only projects, this appears less reasonable.

Recommendation: We recommend revising Section C505.1 with the following redlines: Spaces undergoing a change in occupancy that would result in an **at least 5%** increase in either total ~~modeled~~ annual fossil fuel use or total ~~modeled~~ annual energy use, **either confirmed in writing by a registered design professional or modeled in accordance with ANSI/ASHRAE/IESNA 90.1**, shall comply with Sections C401.3, C402 through C406, and Section C408. **Where the change in occupancy does not result in at least 5% increase in either total modeled annual fossil fuel use or total modeled annual energy use, projects shall be considered Alterations per Section C503.** Where the use in a space changes from one use in Table C405.3.2(1) or C405.3.2(2) to another use in Table C405.3.2(1) or C405.3.2(2), the installed lighting wattage shall comply with Section C405.3. Where the space undergoing a change in occupancy or use in a building with a fenestration area that exceeds the limits of Section C402.4.1, the space is exempt from Section C402.4.1 provided that there is not an increase in fenestration area.

Exceptions:

1. Where the component performance alternative in Section C402.1.5 is used to comply with this section, the proposed UA shall not be greater than 110% of the target UA.
2. Projects complying with C401.2 (New construction pathways)

3. Projects complying with C506 (EnerPHit standard).
4. Interior tenant fit outs having an area of 20% or less of the total building area and which do not include changes to the adjacent existing exterior wall and/or glazed wall system shall be considered Alterations per Section C503. Changes to existing punched window fenestration, when brought into compliance with Section C402.4.3 and which derate window U-value due to the fenestration to exterior wall intersection linear thermal bridge, shall not disqualify the interior fit out from this exception. Derating of the window U value shall be determined in accordance with Equation C402.7.3 where the U values shown in the equation is the U value of the window and the Atotal value shown in the equation is the area of the window.

Commentary:

Changes of use or occupancy are often projects impacting only the interior conditions and/or rooftop equipment. Requiring a change of use or occupancy to meet new construction requirements may end up requiring existing enclosure elements to be replaced, which may be contrary to sustainability goals. This exception allows for interior-only fit-outs and fit-outs that affect only portions of the exterior (that are not increasing energy usage by more than 5% as demonstrated by energy modeling) to comply as alterations, only.

2. UPDATED COMMENTS FROM PREVIOUS PUBLIC COMMENT PERIODS**Comment 5. C503.1 – Alterations – Existing Wall Cavities**

General Comment:

The current exception that allows for wall cavities and ceiling cavities which were uninsulated to be filled with insulation (without meeting code u-factor requirements) is limited to localized removal of interior finishes up to 10 ft². The area threshold is impractically low, and requires exterior wall upgrades to localized areas that do not deliver significant improvement in energy use of a space or occupant comfort.

Recommendation: Revise Exception 7 under Section C503.1 as follows:

“Wall cavities that are exposed during construction shall comply with Section C402.1.4. Localized removal of interior finishes ~~up to 10 ft²~~ when the cavity is exposed across the full inter-story height of a wall area or 200 square feet, whichever is less, does not require upgrading the wall assembly for compliance with Section C402.1.4.”

Comment 6. C202 Glazed Wall System Definition Clarification

General Comment: The definition of a glazed wall assembly is unclear and differs from the examples given in the technical guidance document. The code definition states that it is a system consisting of “both vision glass and/or spandrel sections”, but the technical guidance indicates that both spandrel and vision glazing shall be included. We recommend updating

the definition of a glazed wall assembly; our understanding from discussions with DOER is that the intent is to ensure higher performance for systems that bypass slabs (i.e. multi-story systems) or extend continuously across the façade (i.e. ribbon windows). Coordinate definition with notes in the technical guidance document.

Recommendation: Section C202: Revise the definition for Glazed Wall System as follows:

Glazed Wall System: System consisting of ~~any combination of fenestration assemblies,~~ including both vision glass and ~~or~~ spandrel sections, to create an above-grade wall that is designed to separate the exterior and interior environments ~~and is not installed within discrete individual openings separated from adjacent fenestration by opaque wall construction.~~ These systems include, but are not limited to, curtain walls, window walls, and storefront windows.

Comment 7. C503.2 – Existing Spandrel Section U-factor

General Comment:

There is currently no prescriptive U-factor for spandrel assemblies. Most spandrel assemblies will not comply with opaque U-factors listed in Table C402.1.4. For additional information, see Thermal Performance of Spandrel Assemblies in Glazing Systems Research Roadmap, Phase 1 (<https://www.pankowfoundation.org/our-work/research-grants/exterior-wall-systems/sustainability/thermal-performance-of-spandrel-assemblies-in-glazing-systems-research-roadmap-phase-1/>) and Phase 2 (<https://www.pankowfoundation.org/our-work/research-grants/exterior-wall-systems/sustainability/01-23-thermal-performance-of-spandrel-assemblies-in-glazing-systems-testing-and-modeling-phase-2/>). This is particularly challenging on existing building situations where there is a replacement of a localized area of spandrel glass/spandrel panels. We recommend including a prescriptive target specific to existing building situations, based on tabulated default performance values for spandrel assemblies which have been included in several state-level energy codes (e.g., California, Washington, New York).

Recommendation: C503.2.5: Add Section C503.2.5 as follows:

C503.2.5 Spandrel Sections: Existing window replacements are not subject to the requirements for glazed wall systems; existing window replacements shall meet the requirements of Table C402.4. Spandrel assemblies that are replaced shall meet a prescriptive U-factor based on the Table below.

TABLE C402.1.4.2
EFFECTIVE U-FACTORS FOR SPANDREL PANELS^a

FRAME TYPE	SPANDREL PANEL	RATED R-VALUE OF INSULATION BETWEEN FRAMING MEMBERS						
		R-4	R-7	R-10	R-15	R-20	R-25	R-30
Aluminum without Thermal Break ^b	Single glass pane, stone, or metal panel	0.242	0.222	0.212	0.203	0.198	0.195	0.193
	Double glass with no low-e coatings	0.233	0.218	0.209	0.202	0.197	0.194	0.192
	Triple or low-e glass	0.226	0.214	0.207	0.200	0.196	0.194	0.192
Aluminum with Thermal Break ^c	Single glass pane, stone, or metal panel	0.211	0.186	0.173	0.162	0.155	0.151	0.149
	Double glass with no low-e coatings	0.200	0.180	0.170	0.160	0.154	0.151	0.148
	Triple or low-e glass	0.191	0.176	0.167	0.159	0.153	0.150	0.148
Structural Glazing ^d	Single glass pane, stone, or metal panel	0.195	0.163	0.147	0.132	0.123	0.118	0.114
	Double glass with no low-e coatings	0.180	0.156	0.142	0.129	0.122	0.117	0.114
	Triple or low-e glass	0.169	0.150	0.138	0.127	0.121	0.116	0.113
No framing or Insulation is Continuous ^e	Single glass pane, stone, or metal panel	0.148	0.102	0.078	0.056	0.044	0.036	0.031
	Double glass with no low-e coatings	0.136	0.097	0.075	0.054	0.043	0.035	0.030
	Triple or low-e glass	0.129	0.093	0.073	0.053	0.042	0.035	0.030

- a. Opaque assembly U-factors based on designs tested in accordance with ASTM C1363 or NFRC 100 shall be permitted. Interpolation outside of the table shall not be permitted. Spandrel panel assemblies in the table do not include metal backpans.
- b. Aluminum frame without a thermal break shall be used for systems where the mullion provides a thermal bridge through the insulation.
- c. Aluminum frame with a thermal break shall be used for systems where a urethane or other nonmetallic element separates the metal exposed to the exterior from the metal that is exposed to the interior condition.
- d. Structural glazing frame type shall be used for systems that have no exposed mullion on the interior.
- e. No framing or insulation that is continuous shall be used for systems where there is no framing or the insulation is continuous and uninterrupted between framing.

*Table above is Table C402.1.4.2 from the 2020 NYCECC. Similarly, the Washington State Energy Code (Chapter 51-11C WAC) includes Table C303.1.5.

Comment 8. C402.7 Derating and Thermal Bridges

General Comment:

This section allows for prescriptive, reference, or model derating of assemblies. The prescriptive values are conservative for unmitigated thermal bridges and result in systems that will not meet code-required U-factors. The available reference values are limited for common commercial building applications in Massachusetts. This is resulting in projects that need to perform extensive 2D and 3D modeling to meet U-factors, yet no acceptable modeling standards are provided in the code (See Comment 10).

Recommendation:

We recommend that DOER request development of a thermal bridging guide with modeled conditions and reference psi values for commonly used assemblies. Some that are currently missing include mass masonry wall assemblies, roof-to-wall and wall-to-grade conditions, many wood-framed wall conditions, etc. For project-specific custom modeling, provide a list

of acceptable standards for determining the thermal bridging psi values. SGH is happy to assist with this effort of developing these modeled conditions, if desired by the DOER.

Comment 9. Section C402.1.5 Above Grade Walls within Below-Grade Conditioned Spaces & Inclusion in Component Performance Alternative

General Comment:

We are requesting clarification on the thermal requirements at conditioned below-grade spaces. Specifically, rooms that are within below-grade parking garages where the majority of the useable space is unconditioned, but the core contains conditioned spaces, such as the following:

- Spaces connected to the main thermal envelope (i.e. stairs and elevators)
- Spaces with both heating and cooling, but separated from the main thermal envelope (i.e. locker rooms, other misc. spaces)
- Spaces with heating only, with set points just above freezing to avoid freezing pipes (i.e. mechanical spaces, storage)

These spaces would be difficult to include in the C401.2.5 compliance path, as it is essentially impossible to eliminate the thermal bridging that occurs at the slab-to-wall intersection, as this is a key structural component (core) of the building. These spaces are also typically a small percentage of the building and exist within a below grade space that is tempered by the geothermal effect on the perimeter garage walls.

Recommendation: We recommend including the following clarification:

- Spaces connected to the main thermal envelope (i.e., stairs and elevators) – **Follow the prescriptive U-Factor requirements in Table C402.1.4 at all walls, ceilings, and floors that separate conditioned space from unconditioned space.**
- Spaces with both heating and cooling, but separated from the main thermal envelope (i.e. locker rooms, other misc. spaces) – **Follow the prescriptive U-Factor requirements in Table C402.1.4 at all walls, ceilings, and floors that separate conditioned space from unconditioned space.**
- Spaces with heating only, with set points just above freezing to avoid freezing pipes (i.e. mechanical spaces, storage) – **No thermal envelope required. Air Barrier Required.**

Comment 10. Section C402.7.3.3, Industry Standards for Modeled PSI value calculations.

General Comment:

Section C402.7.3.3 allows use of calculated PSI values based on two or three-dimensional finite element analysis, but does not provide a procedure or reference standard for calculations. There is no current American standard for PSI calculations to our knowledge, but there are industry standards from Europe (referenced by PHI/PHIUS and ASHRAE 90.1-2022) and Canada (CSA Z5010:2021).

Recommendations: C402.7.3.3: Add the following language to Section C402.7.3.3:
“Develop finite element models and perform calculations in accordance with ISO 10211:2017 or CSA Z5010:2021.”

Comment 11. Section C402.7.4, Spandrel Analysis

General Comment:

Refer to SGH Comment 7 above as well.

1. Spandrel panels are most often provided to conceal interior conditions such as intermediate floors or interior walls, or at individual penetrations such as structural members for canopies. Section C402.7.4 is unclear if thermal resistance of spandrels need to include linear thermal bridges (conditions listed in Section C402.7.3), or if the R-value of the spandrel system alone should be used. Section C402.7.4.3 requires three-dimensional modeling to calculate the spandrel R value when there are point thermal bridges, but Sections C402.7.4.1 and C402.7.4.2 do not require consideration of point thermal bridges. There are no requirements to include point thermal bridges (other than cladding attachment components) in the code.
2. Table C402.7.4.1 is limited only to differentiating spandrels within thermally broken or non-thermally broken curtain wall framing systems. Other variations impact spandrel thermal resistance including spandrel infill (e.g. glazing, metal panel) and insulation between framing members. We recommend providing tabulated default performance values for spandrel assemblies which have been included in several state-level energy codes (e.g., California, Washington, New York).
3. C402.7.4.3 requires three-dimensional modeling for thermal bridging in multiple planes, but does not reference published industry standards for a procedure. Additionally, there is not industry consensus on whether all spandrel sections require three-dimensional modeling. NFRC 100-2020 (referenced by IECC 2021) provides procedure to calculate spandrel U-factor only with two-dimensional modeling. ASHRAE RP-1365 and CSA Z5010 provide procedures for three-dimensional simulation, but are not specific to spandrel sections. Ongoing industry research has shown that three-dimensional modeling is recommended to accurately calculate thermal resistance of spandrel sections. For additional information, see Thermal Performance of Spandrel Assemblies in Glazing Systems Research Roadmap, Phase 1

(<https://www.pankowfoundation.org/our-work/research-grants/exterior-wall-systems/sustainability/thermal-performance-of-spandrel-assemblies-in-glazing-systems-research-roadmap-phase-1/>) and Phase 2
(<https://www.pankowfoundation.org/our-work/research-grants/exterior-wall-systems/sustainability/01-23-thermal-performance-of-spandrel-assemblies-in-glazing-systems-testing-and-modeling-phase-2/>).

Recommendations:

1. Section C402.7.4: Add the following sentence to Section C402.7.4:
(If both linear and point thermal bridges are required to be considered; recommended)
– “Thermal resistance of opaque spandrel sections shall include the effects of linear and point thermal bridges. Alternatively, spandrel sections shall be derated for linear thermal bridges where the spandrel section intersects intermediate floor, interior wall, roof/parapet, and point thermal bridges where the spandrel section intersects structural framing or MEP penetrations.”

(If both linear and point thermal bridges are not required to be considered; not recommended) – “Thermal resistance of opaque spandrel sections are not required to include the effects of linear and point thermal bridges and shall consider the spandrel section independently of intersecting building components.”
2. Replace Table C402.7.4.1 with Table C402.1.4.2 from the 2020 NYCECC (screenshot below).

TABLE C402.1.4.2
EFFECTIVE U-FACTORS FOR SPANDREL PANELS^a

FRAME TYPE	SPANDREL PANEL	RATED R-VALUE OF INSULATION BETWEEN FRAMING MEMBERS						
		R-4	R-7	R-10	R-15	R-20	R-25	R-30
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	Triple or low-e glass	0.129	0.093	0.073	0.053	0.042	0.035	0.030

- a. Opaque assembly U-factors based on designs tested in accordance with ASTM C1363 or NFRC 100 shall be permitted. Interpolation outside of the table shall not be permitted. Spandrel panel assemblies in the table do not include metal backpans.
- b. Aluminum frame without a thermal break shall be used for systems where the mullion provides a thermal bridge through the insulation.
- c. Aluminum frame with a thermal break shall be used for systems where a urethane or other nonmetallic element separates the metal exposed to the exterior from the metal that is exposed to the interior condition.
- d. Structural glazing frame type shall be used for systems that have no exposed mullion on the interior.
- e. No framing or insulation that is continuous shall be used for systems where there is no framing or the insulation is continuous and uninterrupted between framing.

3. Replace Section C402.7.4.3 with the following text:

Use a two-dimensional finite element analysis to calculate R-value of opaque spandrel section in accordance with NFRC 100-2020. A three-dimensional model is recommended, but not required*.

*If point thermal bridges required (see Item #1 in this comment), add “except when there are point thermal bridges”.

Comment 12. Section C402.1.5 - Glazed Wall System, Vision Glass Max Whole Assembly U-Factor

General Comment:

Section C402.1.5.1 and Section C402.1.5.2 state vision glass used in the glazed wall system shall have a maximum whole assembly U factor of U-0.25. The technical guidance document states that in certain cases, this maximum can be increased to U-0.30 (detailed on pg 7 of Attachment A, Envelope Performance and Thermal Bridge Derating).

Recommendations: If intended to allow for modifications from the required U-0.25, add the language from the technical guidance document to an exception in Section C402.1.5.1 and C402.1.5.2. We recommend modifying the technical guidance language as follows:

Remove the following requirement “the glazed wall system is a thermally broken, triple glazed, has two low-e coatings, and has argon filled cavities and warm edge spacer”. Some

projects may be able to achieve the COG U-factor without triple glazing (e.g. vacuum insulated glass), so this requirement is not needed.

Comment 13. Section C402.7.3 - Linear Thermal Bridge Conditions and Prescriptive PSI Values

General Comment:

The types of linear thermal bridges are listed inconsistently between Section C402.7.3 and Table C402.7.3.1, or it appears that some common conditions are missing. Thermal bridge type is unclear for horizontal to vertical wall intersections such as floor/soffit to vertical wall, and roof to vertical wall above (i.e. rising wall). These conditions are not considered parapets, and our understanding of vertical wall plane transition is for vertical-to-vertical intersections.

Recommendations:

Section C402.7.3: Add floor/soffit to the list of linear thermal bridge conditions.

Table C402.7.3.1: Revise “Type of Linear Thermal Bridge” to clarify linear thermal bridge type for horizontal-to-vertical intersections.

Comment 14. Section C402.7.3.2 - Linear Thermal Bridge Reference PSI Values

General Comment:

ASHRAE 90.1-2022 Table A10.1 contains Psi-factors and Chi-factors for thermal bridges based on data from ASHRAE Research Project 1365 and the BC Hydro Thermal Bridging Guide (which is already listed as an acceptable reference in C402.7.3.2). IECC 2021 references ASHRAE 90.1-2019. We recommend incorporating this table as an acceptable reference for Psi values.

Recommendations: Section C402.7.3.2: Add the following language after “BC Hydro Power Smart”: “or ASHRAE 90.1-2022 Table A10.1”.

Comment 15. Section C402.7.3 - Linear Thermal Bridge Free

General Comment:

With continuous exterior insulation, some linear thermal bridge conditions have a very low PSI value. Current reference materials do not include common details, forcing design teams to perform thermal modeling when there is minimal thermal bridging by inspection. Modeling requiring additional analysis work is not required where thermal bridging is effectively mitigated by continuous insulation or thermal break components, and should only be required where positive thermal bridges contributing significant additional transmission losses are not being accounted for in the clear field assemblies.

- Phius guidelines have defined thermal bridge-free construction $PSI < 0.006 \text{ BTU/hr-ft-F}$, and modeling of detail conditions where thermal bridging is mitigated is often deemed not required through the Phius design submission review process.
- Other industry standards currently in development (e.g. ASHRAE 227P) are developing language that allows designers to exclude conditions that are thermal bridge-free by inspection (e.g. including continuous insulation with no penetration or reduction in R-value of the insulating layer).
- We recommend adding language for similar conditions (for example, where an interior partition wall intersects the exterior wall or an exterior building corner, but the exterior wall has continuous insulation).

Recommendations: We recommend either allowing for PSI value of zero or including prescriptive PSI values that may only be used for mitigated linear thermal bridges, and defining “mitigated” as including continuous insulation with no penetration or reduction in R-value of the insulating layer.

Edson, Becca (ENE)

From: Stephen Welch <stephen@energycodeservices.com>
Sent: Wednesday, June 24, 2026 5:10 PM
To: STRETCHCODE (ENE)
Subject: Public Comments - Stretch Code

CAUTION: This email originated from a sender outside of the Commonwealth of Massachusetts mail system. Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Good afternoon to the Energy Codes and Policy Team.

Please accept the following proposed modification—and, in the alternative, its fallback counterpart—for your consideration and potential incorporation into the upcoming Stretch Code update:

IRC w/MA Amendments, Table 406.5 - Proposed Modification

Add an exception within Table 406.5, applicable as described in the table’s footnotes, for Accessory Dwelling Units (ADUs). The exception would establish that ADUs meeting any of the following conditions:

- are not detached structures, or
- are a partial or full conversion of a previously existing structure into an ADU, or
- satisfy both conditions,

hereinafter “*Qualifying ADUs*,” shall be subject to a 30-point differential increase applied to all values within the applicable row.

The above proposed is shown with modifications in red, underlined text:

TABLE R406.5
MAXIMUM ENERGY RATING INDEX

	Maximum HERS Index score ^{a,b}			
	New Construction Permits after 1- Jul-24	New Construction w/ R406.5.2 Embodied Carbon Credit	Accessory Dwelling Units (ADUs)/ <u>Qualifying ADUs^c</u>	Major Alterations, Additions, or Change of Use ^d
<i>Mixed-Fuel Building</i>	42	45	52/ <u>82</u>	65
Solar Electric Generation	42	45	55/ <u>85</u>	70
<i>All-Electric Building</i>	45	48	55/ <u>85</u>	70
Solar Electric & <i>All-Electric Building</i>	45	48	58/ <u>88</u>	75

^a Maximum HERS rating prior to onsite renewable electric generation in accordance with Section R406.5

^b The building shall meet the mandatory requirements of Section R406.2.

^c *Qualifying*: ADUs that are not detached structures, or that involve the partial or full conversion of an existing structure, or both.

^d Alterations, Additions or Change of use covered by Section R502.1.1 or R503.1.5 are subject to this maximum HERS rating, except for Historic Buildings which may opt to follow R503.1.1 for alterations, additions or change of use.

IRC w/MA Amendments, Table 406.5 - Proposed Modification (Fallback)

In the alternative, the proposed exception would establish that *Qualifying ADUs* are subject to the score values already assigned to the “Major Alterations, Additions, or Change of Use” category, specifically:

- Mixed-Fuel Building – 65;
- Solar Electric Generation – 70;
- All Electric Building – 70;
- Solar Electric & All-Electric Building – 75.

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Rationale

This approach provides several important benefits, including latitude for DOER to:

- Establish a realistic initial performance baseline — It enables the Stretch Code to reflect real-world conditions encountered in projects constructed within, or partially within, existing structures. This, while maintaining consistency with established construction practices and the energy-conservation characteristics expected under the Stretch Code. Additionally, data derived from audits of *Qualifying ADU* As-Built Ratings can be used to develop future criteria for *Qualifying ADUs*, helping ensure that point requirements remain grounded in actual, measurable performance outcomes for these dwelling types.

- Improve feasibility and affordability — Interim or conversion-based *Qualifying ADU* projects often face constraints not present in freestanding new-construction ADUs. Applying the Major Alterations / Additions / Change-of-Use point values makes compliance more achievable and cost-effective, while still upholding the overall intent and rigor of the Stretch Code.
- Align *Qualifying ADU* requirements with the Commonwealth’s housing production goals — By calibrating energy-conservation standards specifically for this limited ADU sector, the proposal advances the Commonwealth’s broader housing-production priorities, including those led by the Executive Office of Housing & Livable Communities (EOHLC). This alignment expands attainable housing opportunities — particularly for projects of or for undercapitalized property owners — while preserving responsible energy-performance expectations.

Please feel free to reach out to discuss any questions or points requiring clarification, including if you would like elaboration of the Rationale.

Please note: This proposal is submitted to represent my views, and with the endorsement of the Southeastern Massachusetts Building Officials Association (SEMBOA), by a vote of its membership and its Board of Directors.

Sincerely,

Stephen Welch

MA Building Official (Local Inspector) - 2270
RESNET HERS Rater – 3564425
PO Box 3777, Nantucket, MA 02584
(508) 783-7436 m.

Southeastern Massachusetts Building Officials Association



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June 24, 2026

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100 Cambridge Street, 9th Floor
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David Abbott
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RE: PUBLIC COMMENTS - STRETCH CODE

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MASSACHUSETTS
FEDERATION OF
BUILDING OFFICIALS

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This approach provides several important benefits, including latitude for DOER to:

- Establish a realistic initial performance baseline — It enables the Stretch Code to reflect real-world conditions encountered in projects constructed within, or partially within, existing structures. This, while maintaining consistency with established construction practices and the energy-conservation characteristics expected under the Stretch Code. Additionally, data derived from audits of *Qualifying ADU* As-Built Ratings can be used to develop future criteria for *Qualifying ADUs*, helping ensure that point requirements remain grounded in actual, measurable performance outcomes for these dwelling types.
- Improve feasibility and affordability — Interim or conversion-based *Qualifying ADU* projects often face constraints not present in freestanding new-construction ADUs. Applying the Major Alterations / Additions / Change-of-Use point values makes compliance more achievable and cost-effective, while still upholding the overall intent and rigor of the Stretch Code.
- Align *Qualifying ADU* requirements with the Commonwealth's housing production goals — By calibrating energy-conservation standards specifically for this limited ADU sector, the proposal advances the Commonwealth's broader housing-production priorities, including those led by the Executive Office of Housing & Livable Communities (EOHLC). This alignment expands attainable housing opportunities — particularly for projects of or for undercapitalized property owners — while preserving responsible energy-performance expectations.

Please feel free to reach out to discuss any questions or points requiring clarification, including if you would like elaboration of the Rationale.

Please note: This proposal is submitted to represent my views, and with the endorsement of the Southeastern Massachusetts Building Officials Association (SEMBOA), by vote of its membership and its Board of Directors.

Sincerely,

Stephen Welch

MA Building Official (Local Inspector) – BO-2270
RESNET HERS Rater – 3564425
PO Box 3777, Nantucket, MA 02584
(508) 783-7436 m.

Endorsement – Southeastern Massachusetts Building Officials (SEMBOA):

Michael Clancy

SEMBOA

Michael Clancy, President

and

MA Building Official (Building Commissioner) – BO-1239

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Kristen Meehan
Administrative Assistant
SEMBOA

Edson, Becca (ENE)

From: Mark Newey <mark.newey@airtightenergy.com>
Sent: Thursday, July 9, 2026 4:54 PM
To: Finlayson, Ian (ENE); Surana, Shilpa (ENE)
Cc: Edson, Becca (ENE); Ormond, Paul (ENE)
Subject: HERS index for residential change of use

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Hi all,

I commented in my public comments that we strongly oppose eliminating the HERS index requirement for residential change of use projects. I wanted to give you an example. We are working on a 132-unit hotel to multifamily conversion and are currently preparing HERS ratings for them. The starting HERS indexes prior to energy upgrades are shown below. Without improvement these dwelling units will use 3-5 times as much energy as the 2006 IECC!! Uninsulated walls, metal-framed windows, etc

Home Energy Rating Index Score Results

Based on the assumptions described above, we have calculated the following Preliminary Home Energy Rating results.

Dwelling Unit	HERS Index
Studio 1st floor corner	513
Studio 2nd floor corner	576
Studio 1st floor inside	316
Studio 2nd floor inside	396
1-BR 1st floor corner	346
1-BR 2nd floor corner	403
1-BR 1st floor inside	251
1-BR 2nd floor inside	323
2-BR 1st floor corner	288

2-BR 2nd floor corner	341
2-BR 1st floor inside	232
2-BR 2nd floor inside	291

Here is the package of improvements we are recommending to meet the HERS 65-70 requirement, which I think are pretty reasonable:

RECOMMENDED IMPROVEMENT PACKAGE:

Item	Upgrade
1	Install densepack cellulose in exterior wall cavities
2	Install 13" R-49 blown-in cellulose in attic
3	Install new windows with U:0.25, SHGC:0.30 in dwelling units
4	Add ERVs to every unit (Panasonic FV-06VE1)
5	Replace lighting with 100% LED lighting
6	Seal units thoroughly to reach an air tightness result (blower door) in each unit of 0.30 CFM/sqft shell area



Mark Newey, CPHC, LEED AP
 Managing Principal (he/him)
 413-587-0935
www.airtightenergy.com

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DOER Team,

Maybe you're already aware of this since I had sent emails about the discrepancy with CFA definitions for ADUs, and I'm sure others mentioned it too.

Similar but different situation with Conditioned Floor Area and the magical 12,000 sq ft number. Have you been asked to weigh in on this yet in this situation? If so, it would be worth adding something in code and/or technical resource documents.

I received the bottom image from an architect who had emailed PSD (who happens to also be our HERS provider). The architect was asking about CFA. PSD clearly states CFA is from the interior face of the wall, which aligns with the ADU law definition and they cite IECC definitions. The definition of "conditioned space" in code can be interpreted as being from the inside face of the walls "an area enclosed within the building thermal envelope".

However, for a HERS Rating, ANSI RESNET 301-2022 specifically includes the full width of a wall assembly. (image below)

I also emailed PSD to follow up on this, but do you agree there is a disagreement between these two definitions? It is coming up a lot due to the 12,000 sq ft number.

If you agree the two definitions do in fact disagree, then we ~~could~~ will have situations where the sum total of the HERS Rating CFA is over 12,000 sq ft, but the CFA as defined in the IBC/IECC is under 12,000 sq ft. I appreciate your thoughts on this.

Conditioned Floor Area (CFA)⁶ – The floor area of the Conditioned Space Volume within a building or Dwelling Unit, not including the floor area of Attics or crawlspaces, and basements below air sealed and insulated floors. The following specific spaces are addressed to ensure consistent application of this definition:

- The CFA shall include the floor area of the full width of a wall assembly that is within the Conditioned Space Volume.

Exception: If the subject Dwelling Unit shares a wall assembly⁷ with another Dwelling Unit, then the CFA of the subject Dwelling Unit shall extend to the midpoint of that shared wall assembly.

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Chris Zimmer

Sustainable Energy Analytics Inc.

271 Waverley Oaks Rd Suite 206, Waltham, MA 02452

o: 781-790-5718 | w: www.sea.us.com

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Request for Clarification –to avoid inconsistency of Low-GWP Concrete Credit (R406.5.2 / R406.5.4) Documentation Requirements

TO:

- Massachusetts Department of Energy Resources (DOER) – Building Energy Codes Program
- Board of Building Regulations and Standards (BBRS)
- RESNET Quality Assurance Providers and Program Administrators
- Energy Raters of Massachusetts

From:

Jay D. Smith
HERS Rater
South Shore Energy Raters, Hanover, Massachusetts

Subject: Clarification Request – Documentation Requirements for Low-GWP Concrete Mix Credit (R406.5.2 / R406.5.4)

Dear DOER, BBRS, and RESNET Quality Assurance Representatives,

I am writing as a certified HERS Rater actively performing energy code compliance ratings under the 2025 Massachusetts Stretch and Specialized Codes. I seek formal clarification regarding the documentation and verification requirements for the Low-GWP Concrete Mix Credit referenced in Sections R406.5.2 and R406.5.4 of the Massachusetts amendments to the IECC 2021.

Background

The code text currently states that the HERS Rater “must submit specific Environmental Product Declarations (EPDs) for concrete used in the unit ... verified by the ready-mix provider.” However, the code does not define how the rater should confirm that the concrete with the referenced EPD was actually used on site, what constitutes sufficient “verification” by the ready-mix provider, or whether additional documentation (such as delivery tickets or supplier letters) is required for compliance or QA review.

In practice, this lack of clarity has led to inconsistent implementation across the rating community. Some raters require verified plant-specific EPDs, supplier confirmation, and coverage calculations; others apply the 3-point credit automatically without supporting evidence. As a result, projects with identical specifications are receiving different HERS scores, depending solely on documentation rigor.

Concern

Without explicit guidance from DOER, BBRS, or RESNET, the Low-GWP credit is susceptible to misapplication in the field. The current language allows some raters to claim the 3-point credit without adequate documentation, which undermines both the intent of the code—to reward verified reductions in embodied carbon—and fair competition among raters. This situation creates

pressure on conscientious raters to either relax their standards to remain competitive or risk losing projects to those applying credits without proof.

Moreover, since RESNET Standard 301 §604 and Standard 205 §905.3 require that all modeled data be supported by verifiable evidence, the lack of clear direction places raters in a difficult position when determining how much proof is necessary to satisfy both code and QA obligations.

Requested Clarifications

To ensure statewide consistency and maintain the integrity of the verification process, I respectfully request written clarification on the following points:

1. Minimum Documentation: What constitutes the minimum acceptable documentation for the R406.5.2 credit? Is a plant-specific, third-party-verified EPD sufficient, or must the rater obtain proof that the specific mix was delivered and used on the project?
2. Verification Responsibility: Who bears responsibility for confirming compliance—the HERS Rater, the ready-mix supplier, or the builder of record?
3. RESNET QA Expectations: Will QA Providers be instructed to require supporting documentation (e.g., EPDs, delivery tickets, or supplier verification) when reviewing ratings that claim the Low-GWP credit?
4. Future Guidance: Does DOER or BBRS plan to issue supplemental guidance or a technical bulletin specifying minimum verification standards for embodied-carbon credits under R406.5?

Closing

Clarification of these points would ensure consistent application of the Low-GWP Concrete Mix Credit, prevent potential misuse, and align Massachusetts implementation with RESNET's national QA framework. As a participating rater committed to both accuracy and transparency, I would greatly appreciate official written guidance to maintain uniform practice across the rating community.

Thank you for your attention to this matter and for your ongoing efforts to strengthen Massachusetts' leadership in building-energy performance and carbon reduction.

Respectfully,

Jay D. Smith
South Shore Energy Raters
Hanover, Massachusetts
781-771-9119
jay@southshoreenergyraters.com

Edson, Becca (ENE)

From: Thomas Barnes <tom@hersenergy.net>
Sent: Wednesday, July 15, 2026 6:12 AM
To: Edson, Becca (ENE)
Subject: Re: Concrete Suppliers Low Embodied Credit in MA

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Yes, and please add it states in all the building codes that a qualified and certified person has to be involved with concrete verification, and HERS Raters have no training in this area nor can they be asked to do it in my opinion. For the Commonwealth of Massachusetts to ask a HERS energy person to certify something they have no training in or are not qualified to do put it squarely in the category of it's somebody else's responsibility not ours. I would suggest strongly that you look at this legally and practically. There are many many other professionals and ways to get this done.
Best Regards -

Tom Barnes
RESNET Certified
HERS Energy Rater
508-631-6633 to talk or text

On Jul 13, 2026, at 1:25 PM, Edson, Becca (ENE) <Becca.Edson@mass.gov> wrote:

Hi Tom,

May I include this in our public comment compilation?

Thanks very much,
Becca

From: Edson, Becca (ENE) <Becca.Edson@mass.gov>
Sent: Tuesday, March 17, 2026 12:32 PM
To: Edson, Becca (ENE) <Becca.Edson@mass.gov>
Subject: FW: Concrete Suppliers Low Embodied Credit in MA

Can we use this as public comment?

From: Thomas Barnes <tom@hersenergy.net>
Sent: Wednesday, March 4, 2026 12:23 PM
To: Edson, Becca (ENE) <Becca.Edson@mass.gov>
Cc: Mark Price <markprice360@gmail.com>; Nate Connors <Nate.Connors@icf.com>; Peter Ruiz Jr

<pete@projected2perform.com>

Subject: Re: Concrete Suppliers Low Embodied Credit in MA

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Becca, tom here.

I can't stress enough, the importance of a very clarifying and useful spreadsheet that is given to a builder to give to his concrete supplier with signature lines for the builder and the supplier to sign off on everything that they're verifying and then we can collect that but we can't be there for the pouring or collect the pieces of paper and verify whether anything that's coming from a concrete plant and going to a site is legitimate so without a clear chain of custody process, that is the responsibility of the builder and his supplier of concrete this is going to be hard to implement. That being said, I have been talking about this with many builders who are seeking this structure in the form of a form and spreadsheet and some instructions and once that is solidified in my opinion, these three points are so valuable that it will take off but until we get an Excel sheet and a Self certification by the builder and his supplier. I think it's a non-starter.

Best Regards -

Tom Barnes
RESNET Certified
HERS Energy Rater
508-631-6633 to talk or text

On Mar 4, 2026, at 11:55 AM, Edson, Becca (ENE)
<Becca.Edson@mass.gov> wrote:

Hi Mark & Co.,

Great question! The low GWP concrete applies to concrete associated with the design and construction of the dwelling(s)/ aka buildings. This would include the garage slab if the garage is attached to the house, but would not include a pool, sidewalks, outbuildings, etc. We can add a clarifying note to the technical guidance, and please feel free to submit any suggestions on the code language during the public comment period which should open up ***sometime*** this spring ---- we have to reopen to the codes for some district energy language, and are taking the opportunity to correct some errata.

We are working on creating a spreadsheet for the concrete low GWP HERS, akin to the insulation. Hopefully this will be up on the website soon.