

From: STRETCHCODE (ENE)
Subject: FW: Sure

Thank You for posting the additional resources.

I suggest more public meetings and another postponement of the comment deadline.

The stretch code should remain a stretch. The science of reaching sector-wide and 2050 goals is paramount, the cost effectiveness and what builders are comfortable with or used to, are secondary.

Other questions and comments:

Please include modeling for reaching 2032 and 2050 sector-wide emissions goals in the residential and commercial heating and cooling sector.

According to the Decarbonization Roadmap Buildings sector report :

"Despite the new construction results detailed above, even by 2050, **structures that exist today will still represent over 80% of the total building stock**. Addressing these existing buildings is central to the meeting the decarbonization targets of the Commonwealth"

How do we reach sector-wide emissions limits while only addressing 20% of the building stock?

What provisions in these codes apply to existing buildings?

How about a whole section on retrofits?

Include in retrofits:

Prescriptive rules for **thermal breaks** when envelope components reach the end of their service life

Add R-5 continuous as a MINIMUM over all framing components, and cavity insulation when residing and/or installing new windows on the exterior, or the removal of of sheetrock and plaster on the interior.

Roofs should have at least R-10 rigid in addition to cavity insulation.

Return the suggested wall minimum cavity insulation of R-21 back to R-20 to allow for blown in cellulose.

End of retrofit suggestions for now

In 2008 the GCA mandated that municipalities reduce energy consumption by 25% by 2020 measured against 1990. The state surpassed that partially due to covid but

The nation saw a 7 percent increase in greenhouse gas pollution from energy last year, according to new federal [projections](#).
SO:

HERS42 should be the maximum HERS index rating (less than HERS 42 is better)

There should be no gas heating options in new construction or retrofits

Taking the 2021 IECC base code with (electrification) as a requirement and mandating 1.5 ACH 50 (max for now) seems a better option then the trade-offs offered in the Straw Proposal. The savings and incentive example in the Small residential electric would be less but so would GHG emissions.

BASED ON DOER DOC I PROPOSE THIS:

Wall Sheathing	COuNT	Percentage	Min ERI	MaxERI	AverageERI
DOER_R-10 XPS	174	24%	29	54	35.2
Unfinished Attic	Count	Percentage	Min ERI	Max ERI	Average ERI
DOER_Ceiling R-60 Cellulose, Vented	95	13%	29	56	35.3
DOER_Roof R-38 Open Cell Spray Foam, add Unvented R-10c R-20 Better	31	4%	30	59	40.5
MA_Ceiling R-49 Cellulose, Vented	32	4%	29	60	40.2
Unfinished Basement	Count	Percentage	Min ERI	Max ERI	Average ERI
DOER_Ceiling R-30 Fiberglass Batt	517	72%	28	64	38.5
DOER_Whole Wall R-21 Fiberglass Batt, 2x6, 24 in o.c.+ R-10 C	32	4%	29	57	39.3
Windows	Count	Percentage	Min ERI	Max ERI	Average ERI
MA_U-0.18, 0.29 SHGC or	179	25%	28	57	34.2
MA_U-0.25, 0.29 SHGC	33	5%	29	57	39.2
Air Leakage	Count	Percentage	Min ERI	Max ERI	Average ERI
DOER_1.5 ACH50	?	?	?	?	?
DOER_2 ACH50 only if I must	160	22%	30	64	45.1
Mechanical Ventilation	Count	Percentage	Min ERI	Max ERI	Average ERI

MA_2013, HRV, 75%	466	65%	28	52	35.2
Central Air Conditioner	Count	Percentage	Min ERI	Max ERI	Average ERI
Mini-Split Heat Pump	Count	Percentage	Min ERI	Max ERI	Average ERI
MA_SEER 20, 12 HSPF, Ducted	13	4%	31	55	41
MA_SEER 20, 12 HSPF, Ductless	186	58%	28	51	34.3
Ducts	Count	Percentage	Min ERI	Max ERI	Average ERI
DOER_2 CFM25 per 100ft2, R-6 (2)	37	5%	36	62	49.2
DOER_4 CFM25 per 100ft2, R-6 (2)	194	27%	31	66	48.5
DOER_In Finished Space	173	24%	31	53	35.1
None	310	43%	28	57	37.4
Water Heater	Count	Percentage	Min ERI	Max ERI	Average ERI
DOER_HPWH, 50 gal	42	5%	30	59	44.2

Thank you.

Bob

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