

Finlayson, Ian (ENE)

From: Cynthia Arens <cindyaren@hotmail.com>
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To: STRETCHCODE (ENE)
Subject: BUILDING CODE COMMENTS

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Dear Commissioner Woodcock, Director McCarey, Mssrs. Finlayson and Ormond, et al:

I am an elected Town Meeting Member in Lexington, a Select Board-appointed member of the Sustainable Lexington Committee, and a member of the Clean Heat Lexington Alliance, and I appreciate the opportunity to submit the following comments on my own behalf, in response to DOER's Draft Building Energy Code. (These are the same comments that I presented in person at the July 22 hearing.)

First, thank you very much for your hard work in drafting a new stretch building code and municipal specialized opt-in code.

Generally, the non-residential commercial electrification requirements and partial electrification requirements for labs and hospitals in the stretch code are much needed and well done.

There is, however, more work to be done for all types of residential dwellings, whether that's single-family, multifamily or large residential. Below are suggestions for needed improvements:

1. Time of effect: When the straw proposal was announced, the residential stretch code HERS requirement of 45/42 was to take effect in December 2023. Now, the stretch code draft has moved that out to July 2024. There's no reason this requirement can't take effect as soon as July 2023. There has been plenty of time to be aware of this change. Plus, according to DOER's analysis, most construction methods (windows, insulation, sealing) will not have to change in order to meet HERS 45 if heat pumps are installed.
2. Wiring: ALL new residential construction, whether under the stretch code or the opt-in code, should be required to be wired for electrification (Electric Readiness RC104.3 and Wiring for Future Electrification CC106). The absolute lowest cost time to wire for electrification is during construction. This must be part of the new stretch code.

3. With regard to allowing fossil fuels in new residential dwellings under the 'net zero' definition in the opt-in code: I strongly disagree that this is really in-line with the states Clean Energy and Climate Plan. The state has over 2 million buildings that it has to remove fossil fuels from. We will have a hard enough time retrofitting those existing buildings by 2050. Respectfully, it is a very bad choice to allow new residential construction to have fossil fuels when the DOER's own analysis shows that it's more cost-effective for builders and residents to build all-electric now.
4. Mixed-fuel: If the mixed-fuel pathway, however, is retained in the municipal opt-in code, then more solar PV installation must be required with no exceptions.

In Sections RC104.4 and CC105.2, there should be no exceptions to installing the solar PV, whether for solar area size or shading. If a building does not have enough shade-free roof to install enough solar PV to meet the requirements, then the building should not be allowed to take the mixed-fuel pathway and install fossil fuel systems. That would be in violation of the DOERs very forgiving definition of net zero.

Section RC104.4 for the mixed-fuel pathway requires solar PV installation for one- and two-family dwellings and townhouses of 4kW for each dwelling unless the solar ready zone is less than 300 sq. ft. However, 4kW of solar PV needs about only 200-230 sq. ft of area. The one and two-family requirement of 4kW per dwelling should be changed to be: 4kW OR 1.5W per conditioned sq. ft., whichever is greater. Also, for all other residential buildings, the solar PV installation requirement of 0.75W per conditioned sq. ft. should be increased to 1W per conditioned sq. ft.

Finally, a small technical correction: In CC101.3 Point 1, the pre-wiring requirement is CC106, not CC105.

Thank you, again for taking comments and holding hearings. I look forward to an even further improved final building code in December.

Respectfully,
Cynthia Arens
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