

Finlayson, Ian (ENE)

From: Jacob Bloom <JBLOOM@cambridgeseven.com>
Sent: Monday, 8 August 2022 9:12 AM
To: STRETCHCODE (ENE)
Subject: BUILDING CODE COMMENTS

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Dear Commissioner Woodcock,

I would like to thank you and your team for the great work you have done in updating the stretch energy code and writing the new specialized opt-in code. Many of the new code requirements truly show the DOER's commitment to climate action and reducing greenhouse gas emissions. Of particular note, I appreciate the following:

1. The new stretch code's new TEDI requirements is a huge improvement in energy efficiency requirements.
2. Existing buildings which make up most of our building stock are now included in the stretch code requirements.
3. The inclusion of a definition for Net Zero Energy Buildings shows a path toward our 2050 emissions goals.
4. The thermal bridging derating requirements give a much more accurate understanding of the actual envelope performance and give the new backstop requirements real meaning.
5. The Passive House requirements are a huge step forward in our energy efficiency goals.

With all the improvements the DOER has made, there are still some critical issues that must be addressed:

1. As noted in the Attorney General's comments on the straw proposal, the Specialized Opt-In code can and should require all buildings to be All-Electric Buildings. Municipalities have been asking for this for a long time, and this is the states opportunity to allow it. This is imperative in meeting our 2050 goals.
2. The current timeline for release of the code language does not give municipalities time to adopt the Opt-in code by July 1, 2023. Municipalities should be able to adopt the Opt-in code at any point before July 1 for implementation to begin on July 1.
3. The Opt-In code should require on-site renewables for all projects where there is Potential Solar Zone Area.
4. Restore embodied carbon requirements that require low embodied carbon materials for all projects and whole building LCAs for large buildings. We need to be gathering this data now for implementation in future codes for embodied carbon reductions. Some project teams are not yet familiar with LCAs, but that must change now to meet the 2050 targets.
5. There is nothing special about curtainwall that should give it permission to be less efficient than other buildings. Under the base stretch code, any building that is an All-Electric Building including heating, hot water, cooking, and drying should be allowed to use the more lenient backstop. Under the Opt-In code this pathway should be removed, all buildings should be All-Electric, and all buildings should meet the more stringent backstop requirement. If a project team wants a 100% curtainwall building, they must innovate to meet the backstop, TEDI, and EUI requirements.
6. The new TEDI requirements should be coupled with EUI baselines. As heating and cooling loads decrease, other loads such as lighting, plugs, hot water, pumps, fans, etc. will become a larger portion of building energy use, and to meet our 2050 targets we will need to optimize all of them.
7. Provide models showing how these code updates will meet the 2025 and 2030 sector emissions limits and update previous cost studies based on current electric and gas prices.

8. On a more detailed note, Section C402.7.2.1.1 thermal bridging derating for brick veneer systems of 0.7 seems much too high given that brick relieving angles are one of the most significant thermal bridges in façade systems. If the intent is that the relieving angle will have a prescriptive Psi value, that should be clarified and listed.

Thank you again for all the progress the new codes have made. I look forward to seeing the further improvements in the final code language.

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