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Comments & Questions in response to docket file entitled â€œCMACN and Martha VanGeem Comments - Nonresidential Mass Wall Com

Additional submitted attachment is included below.

RE: Comments/ Questions in response to recent docket file entitled "CMACN and Martha VanGeem Comments - Nonresidential Mass Wall Comments"

Regarding the recent public comment posted to the 2025 Energy code Pre-Rulemaking project, I have the following questions/ concerns.

In paragraph A.2.a, it states the following:

"a. In the Final CASE presentation, the incremental cost of adding R-2 insulation was presented as $0.10 per sq ft. This cost is unreasonably low and not valid."

I agree with this statement. This cost for R2 material is considerably lower than current market pricing. Large box account building material distributors have R2 EPS material listed for approximately $.30 per square foot, and specialty distributors will sell this in the .25 to .29 range regularly for large volume business. If the Final CASE presentation believes that $0.10 is the correct cost for this material, where was this information gathered?

In paragraph A.2.c, the author references pricing for R-2 product and posts a link to an item on Home Depot's website as follows:

"c. Home Depot has a cost of insulation for R-2 as $0.44 per sq ft (not including tax or labor, nor framing or finish materials). https://www.homedepot.com/p/Owens-Corning-FOAMULAR-1-2-in-x-4-ft-x-8-ftR-3-Square-Edge-Rigid-Foam-Board-Insulation-Sheathing-36L/100320356"

The link leads to an XPS insulation item that is above the requirements the author is objecting to. And while this product would fit the needs of the proposed code change, it is not an R-2 item, nor is it a currently available product for purchase. The item in the link is for a version of an XPS product that was produced without the required blowing agent adjustments required in several states, including California. This may be why the link above specifically states that it is out of stock both in store and online, and thus is not an accurate basis for determining incremental costs, at least in California.

In paragraph A.2.d the following statement is made:

"d. The cost effectiveness needs to take into account not only the incremental cost of insulation but the full cost of attaching the insulation to the mass wall. Attaching insulation on the indoor side of a mass wall usually requires attaching framing or clips and then gypsum wallboard or another finish material. This attachment of insulation on the indoor side negates the benefit of the thermal mass effects that can be gained by exposing the mass to

the interior of the building, thus absorbing internal gains. It also negates the benefit of a hard surface on the indoor side, which is desirable in many building types. Attaching insulation on the outdoor side of the mass wall requires the addition of another finish material such as traditional or synthetic stucco. Framing indoors with gypsum wallboard, or applying exterior insulation with traditional or synthetic stucco, adds approximately $7 per sq ft to these costs. Therefore, the true cost of adding insulation, where there was none before, is more than $8 per sq ft, not $0.10 per sq ft."

While it can be agreed that the incremental costs of adjusting the insulation requirements should include additional materials and labor involved in the installation of the insulation, the costs in this paragraph seem to be grossly overblown. If the author believes these seemingly astronomical increases are true, then it would be good to itemize out the additional material costs as well as the average labor rates to install each of those individual components to show how the "more than $8 per sq ft" price she anticipates is calculated. There are fully warranted thermal/ air/ weather resistive barriers for commercial building exteriors with much higher R-values than R-2 that do not have an overall cost of all material and labor at $8 per sq foot.

R-2 EPS insulation, for example, is ½" thick and could have drywall installed directly thru it into the substrate without additional furring members, and there are other types of insulation that do not require drywall or any other material to be installed on top of the insulation in an interior assembly. Were these options taken into consideration with the authors calculations?

I am a fully supportive of the CEC's goals to increase energy-efficiency by adding insulation to buildings of all types, as passive measures such as improved envelope insulation is one of the most effective and fundamental strategies for reducing energy consumption. There will always be incremental costs associated with improving the building envelope, but these need to be accurately portrayed.

Regards,

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