

## DOCKETED

<b>Docket Number:</b>	17-BSTD-02
<b>Project Title:</b>	2019 Title 24, Part 6, Building Energy Efficiency Standards Rulemaking
<b>TN #:</b>	222594
<b>Document Title:</b>	NAIMA Comments
<b>Description:</b>	Title 24, Part 6
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<b>Organization:</b>	North American Insulation Manufacturers Association
<b>Submitter Role:</b>	Public
<b>Submission Date:</b>	2/20/2018 7:30:55 AM
<b>Docketed Date:</b>	2/20/2018



February 20, 2018

California Energy Commission  
Attention: Docket 17-BSTD-02  
Dockets Office 1516 Ninth Street, MS-4  
Sacramento, CA 95814

**Subject: Comments from the North American Insulation Manufacturers Association on Docket Number 17-BSTD-02 2019: Title 24, Part 6, Building Energy Efficiency Standards Rulemaking**

These comments are submitted by the North American Insulation Manufacturers Association (NAIMA) regarding draft changes to the 2019 California Building Energy Efficiency Standards. NAIMA is the association for North American manufacturers of fiber glass, rock wool, and slag wool insulation products. Our role is to promote energy efficiency and environmental preservation through the use of fiber glass, rock wool, and slag wool insulation, and to encourage the safe production and use of these materials.

NAIMA strongly supports the California Energy Commission's (CEC) mission "to reduce wasteful, uneconomical, and unnecessary uses of energy, thereby reducing the rate of growth of energy consumption, [and] prudently conserve energy resources." The Commission is a national leader in promoting building energy efficiency by establishing robust and cost-effective code requirements for the building envelope.

NAIMA strongly supports the Commission's draft 45-day Draft Express Terms of the 2019 building energy standards and NAIMA makes the following additional recommendations:

1. Maintain consistency within Section 150.0(c)2 requirements and list both R-value and U-factor for mandatory minimum wall insulation requirements
2. Adopt editorial changes to RA3.5 Quality Installation Procedures for improved clarity

**1.) Maintain current format for wall insulation mandatory features**

Section 150.0(c), wall insulation, currently includes both maximum overall assembly U-factor and minimum R-value requirements. It was suggested by commission staff during the February 5<sup>th</sup> public hearing that the minimum R-value would be removed and that only a U-factor would be listed. The rationale given for this modification was to remain product neutral. NAIMA supports maintaining that this requirement be expressed in both R-value and U-factor (e.g., R-20 or U-0.071) for several reasons, outlined below.

First, all home insulation products are capable of meeting R-20 in 2x6 wall cavities, including cellulose, fiber glass, mineral wool, open cell spray foam, and closed cell spray foam. When R-21 was under consideration as a possible minimum R-value, it was noted that

some open cell spray foam products currently on the market could not achieve R-21 but could consistently achieve R-20.

Second, the labeled R-value of insulation products are easy to identify and generally understood by the general public as to what they are getting. Insulation products are consistently labeled in terms of R-value because the Federal Trade Commission (FTC) has created an R-value Rule which mandates that home insulation product be labeled for R-value. Diverging from this well-established and legally codified system of labeling and verification infrastructure to only provide a maximum U-factor leaves behind market tools that have proven effective and reliable guides in purchasing insulation products and potentially undermines federal requirements that have been in place since 1979.

Third, requiring builders and inspectors to turn to a separate U-value chart either in or outside of the code to determine compliance further complicates the code and is bad public policy. Expressing requirements as R-values is consistent with model codes and previous Title 24 codes and improves field verification as the R-value is easily identified by contractors, raters and code officials.

Additionally, it was voiced during oral public comments that windows successfully use a U-factor approach and therefore it is acceptable to only have a U-factor requirement for walls. It should be noted that windows are labeled with NFRC ratings that list U-factor in an easily accessible manner and wall assemblies are not labeled in this way.

With no explicit need to remove the listed R-value requirement, NAIMA strongly recommends that the format be maintained for the 2019 Title 24, Part 6, Building Energy Efficiency Standards.

## 2.) Improved clarity for RA3.5 Quality Installation Procedures

The clarity of two items contained in RA3.5 could be improved through language changes and diagrams. There is a precedent for diagrams within the residential appendices and for the scenarios discussed it would greatly improve the usability and clarify the intent.

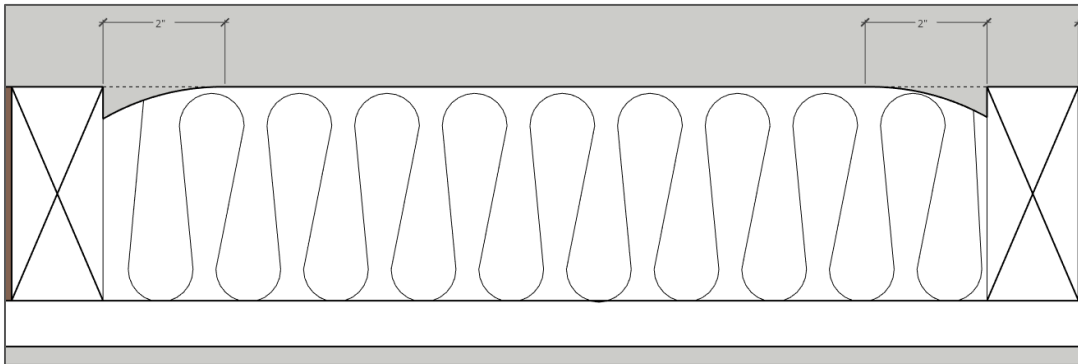
### Exception to RA3.5.3.2(e) – Batt installation with flanges/inset stapling

The language in this section could be improved for clarity (suggested text included below). However, NAIMA believes that the inclusion of diagrams that describe these requirements are instructive and provide the most clarity regardless of any changes to the text.

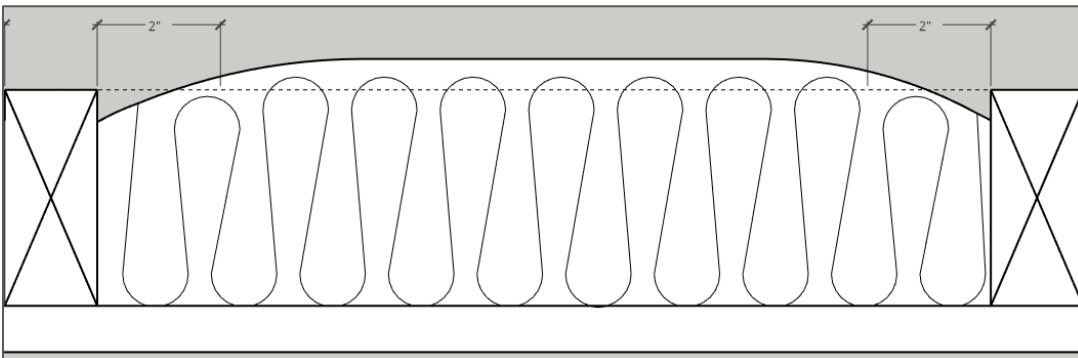
“Where batt insulation with flanges that are inset stapled to the side of the stud, the surface of the batt facing the occupied space must be flush with the face of the cavity (or protrude beyond), except the portions of the batt that are less than two inches from the side edge of the stud. Portions of the batt are permitted to protrude beyond the face of the cavity.”

Figure 1 displays the requirement that the batt only be compressed within 2 inches of the side of the stud. The inclusion of such a graphic would clearly show the intent of the requirement and leave no room for confusion or error. Figure 2 shows an inset batt that has both acceptable compression at the side of the stud (less than 2 inches) and extends out of the cavity, which is also acceptable.

*Figure 1 – Limits of acceptable flange & inset batt installation*



*Figure 2 – Acceptable protrusion of batt in flange & inset batt installation*



RA3.5.3.3.4(b) – Special Situations -- Below Roof Deck Insulation (Vented and Unvented Attics)

To improve the clarity on the installation of insulation below the roof deck, NAIMA proposes the following language and associated diagram (Figure 3, below). This language and diagram are designed to better describe how the insulation should touch when extending below the framing members.

“When the batt thickness ~~nominal~~ exceeds the depth of the roof framing members, the batts must cover the bottom of the framing members and be in contact with adjacent batts. The batt shall also be secured as described in (a).”

*Figure 3 – Acceptable installation of below roof deck insulation*

