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*Comment Received From: Rick Olson, President Tile Roofing Industry Alliance  
Submitted On: 3/4/2021  
Docket Number: 19-BSTD-03*

**TRI Comments for California Energy Commission (CEC) Docket No  
19-BSTD-03 TN # 236877**

*Additional submitted attachment is included below.*



*Tile Roofing Industry Alliance*  
Rick Olson, President

TO: California Energy Commission

February 26, 2021

**RE: Comments to the California Energy Commission (CEC) Docket No. 19-BSTD-03, TN # 236877  
Pre-Rulemaking Express Terms (Comment deadline March 9, 2021)**

**From:** Rick Olson, President of the TRI Alliance (Tile Roofing Industry Alliance). [www.tilerroofing.org](http://www.tilerroofing.org)

As the Industry association for the manufacturers of concrete and clay roofing tiles and our roofing contractor member base, we thank you for the opportunity to provide written comments on your Docket No. 19-BSTD-03, TN # 236877 code revisions for 2022. As part of our review, we wish to comment on the proposed language found on page 329, section 150(a)1 under Single-Family Residential Buildings, Mandatory Features and Devices.

The proposed draft revisions will require prescriptive language for all new construction that states the following.

**NOTE:** *The requirements of Sections 150.0(a) through 150.0(r) apply to newly constructed buildings. Sections 150.2(a) and 150.2(b) specify which requirements of Sections 150.0(a) through 150.0(r) also apply to additions or alterations.*

*(a) Roof Deck, **Ceiling and Rafter Roof Insulation.** The opaque portions of ceilings and roofs separating conditioned spaces from unconditioned spaces or ambient air shall meet the requirements of Items 1 through 3 of 4 below:*

- 1. Roof decks as part of a newly constructed attic system shall be insulated to achieve a weighted average U-factor not exceeding U-0.178.**

As presented, this would be a requirement for all new construction, but can create the confusion as to alterations of existing when reviewed as part of the Mandatory Features and Device language. Our concerns relate to the subsection 1 that will require all new construction to have insulated roof decks. Our interpretation of this requirement as written allows the new insulation materials to be placed either above or below the roof deck. By allowing the option of above the roof sheathing (deck) you create a significant challenge on steep slope roofs for all roof claddings including our concrete and clay roofing tiles.



As we have brought forward in previous discussions, that the addition of any insulation materials installed above the roof deck will create a tradeoff of performance and compliance for other code requirements mandated in California. Some of the areas we raise concern are:

*Fire rating of roof systems* – Many of the roof claddings have obtained and maintain a formal fire rating for their specific products. For our roofing tiles, this will be the Class A roofing assembly to meet the fire and Wildfire Urban Interface (WUI) compliance. The installation of insulative materials above the roof deck, may jeopardize the ability to achieve these ratings depending upon the material properties. Trading fire and life safety for potential energy savings should be fully vetted with those impacted.

*Installation requirements* – As manufactures, the codes require formal adopted installation instructions. Our TRI Alliance members all carry formal code issued product approvals that have prescriptive requirements for how to properly install our products for compliance with the adopted codes in California. Like other steep slope materials, we provide options for installing our tiles over a ridged roof deck, or batten systems (attached to the rigid deck) that are designed to meet the wind uplift requirements. As industry we performed extensive testing to demonstrate our uplift resistance to specific fastening systems. The addition of a non-structural insulative material will not be covered by any of the current testing, or installation guides in place. The insulation manufacturers will have to perform expensive testing for all roof claddings to show compliance with the proposed language.

*Above Sheathing Ventilation* – Our concrete and clay roof tile systems are one of the few roof claddings that provide a natural insulative property that has been identified as “Above Sheathing Ventilation”. The natural air space and the profile of our tiles will allow a natural airflow form the eave to ridge that in most cases exceeds any benefit the surface color of the cladding might bring. The addition of a layer of insulation above the roof deck will affect the airflow properties of our above sheathing ventilation. If the material is flexible in nature, it may fill the cavities and preclude any flow of air, reducing an energy savings benefit that is already in place.



*Tile Roofing Industry Alliance*  
Rick Olson, President

While the proposed language is not mandating the additional insulation be placed above the roof deck, we recognize that previous attempts to get the roofing community to provide increased insulation under the roof deck has been pushed back by the contracting community. As presented, the builders will consider the above sheathing option as a more viable option, without understanding the changes to product approvals and warranties it creates.

As the TRI Alliance we support and appreciate the energy savings efforts the commission is undertaking. Our concerns for the above items listed create the need for greater discussions with all the stakeholders to provide better cost-effective options that do not conflict with the requirements of other section of the current building codes. It is for that reason that we ask at this time, that the CEC remove the proposed language for section 150(a)1 as currently written.

Sincerely,

Rick Olson  
President  
Tile Roofing Industry Alliance