DOCKETED	
Docket Number:	22-BSTD-01
Project Title:	2025 Energy Code Pre-Rulemaking
TN #:	250218
Document Title:	Fard Engineers Comments - Questions and Possibilities on Cool Roofs in Context of De Youngs Concerns
Description:	N/A
Filer:	System
Organization:	Fard Engineers
Submitter Role:	Public
Submission Date:	5/19/2023 1:58:51 PM
Docketed Date:	5/19/2023

Comment Received From: Fard Engineers
Submitted On: 5/19/2023
Docket Number: 22-BSTD-01

Questions and Possibilities on Cool Roofs in Context of De Youngs Concerns

Additional submitted attachment is included below.

From:	Avery Colter
To:	Energy - Docket Optical System
Subject:	22-BSTD-01: Questions and Possibilities on Cool Roofs in Context of De Young"s Concerns
Date:	Friday, May 19, 2023 12:38:11 PM

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

I see possibilities to address De Young's concerns regarding the intensification of cool roof requirements, and also some questions on the current and possible future state of the ACM as regards this aspect of design.

There is already an exemption in the prescriptive standards from cool roof requirements for portions of the roof area composed of building integrated PV or solar thermal. This I assume does not currently apply to rack-mounted modules. The pragmatic fact, however, is that rack mounted modules located on roof area do effect an actual reduction of unoccupied SARA. Is this currently accounted in any way currently in the ACM? I know of no way in CBECC-Res to enter how much of the roof area is covered by BIPV or BIST. Can this be added to CBECC-Res? Can a method for accounting for reductions in unoccupied SARA from rack-mounts, based on module area, vertical offset, tilt and azimuth of both modules and roof surface, be contemplated in future iterations of the CBECC software? Should these "somatic" aspects be part of an entity one can Create in the *Roof Deck/Surface* area of an *Attic*, or off a *Cathedral Roof* similarly to a *Skylight*? Entry could be a little complex this way and would be completely optional, but Implementation of this could add to the benefit to calculated EDR savings of the PV system, such that the above parameters of the PV system can more effectively trade off the cool roof baseline.

New single family homes are of course all subject to CBECC-Res calculation, and designers can of course currently specify cool roof products with below-prescriptive reflectance and/or emittance, or even none at all, so long as other measures trade off sufficiently to produce a compliant CF-1R; perhaps by ensuring that both building-integrated and rack-mounted solar hardware have their respectively appropriate tabulations of reduced insolation directly on the roof surface available for entry and computation in the ACM, greater amounts of on-roof solar can be incentivized on the basis of providing an enhanced trade-off to cool roofing and generally across the whole design.

Avery Ray Colter
CABEC Certified Energy Analyst R19-15-30115/NR19-15-30036
CalCERTS Rater Residential & Nonresidential
CHEERS Rater
LEED-NC BD&C AP
Fard Engineers
Office Landline: (925) 932-5505 x 105 *or* Direct at (925) 446-6185
iPhone: (925) 381-3754
200 Gregory Lane, Building A
Pleasant Hill, CA 94523-3394
avery@fard.com