DOCKETED

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Comment Received From: Luke Nolan
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Proposed Language: Subchapter 6, Section 141.0(b)2Biii

Additional submitted attachment is included below.

CENTRAL COATING COMPANY

License #458848

October 20, 2017

California Energy Commission
Payam Bozorgchami
Dockets Office, MS-4
RE: Docket No. 17-DSTD-01
1516 Ninth Street
Sacramento, CA 95814-5512

Re: Proposed Language: Subchapter 6, Section 141.0(b)2Biii

Dear Mr. Bozorgchami,

Thank you for your attention to this issue. Attached you will find the proposed changes to the language of the section referenced above.

You mentioned in our previous conversations regarding this issues that it may be too late in this code cycle for sweeping changes to the additional insulation during roof replacement requirement. With this in mind, the changes proposed work within the framework of the existing requirement which has already been reviewed through cost-benefit analysis. The proposed changes are incremental in that they only apply to California's least energy efficient buildings and then only serve to somewhat limit the exceptions that can be used to avoid the requirement. With these changes, the 2019 code has an opportunity to create an impact on California's energy use that will otherwise be missed for at least three more years.

The existing requirements have been in place through the 2013 & 2016 code cycles. As a California licensed roofing contractor, my company experiences first hand that these requirements are not making an impact in their current form. With the proposed changes the CEC can take a first step towards upgrading the energy efficiency of California's existing commercial buildings in a meaningful way with little or no negative ramification for current stakeholders.

Regards,

Luke Nolan,
President

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October 20, 2017

California Title 24 – 2019 Draft Language

Proposed Language: Subchapter 6, Section 141.0(b)2Biii

iii. For nonresidential buildings, high-rise residential buildings and hotels/motels, when low-sloped roofs are re-roofed, recovered with new roofing or existing roofs are restored with a fluid applied coating and meets Section 141.0(b)2Bia or iia, the replaced, recovered or coated area shall be insulated to the levels specified in TABLE 141.0-C.

EXCEPTIONS to Section 141.0(b)2Biii

a. Existing roofs that are insulated with at least R-7 continuous insulation above the roof deck or that have a U-factor lower than 0.089 are not required to meet the R-value requirement of TABLE 141.0-C.
b. Existing roofs that are insulated with greater than R-19 non-continuous insulation below the roof deck are not required to meet the R-value requirements of TABLE 141.0-C.
c. Existing roofs where the addition of continuous insulation requires modification to greater than 50% of the rooftop mechanical units are not required to meet the insulation requirement.
d. If adding the required insulation will require modifications to parapet walls and penthouse the added insulation will not be required provided that conditions in Subsections i and ii apply:
    i. The penthouse or parapet walls are finished with an exterior cladding material other than the roofing covering membrane material; and
    ii. The penthouse or parapet walls have exterior cladding material that will require modifications to more than 20% of the linear dimension of the affected penthouse or parapet wall.
e. Tapered insulation may be used which has a thermal resistance less than that prescribed in TABLE 141.0-C at the drains and other low points, provided that the thickness of insulation is increased at the high points of the roof so that the average thermal resistance equals or exceeds the value that is specified in TABLE 141.0-C.

Table 141.0-C Requirements For Roof Replacements

Climate Zone	Existing Non-Continuous Insulation below roof deck	Existing Continuous Insulation Above Roof Deck	Continuous Insulation To Be Added Above Roof Deck During Roof Replacement
All	R-19 or less	None	R-8
All	Greater than R-19	None	None
All	Any amount	R-7 or Greater	None

Additional reason statement:

The California building standards include provisions for reroofing, including definitions, limitations, exceptions and requirements that provide a clear path towards ensuring that when roofs are replaced, appropriate consideration is given to the performance requirements of the new roof assembly. These requirements are intended to ensure that the roof will provide the minimum levels of fire safety, wind uplift performance, seismic resistance, and of course, weather protection.

Under current California building standards provisions, reroofing includes two options: roof recover and roof replacement. Roof replacement requires the complete removal of existing roofing materials down to the roof deck. This mandatory process typically results in the installation of new roof accessory products in addition to the roof assembly itself. In fact, the definition of roof replacement includes a performance expectation with the term "repairing any damaged substrate." This language is derived from the International Building Code, which was coordinated with the requirements of the International Energy Conservation Code (IECC). The IECC contains the definitions of roof recover and roof replacement as well as technical provisions for energy efficiency. Under the IECC, replacement of roofs that are part of the building thermal envelope and include above-deck insulation are required to comply with the insulation requirements for new construction. This requirement extends through all climate zones, including northern zones with much greater insulation requirements than are typically found in California. ASHRAE 90.1, while not directly correlated to the construction codes, contain identical requirements for roof replacement.

The current Title 24 provisions for reroofing are substantially weaker than the IECC and ASHRAE 90.1. In the US, ¾ of roof covering systems produced are installed on existing buildings - not new construction. Without robust energy efficiency provisions for upgrading insulation during reroofing, a significant opportunity for energy savings is lost - perhaps for decades. The CEC should study the issue and develop a comprehensive strategy to capture energy savings for reroofing of existing buildings. This proposal, however, provides a simple and technically feasible option to include additional insulation for some reroofing projects and start down that path.