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Commissioner Karen Douglas
Lead Commissioner for Energy Efficiency
California Energy Commission
1516 9th St., MS-31
Sacramento, CA 95814

Re: Roofing Industry Comments on 45-day Language - 2013 Building Energy Efficiency Standards California Energy Commission Docket No. 10-BSTD-01

Dear Commissioner Douglas:

On behalf of the undersigned roofing industry and affiliated trade associations and stakeholders, we are writing to comment on the 45-day language posted to the CEC website and to be presented at the March 12-13 California Energy Commission (CEC) hearing on the 2013 California Building Energy Efficiency Standards. We appreciate your consideration of our collective concerns about the 45-day language.

While as individual organizations we have numerous concerns and positions related to this language which we will share in more detail in testimony at the March 12-13 hearing, the members of this industry coalition share some critical fundamental concerns with the language in its current form, many of which have been stated before but not addressed by CEC.

Cost Justification

As we have previously expressed, the baseline costs used for cost justification in the 2005 code, and again for 2008 were based on a Lawrence Berkeley National Lab report from 2002 that has been publicly demonstrated, and acknowledged by CEC staff, to have used cost data that was not representative of the real world costs associated with cool roofing materials. Nor did this baseline data accurately reflect the premiums for "cool" versions of existing roofing materials. The current prescriptive requirement for low-slope roofing of 0.55 aged solar reflectance was based on that fallacious report, yet the CEC has taken the position that you cannot "go backwards" in the surface reflectance requirements.

The proposed increases for 2013 continue to sustain and validate this flawed data since the justifications for the proposed increases of 0.63 and 0.65 for alterations and new roofing respectively are founded by comparison against the existing requirement of 0.55. When challenged by this industry at the October work shop, the CEC opted to utilize their existing consultants to conduct what is a "quick and dirty" cost analysis instead of considering the roofing industry's strong recommendation to work collectively with our industry to develop a strong, detailed, and meaningful cost justification analysis.

The CEC's approach appears to rationalize an increase in reflectance based on a self-imposed mandate to increase the requirement regardless of benefit as opposed to living up to your obligation to California consumers, building owners, and manufacturers to develop a true cost justification analysis that takes into account the numerous factors that have been raised over

the last several years in written comments and verbal testimony from stakeholders and other parties interested in the code development process. By not conducting this analysis in a proper, thoughtful, and responsible manner the CEC is regulating durable, proven, reliable products out of the market, taking choice out of the hands of Californians, and putting hundreds of manufacturing and contracting jobs at risk, all based on flawed data that has failed under scrutiny.

The cost analysis conducted by AEC is seriously, if not fatally, flawed in a number of fundamental areas:

1. **Limited responses.** The response pool upon which the proposed code is based is far too small to draw any sort of conclusion – 3 written responses and 9 phone interviews with no substantiation as to the validity of the data or the qualification of respondents to respond.
2. **No statistically valid sample size.** There are not enough data points to show a range of cost variability for each roofing material category – the survey fails to pass any test for statistical significance.
3. **Dubious labor rates.** There is clearly an issue with the labor costs when union labor rates come in at \$2.25/hour less than open shop rates.
4. **Lack of confirmation of underlying premise.** There appears to have been no attempt to confirm that respondents were basing their feedback on the 0.65 target as requested.

In short, the AEC supposed “cost analysis” contains very little real cost data and, what little has been generated, demonstrates no validation of its accuracy. There is no way that a reputable organization can seriously draw any conclusions based on such an unsubstantiated and extremely limited response.

The roofing industry formally restates our position that the CEC should NOT change the current 0.55 solar reflectance in this code cycle, and we reiterate our offer to work collaboratively with the CEC to collect real world data which can be used to develop a robust, statistically significant cost justification analysis document that can be used to set fair, reasonable, and sound solar reflectance requirements for low-sloped roofs in California.

The State of California and the CEC are responsible to set policy that offers a benefit to the citizens of California, their environment, and their standard of living. It appears to the undersigned that the CEC is operating with a mandate to make existing standards more stringent, but without going through a complete and thoughtful analysis that considers not only the economic basis for the changes, which we understand to be a mandate under the Warren-Ahlquist Act. Consequently, the full picture of the science behind the arbitrary changes that are being proffered and the ripple effects they will create is not complete and very poor science at best.

In addition, we are concerned that current TDV calculations used in Title 24 were established without accurate consideration for the impact of increased penetration of various renewable energy technologies over time. Logically, as peaking renewable energy penetration increases, the value of incremental power during the peak hours of the day is expected to decrease, as indicated by a recent report from the Lawrence Berkeley National Laboratory¹. As a

¹Mills, Andrew, Lawrence Berkeley National Laboratory, “Economic Valuation of Solar PV and Flexible Resources at Increasing Penetration Levels”, Intersolar North America Conference (July 11, 2011) at 16.

consequence, as contracted renewable energy resources become operational, the assumptions used to derive the current TDV calculations will become increasingly inaccurate for purposes of valuing incremental energy savings. Failure to reflect this phenomenon in current TDV analysis will tend to overly burden building owners and building materials manufacturers with unnecessary increases in prescriptive energy standards, especially proposed increases in the minimum prescriptive solar reflectance of roofing membranes, which are most closely tied to peak TDV values most affected by increased renewable energy production. To avoid this potentially adverse effect, we recommend the Commission re-evaluate current TDV calculations and models prior to the implementation of any increase in solar reflectance.

Consistency and Enforcement

CEC staff and members of the roofing industry have shared concerns over the enforcement of the requirements for roof surface reflectance under Title 24. Since the adoption of radiative property requirements for roofing over 7 years ago, there has continued to be a disconnect between what is required and what is in fact taking place on buildings. This disconnect is exacerbated by significant variation in local enforcement. Until such time as there is equal application of the requirements of this energy code, any further stringency in its requirements seems to be made without any regard for reality.

Clear, Concise, Consistent Code Language

The approach taken by the CEC in the draft proposals for low-slope roofing, despite efforts to simplify, will create additional confusion in the marketplace. Whatever level of surface reflectance meets with the cost justification requirements should be consistent for new roofs and alterations. As has been proven in the past, variable requirements by location or application leads to uncertainty and perplexity in the marketplace and confusion for all involved in the process of selecting the proper roof system for the building.

Summary

While we appreciate that the CEC staff has considered comments received from our coalition of industry organizations, individual manufacturers, and other stakeholders and has invested in working to address some of the concerns that have been raised, we remain deeply concerned that many of the issues previously raised have not been addressed which have direct impact on the standards proposed. Because of this, we continue to have fundamental concerns with the overall process.

We do understand that there are alternative compliance options in the proposed language, but it is critical that the CEC recognize that experience with previous versions of the code makes it abundantly clear that no matter how simple alternate means of compliance may be, it is the prescriptive language in the standard that receives the focus of the California building and consumer communities, and will therefore have the greatest impact on the California market.

Your attention and response to our comments is appreciated. As an industry, we all want to ensure that the results of the 2013 Title 24, Part 6 process are energy efficiency standards that make practical sense for the consumer and ensure that they continue to have choice in their roofing selection that fits the needs of their home or building. The 2013 standards should likewise continue to support the goals of the California Energy Commission and the State of California, and should be based in sound scientific, technical and economic facts and data.

As an industry, we remain ready, willing, and able to assist CEC staff to work through the science, technology, and economics related to roofing materials and systems. We urge you to accept this offer and to work with industry to come up with sound requirements for roofing. Please do not hesitate to contact any of the undersigned if you have any comments or questions regarding this letter.

Sincerely,

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