

Sept. 25, 2012

To: Dockets Office, California Energy Commission  
From: Gary Farber, Farber Energy Design  
RE: Adoption of CALGreen 15-Day Language  
Docket number 12-BSTD-1



I want to first thank Commission staff for responding to many of the technical comments I have previously made on the proposed 2013 CalGreen energy standards.

My overarching concern with setting CalGreen nonresidential efficiency requirements have been two-fold:

1. That the efficiency targets be realistic, recognizing that the amount of additional efficiency available will diminish as the Standards become more stringent (moving towards NZE).
2. That the efficiency targets vary, based on the available systems for which efficiency credit may be obtained.

With regards to the overall efficiency target, the draft CalGreen nonresidential requirements make a reasonable reduction in the energy target.

Regarding varying the efficiency target based on the amount of possible efficiency measures a project may include, the draft requirements only partially address this issue.

The draft reasonably does not require any efficiency target when the project is envelope-only. And sensibly reduces the efficiency targets when the project excludes either mechanical systems or lighting systems.

The outstanding problem is that the higher efficiency targets (90% for Tier 1, 85% for Tier 2) are based on buildings that can achieve efficiency savings beyond code for envelope, indoor lighting and mechanical systems - but apply to buildings that have very little lighting for which efficiency credit may be taken. Specifically, I am referring to commercial buildings with only core lighting to be installed under the shell permit, high-rise residential, and hotel/motel buildings.

With the increased envelope stringency in the 2013 Standards, I believe that commercial buildings with only core lighting, high-rise residential and hotel/motel buildings, may not be able to achieve the 90% or 85% target for which they are subject in the draft. And it is not reasonable to expect that such buildings have the

same efficiency target as a full build-out nonresidential building that can achieve efficiencies from lighting throughout the building (as well as from envelope and mechanical systems).

Therefore, I propose the following changes:

1. The current exclusion for envelope-only projects be expanded to also exclude projects that are multiple-tenant commercial buildings where the permit work only includes envelope and core lighting.
2. The current reduction in efficiency requirements for buildings that exclude either lighting or mechanical systems, but not both, be expanded to include the following building types:
  - a) Multiple-tenant commercial buildings that include envelope and mechanical, but only core lighting.
  - b) High-rise residential buildings.
  - c) Hotel/motel buildings.

#### Additional Comments

1. The nonresidential section of the CalGreen energy standards should note that buildings that consist of multiple building function types that are each subject to different CalGreen efficiency requirements shall be required to achieve an overall efficiency level which is an area-weighted average of the unique efficiency requirements that each unique portion of the building is subject to.
2. Unless it is found that residential garage door openers are readily available with high-efficacy lighting - or are expected to be prior to 2014, the residential section lighting requirements should exempt lighting that is included in garage door openers. These lights always turn off automatically, and are typically on for a very short time.