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"The Leader in Glass Fabrication"™

July 1, 2011

Via email to:

docket@energy.state.ca.us

California Energy Commission Dockets Office,
MS-4
Re: Docket No. 10-BSTD-01
1516 Ninth Street Sacramento, CA
95814-5512

Re: Two Alliance Center
Glass Color Data

Ladies and Gentlemen of the California Energy Commission and Staff:

Viracon is pleased to submit comments responsive to the CASE Report ("CASE Report") presented at the June 9, 2011 Staff Workshop proposing changes to the 2013 Building Energy Efficiency Standards ("Energy Standards") for non-residential and high-rise residential buildings.

By way of background, Viracon is based in Owatonna, Minnesota, and has facilities in Statesboro, Georgia; St. George, Utah; and Nazar Paulista, Brazil. Viracon is one the largest commercial glass fabricators / suppliers for North American and international markets, producing high-performance commercial glass products, including tempered, laminated, insulating, silk-screened, and high-performance low-e coatings. The company is a subsidiary of Apogee Enterprises, Inc. Apogee, headquartered in Minneapolis, is a leader in technologies involving the design and development of value-added glass and aluminum products and services, ranging from production to final installation of commercial window, curtain wall, and storefront systems.

Among other things, the CASE Report proposes adding a high minimum Visible Light Transmission ("VT") requirement to California's prescriptive Energy Standards in combination with low, maximum Solar Heat Gain Coefficient ("SHGC") values. Together, these values virtually eliminate all designer choice and will prescribe the use of single type of triple silver, soft coat, low emissivity glass throughout all of California's climate zones.

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More importantly, by imposing a minimum visible light transmission level for all types of designs, less natural daylight will be utilized due to uncomfortable levels of light and glare. When too much light is allowed inside the building, people will have to rely on interior shading devices to control the amount. The result is greater dependency on electric lights and higher energy costs. By allowing for lower visible light transmitting glass (<50%) unwanted glare can be controlled better reducing the dependency on internal electrical lighting. Viracon supplies all types of glass and works closely with architects and building owners to select the optimum glass products on the basis of building design, orientation and usage. As a result we believe more “free” light can be utilized, reducing the dependency on electrical lighting by using lower light transmitting glass (<50%) when the building design utilizes larger amounts of glass (window to wall ratio).

Daylighting is application specific. One of the most common daylighting problems that Viracon encounters in real buildings are inappropriate glazing designs with excessively high VT that allow too much daylight into a building. Using the expertise of several recognized daylighting experts and architects, Viracon has prepared a 6 ½ minute video entitled “Balancing Daylight” to educate its customers about this problem.¹

Experienced daylighting professionals know that good daylighting is not about bringing the *maximum* amount of light possible into a space since such an approach will typically result in discomfort and workspace glare, affecting the usability and value of the space. Instead, good daylighting is about bringing the *right* amount of daylight into an area by specifying the right type of glass for the right application.

Unfortunately, the high VTs coupled with the low SHGCs proposed by the CASE Report would mandate the use of only one type of glass which would eliminate the ability to choose the right type of glass for the right daylighting applications. As examples, the use of high performance tinted glass and/or silk screen frits, both commonly used to control the amount of light that enters a building through the glass, would not be allowed.

Also, the VT values proposed in the CASE Report exceed the levels that Viracon has found most likely to result in a good daylighting balance in many applications. Consequently, adopting these high VTs will likely result in too much daylight, in turn, resulting in problems associated with glare and occupant discomfort.

In short, Viracon urges the Staff not to adopt the VT values proposed in the CASE Report. Adopting those VT values, coupled with the SHGC values proposed in the Report, will eliminate virtually all of the designer choice necessary to design and implement efficient daylighting in California’s nonresidential and high rise residential buildings.

¹ Ten (10) electronic copies of this video are being supplied to the California Energy Commission’s Docketing Office along with ten (10) copies of this comment. It can also be viewed online at Viracon.com/media

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Daylighting is critically important, however, Viracon urges the California Energy Commission to develop its benefits in the performance path provisions of the Energy Standard rather than its prescriptive provisions.

Sincerely,

A handwritten signature in black ink, appearing to read "Rick Voelker", with a long horizontal flourish extending to the right.

Rick Voelker

Vice President, Technical Services