



# Study Confirms Benefits of CMA in California

The National Fenestration Rating Council (NFRC) has released an independent study demonstrating the benefits of its Components Modeling Approach (CMA) Product Certification Program in California. The purpose of the study was to determine CMA's actual benefits compared to the California Energy Commission's alternate Title 24 rating values, after CMA was incorporated as a standard approach in the state's latest Title 24 Energy Efficiency Standards for non-residential buildings.

The CMA Simulation Study, conducted by the Heschong Mahone Group, Inc., compared CMA values to CEC default and equation-based values, running simulations on eight building models under conditions similar to each of California's 16 climate zones to determine energy-related performance values for fenestration products. Key findings include:

- ★ **Additional energy compliance margins over alternate Title 24 values**

Compared to alternate fenestration rating values detailed in California's Title 24, using CMA provides a maximum increase of 11.7% in energy compliance margins. This means that compared to other available options, CMA provides the most accurate values of window energy and visible performance.

- ★ **Greater benefits from above-code incentive programs like Savings by Design**

Some performance-based energy incentive programs, such as Savings by Design, offer greater financial incentives to building owners when efficiency exceeds minimum thresholds. Because CMA accurately calculates fenestration ratings, energy efficiency data is likely to be boosted, meaning more incentive dollars for increased compliance margins.

**To obtain a copy of the CMA study, please contact Jen Padgett at [jpadgett@nfr.org](mailto:jpadgett@nfr.org)**

- ★ **More accurate HVAC loads modeling and sizing**

Design and construction professionals who use CMA to rate fenestration will be able to calculate more accurate thermal load estimates and choose the right-sized HVAC system for their buildings, because CMA provides the most accurate fenestration energy performance values.

- ★ **Potential for higher LEED scores**

The U.S. Green Building Council's (USGBC) LEED program requires applicants to comply with ASHRAE 90.1-04 for building energy use. NFRC 100 and NFRC 200 are required by ASHRAE 90.1-04, and the CMA program enables applicants to comply. LEED applicants may even be able to significantly increase their LEED score by using CMA to select and specify windows with superior

NFRC administers an independent, uniform rating and labeling system for the energy performance of fenestration products, including windows, curtain walls, doors, and skylights.

For more information on NFRC, please visit our Website at [www.nfrc.org](http://www.nfrc.org) or contact NFRC directly at 301.589.1776.

