



Media Contact:
Tom Herron
therron@nfr.org
301-589-1776, x205

Independent Study Demonstrates Benefits Associated with NFRC Component Modeling Approach

Improved compliance margins provide greater accuracy and assistance in meeting requirements for above-code incentive programs

GREENBELT, Md. (October 5, 2010) – Because the National Fenestration Rating Council’s (NFRC) Component Modeling Approach (CMA) provides users with increased energy compliance margins, the program offers a number of important benefits for construction professionals.

According to a study conducted by the Heschong Mahone Group, and released today by NFRC, the use of CMA provided a maximum increase of 11.7 percent in energy compliance margins compared to default fenestration rating values in California buildings.

NFRC’s Director, New Business Programs, John Lewis, says that while this study was confined to California, it strongly implies that similar results can be achieved elsewhere.

“This study definitively shows that implementing CMA can improve accuracy and help provide access to above-code incentive programs,” Lewis said. “These kinds of benefits are something industry professionals are likely to find attractive.”

The 11.7 percent additional compliance margin was obtained by modeling an office building with 20.8 percent window-to-floor area ratio. Additional compliance margins were found to be generally associated with buildings using more fenestration. For example, the model of a retail store building with only 1 percent window to floor ratio showed no additional improvement.

According to Lewis, the conclusions that can be drawn from the study include:

- *Higher compliance margins.* For buildings in the state of California, fenestration modeled with the CMA program can provide an increase in compliance margin by as much as 11.7 percent compared to other available options.
- *More accurate HVAC loads modeling and sizing.* CMA provides the most accurate values of window energy and visible performance, meaning more accurate thermal load estimates and right-sized HVAC systems.
- *More benefits from above-code incentive programs.* For performance-based energy incentive programs such as [Savings By Design](#), where financial incentives are available to building owners when efficiency exceeds minimum thresholds, energy

-- more --

efficiency is likely to be boosted as a result of CMA use, which provides designers the ability to accurately rate fenestration, and avoid the use of more punitive calculation methods. That means more incentive dollars (to a maximum of \$108,373 for the largest project utilizing the most glazing included in this study) for the increased compliance margins.

Jim Benney, NFRC's CEO, says HMG's study reveals the extensive value CMA brings to the fenestration industry and strongly suggests a corresponding effect on the sustainable building industry overall.

"As this study shows, CMA's certification program and software are remarkable tools, simplifying the process of rating non-residential products and reducing time and costs," said Benney. "In California, it makes everyone's job in the design and construction business a little more straightforward."

Benney added: "These results in California are extremely encouraging, and we fully expect similar advantages with other above-code incentive programs that allow the use of default calculation methods or the use of more-accurate NFRC ratings calculated with the CMA methodology."

Beyond this benefit, Benney says the study implies that CMA offers a number of peripheral benefits, including reducing utility demands, providing access to multiple tax incentives, and helping to improve the re-sale value of a given property.

According to the U.S. Green Building Council (USGBC), buildings account for about 40 percent of total energy consumption in the United States. CMA can help reduce this percentage and decrease utility bills by enabling construction professionals to install the most energy efficient windows, which in turn allows for the installation of smaller HVAC systems.

The USGBC's LEED program requires applicants to comply with ASHRAE 90.1-04 for building energy use. NFRC 100 and 200 are required by ASHRAE 90.1-04 and the CMA program enables applicants to comply. In addition, LEED applicants may be able to increase their LEED score significantly by using CMA to select and specify windows with superior energy performance.

"CMA has a wide scope, reaching well into the sustainable building industry and offering some attractive tangible benefits," Benney concluded. "That's what makes it such an exciting innovation."

Interested parties can learn more about CMA and the CMA Simulation Study on the NFRC website at www.nfrc.org. You may also contact John Lewis directly at jlewis@nfrc.org.

###

About CMA

CMA is a product certification program from the NFRC which enables energy-related performance ratings for commercial (non-residential) fenestration products. Performance data from the three primary fenestration components – glazing, frames, and spacers – are used to obtain an overall performance rating. The California Energy Commission included CMA as a standard approach in the state's 2008 Title 24 Energy Efficiency Standards for non-residential buildings. To learn more about CMA, visit www.nfrc.org/CMAprogram.

About NFRC

NFRC is a non-profit organization that administers a voluntary, uniform rating, labeling and certification system that can be used to compare the energy performance of windows, doors, curtain walls, skylights, and other fenestration products. Its members include manufacturers, suppliers, utilities, consumer groups, representatives from the building and code industries, scientific and educational organizations, and government agencies.