



# National Fenestration Rating Council Update

WINTER 2008

**Seasons greetings from the staff at NFRC!  
We wish you joy this holiday season and hope your New Year  
starts off merry and bright. We'll be back in 2009!**



## Executive Director's Message



**JIM BENNEY**  
NFRC Executive  
Director

This is such a great time of year! The holidays give us time to spend with our family and friends so we can exchange gifts and words of cheer. It is also the time when we think about others less fortunate than ourselves.

I just returned from a trip to Delhi, India – a very moving experience for me. It is a land of contrast – beautiful and ancient mosques, tombs and temples,

high tech phones, and other technology amidst excruciating poverty. I found the country fascinating and the people very warm and hospitable. I also discovered a newfound appreciation for the lifestyle here in the states that we too often take for granted.

It should be noted that India recently adopted an energy code very similar to the International Energy Conservation Code, and NFRC is assisting the

fenestration industry there with understanding the importance of windows and building energy efficiency. We're also working with them to develop the infrastructure for a rating, certification, and labeling program.

However, NFRC's message is not for the majority of this country's people. Our message is aimed at the 20% of the population who have air-conditioned homes – over 200 million people and growing. Solar heat gain through fenestration systems is a major contributor to energy usage. It is to this audience that we can work towards communicating a better understanding of how windows impact energy loads and how they can potentially make a difference in energy use by a significant portion of India's billion-plus people, which can make a big difference in the world.

Reducing dependence on fossil fuels – by improving building energy efficiency – can improve the quality of life in India as well as in the United States. A worthwhile goal indeed! ■



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# Q&A: Deke Smith, buildingSMART alliance™

## Building Information Modeling Shows Growth, Promise



DEKE SMITH  
buildingSMART  
Executive Director

*Deke Smith is the executive director of the buildingSMART alliance™, a dynamic and expanding program of the National Institute of Building Sciences (NIBS). He initiated the U.S. National Computer Aided Design (CAD) Standard and the National Building Information Modeling (BIM) Standard.*

*Update talked with Deke about BIM and ways that NFRC can work with the alliance.*

### What is your background? How did you get started with the buildingSMART alliance?

I am a registered architect in the state of Virginia. I retired from the Department of Defense (DoD) after 30 years in December 2007. My last position there was as Chief IT Architect for Installations and Environment for the DoD Business Enterprise Architecture, a business process re-engineering effort involving the whole Department of Defense.

During my time with DoD I also worked as a volunteer at NIBS for over 20 years and was chair of the NBIMS Project Committee prior to moving to a staff position. I have been involved with the development of the Construction Criteria Base, Uniformat II, both AIA CAD Layering Guidelines, and created the concept for the National CAD Standard and the National BIM Standard.

### Can you describe for Update readers the alliance's mission? What are the main goals of the organization?

The mission of the alliance is to improve all aspects of the facility and infrastructure lifecycle by promoting collaboration, technology, integrated practices, and open standards.

The primary goals of the organization are to:

- Build a consensus group with representation from all facets of the industry;
- Create a multi level model of all activities that take place in the industry identifying all stakeholders;
- Coordinate projects to develop best practice business process models, which link to the activity models to ensure information flows to all stakeholders; and

- Obtain consensus from industry practitioners and distribute in a National BIM Standard based on open standards.

### Can you describe the alliance's membership base?

It is a significant cross section of the industry, certainly architects, engineers and construction contractors, but also, lawyers, insurance, trade organizations, government, academia, and many other stakeholders who have not traditionally been involved.

### For some, BIM is somewhat of a buzz word. How do you describe it to those that aren't familiar with the concept?

Put simply – building buildings electronically prior to building them physically.

### Can you explain how BIM works for users? How can NFRC and the alliance work together on BIM?

There are two types of BIM – little bim and BIG BIM. Little bim is when a firm goes out and buys a bim package for their firm and is likely very successful in their firm and with the firms they work with.

BIG BIM is when the industry gets together and solves problems such as how do we educate collaboratively all the stakeholders involved in the facility process. BIG BIM is when we, as an industry develop national and international open standards. BIG BIM is when we work on an approach where all manufacturers and suppliers can supply information to the model needed for selection, engineering analysis, certification, installation, maintenance, etc.

### What about the economy? What effect will it have on new construction, eliminating waste?

That is the million-dollar question. It depends on just how bad it gets. Typically, times of recession are times when organizations re-tool. They want to keep their good people busy and so it affords them the opportunity to change. Wish it weren't the case, but all in all it may be good for accelerating the change so we come out of the other end of this a much leaner and more efficient operation overall.

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*For more information on Deke Smith, BIM and the buildingSMART alliance, visit [www.buildingsmartalliance.org](http://www.buildingsmartalliance.org).*

# NFRC Exhibits at Greenbuild Show in Boston



The U.S. green building market is growing at a rapid pace, and NFRC sees this as a unique opportunity to create further awareness about the benefits of its

ratings system for windows, doors, skylights, and attachment products.

On November 18-20, NFRC reached out to an estimated 28,000 attendees at the Greenbuild 2008 show, sponsored by the U.S. Green Building Council, held at the Boston Convention & Exhibition Center.

## **Green Building on the Rise**

A recent report, *Construction's Green Outlook 2009: Trends Driving Change*, published by McGraw-Hill, says green building construction starts grew from \$10 billion in 2005 to \$36-\$49 billion in 2008. The report further estimates this number could reach \$96-\$140 billion by 2013.

The large number of attendees at this year's show provides further evidence that interest in green building is on the rise. In just six years, attendance has increased seven-fold over the estimated 4,000 people who attended the show when it began in Texas in 2002.

The dramatic growth of green building and the increasing number of attendees at the shows indicate the

industry's strong concern with energy efficiency and its desire to make greater strides toward conservation. It also suggests that manufacturers are concerned with continually improving their products in support of the green building movement.

## **NFRC and Green Building**

NFRC addressed the concerns of consumers and manufacturers alike during Greenbuild by providing information on how its ratings system works and describing why it is integral to the green building movement. NFRC found that many people were concerned about how to reliably compare fenestration products so they could choose the energy-efficient product available in the marketplace. In fact, many attendees shared common questions regarding u-factor, solar heat gain, and air leakage.

A considerable number of NFRC's certification program participants attended Greenbuild 2008. Among them were:

- Andersen
- Pella Corp
- JELD-WEN
- Nana Wall Systems
- Wausau Window & Wall Systems
- Marvin Windows
- Southwall Technologies

NFRC will continue to track the movement and take action to connect with others in the green building industry, including influential leaders so they can share ideas on improving energy efficiency. ■

# Spring Membership Meeting Set for Tucson

***You are invited to get involved!***

NFRC will be holding its Spring Membership Meeting at the Tucson Marriott University Park in Tucson, Ariz., March 2-5, 2009. Both NFRC members and non-members are welcome to attend the meetings, where a diverse group of volunteers continue to work on the many program areas managed by the NFRC.

The meeting space is located right outside of the gates of the University of Arizona in downtown Tucson.

## **Key Dates to Take Note**

The deadline to reserve a room under NFRC's discounted room block is February 4, 2009. Reservations can be made by dialing 800-228-9290.

Everything you'll need to get organized for this upcoming meeting – online and offline registration forms, schedules, detailed agendas, etc. – can be found online at the upcoming meeting page on NFRC's Web site.

If you have any questions, please send us a note at [meetings@nfr.org](mailto:meetings@nfr.org) or call us at 301-589-1776. ■

# NFRC Reaches Out to Fenestration Professionals at GlassBuild America

The National Fenestration Rating Council (NFRC) educated scores of visitors about rating, labeling, and certification systems for the energy performance of fenestration products at the GlassBuild America exposition in October. The event's organizers estimate more than 8,000 people attended the show in Las Vegas.

During the three day event, visitors to NFRC's booth learned such things as how to reliably compare one fenestration product to another while making more informed purchasing decisions.

NFRC Chairman Joe Hayden gave a presentation on the state of the window and door industry to a capacity crowd on the expo's second day. His presentation addressed NFRC's development of the Component Modeling Approach (CMA) and other topics of interest to the nation's leading fenestration professionals.

Hayden explained how CMA will serve as a vital tool for commercial customers. "CMA is valuable because it provides a uniform, standardized rating and certification

program, which is consistent with the main reason NFRC was originally formed," he said.

CMA offers a simple process, a fully integrated and searchable database, and high quality control of data. The program's technical procedures have been approved, and the certification procedures are pending. CMA is on schedule for implementation by mid-2009.

Hayden also discussed insulating glass certification, which NFRC is pursuing to comply with U.S. Department of Energy requirements. NFRC is working with existing programs, rather than creating new ones.

Hayden concluded his talk by discussing how Building Information Modeling and Radio Frequency Identification will affect fenestration. While these are still gaining traction, NFRC intends to pursue them more in 2009.

"Both of these are critical to the industry, and we are exploring how they can fit into existing NFRC programs," Hayden said. ■

## NFRC Partners with Local Habitat Chapter for Fall Meeting



During its Fall Membership Meeting in Jacksonville, Fla., November 3-6, the National Fenestration Rating Council (NFRC) raised \$565 for a non-profit working to promote sustainable, green

products in the local community.

Through voluntary donations in exchange for a commemorative NFRC lapel pin, attendees at the meeting helped raise the generous gift.

"This is a new tradition we are starting at NFRC and we were overwhelmed by the generosity of our meeting attendees to support this cause," said NFRC Executive Director Jim Benney.

HabiJax has been providing high-quality, affordable

housing for Duval County residents since 1988. They have built more than 1,600 homes, surpassing any other local affordable housing provider and any Habitat for Humanity affiliate in the U.S. HabiJax is committed to building sustainable housing and taking on energy efficiency projects.

HabiJax's first LEED® Silver certified home came earlier this year during their fourth Women Build, when women from all over Jacksonville came together for eight Saturdays in a row to complete the 1,161 sq. ft. home. To those unfamiliar with the LEED process, it is the Green Building Rating System developed by the U.S. Green Building Council (USGBC) that provides a set of standards for environmentally sustainable construction.

The NFRC lapel pin features the NFRC logo and the meeting location and date, along with an image that represents Jacksonville – a palm tree. NFRC will carry on this tradition in future meetings and work with other efficiency organizations. ■

# Building Information Modeling Shows Growth, Promise

The demand for Building Information Modeling (BIM) is steadily increasing among architects, engineers, contractors, and owners. Certain industry analysts predict that in 2009, 62 percent of BIM users will implement the software for more than 30 percent of their projects and 45 percent of current users will use BIM for approximately 60 percent of projects.

BIM is essentially a digital representation of the physical and functional characteristics of a given facility and is important because it serves as a resource for sharing knowledge on information about a facility.

During the opening session of NFRC's Fall Membership Meeting in Jacksonville, Fla. on November 3, Deke Smith, executive director of the buildingSMART alliance™ described BIM to the attendees.

The buildingSMART alliance estimates there is approximately 57 percent waste in the current construction industry and says this equates to nearly \$400 billion annually. Much of this waste is the result of people doing things that simply don't need to be done or doing the same thing multiple times.

According to Smith, BIM can find potential conflicts before any building actually starts, saving time and money. The alliance's goal is to get the business processes in place to support this software. Smith noted a situation where a project was slated to take 15 months but was completed in just seven months using BIM.

"We need to get smarter so we can hold on to all the information we collect and best use it to our advantage," said Smith. "The key element to solving this problem is entering data once. So much waste in our industry comes from people having to go out and collect the same information multiple times."

The alliance's mandate is to represent the entire facilities industry and to build bridges between the public and private sector. NFRC supports the industry's transition to BIM.

For more on Deke Smith and the buildingSMART alliance, see the Q&A in this issue of *Update*. ■

# DOE Renews Tax Credit for Energy-Efficient Windows

If you're planning to install new windows in your home, you may want to wait until January 1, 2009.

That's because the Emergency Economic Stabilization Act of 2008 includes a provision that includes a tax credit for consumers undertaking home improvement projects, including windows, doors, and skylights.

The provisions of the tax credit state that:

- Consumers can receive a \$200 credit for all qualifying products (including windows and skylights) installed during 2009 and a \$500 lifetime credit (doors and window film);

- All qualifying products must be ENERGY STAR®; and
- Credits must be applied for products purchased in 2009.

Because this program was not renewed at the end of 2007, products purchased during 2008 do not qualify.

For more details on how the tax credit impacts you, see NFRC's fact sheet on this renewed tax credit.

If you have further questions feel free to contact NFRC's Marketing and Communications Manager Tom Herron at [therron@nfr.org](mailto:therron@nfr.org). ■

**Tax Credits Provide Incentive For Window Replacement Projects**

Windows, doors, and skylights, if chosen properly, can provide increased comfort, natural daylight, energy and noise savings. Unfortunately, these same products can also be the largest source of a home's energy drain, adding hundreds of dollars each year to heating and cooling costs. To compensate, many homeowners cover their windows with shades, blinds, heavy curtains, and other devices that reduce natural light, views, and comfort levels. Not only do consumers, but the federal government is making it a little easier to upgrade from window to a better window.

**New Tax Credit Extension Provides Incentives**

The Emergency Economic Stabilization Act of 2008 includes a provision that offers consumers tax credits for the purchase and installation of qualified energy-efficient windows, doors, and skylights in 2009. The federal government is allowing consumers to claim a credit with the purchase of qualified windows, doors, and skylights in 2009.

**Who's the Process?**

**Step 1:** Look for the ENERGY STAR label. The U.S. Department of Energy and the Environmental Protection Agency National Green Label for Energy Efficiency (NGL) designates the products meeting certain performance criteria. Also, the design efficiency performance of windows, doors, and skylights are easy to identify. product manufacturers are given for their designs.

**Step 2:** Select a quality product. The ENERGY STAR label and NGL label are both required for a product to be eligible for the tax credit.

**Step 3:** The ENERGY STAR label includes energy performance (ENERGY STAR) and other information. The ENERGY STAR label is a key indicator of energy efficiency.

**Allowable Amounts**

Product Type	The Credit Specification	The Credit	Notes
Energy-efficient windows and skylights	ENERGY STAR qualified or NGL	20% of cost, up to \$200	All qualified ENERGY STAR windows, doors, and skylights qualify. The maximum credit per window, door, or skylight is \$200.
Energy doors	NGL	50% of cost, up to \$500	ENERGY STAR doors do not qualify. Only doors that carry the NGL label are eligible.

ENERGY STAR is a registered trademark of the U.S. Environmental Protection Agency. ENERGY STAR is a registered trademark of the U.S. Environmental Protection Agency. ENERGY STAR is a registered trademark of the U.S. Environmental Protection Agency. ENERGY STAR is a registered trademark of the U.S. Environmental Protection Agency.

# Codes Update



*Several states have adopted new energy codes in 2008, and many others have taken action to implement code changes.*

*Here are some of the recent code developments on the horizon as provided by the Building Codes Assistant Project (at [www.bcap-energy.org](http://www.bcap-energy.org)) and the Responsible Energy Codes Alliance (RECA):*

A **California** law requiring building owners to report their energy use will take effect January 2009 for non-residential buildings and January 2010 for commercial buildings.

Earlier this year, **Colorado** passed a law requiring all jurisdictions with a building code to adopt the 2003 or 2006 IECC.

The **District of Columbia** City Council passed the Clean and Affordable Energy Act of 2008 in September, which will require government buildings to report their energy efficiency statistics using the Energy Star Portfolio Manager tool. The bill requires all buildings to undergo annual benchmarking, beginning in the fall of 2009.

In June, **Florida** Governor Charlie Crist signed a bill requiring the state adopt the current version of the IECC, with some modifications, to meet standards set by the Florida Energy Efficiency Code for Building Construction.

In November, **Montana's** Building Codes Bureau met and unanimously voted to support adoption of the 2009 IECC. With an update process of roughly six months, the state expects to pass legislation next fall.

**Massachusetts** passed legislation in October that made effective immediately the 2006 IECC with the 2007 supplement and ASHRAE 90.1-2007. The legislation allows for a six-month grace period for commercial buildings.

This fall, **Nebraska** won a \$303,065 grant from the U.S. Department of Energy that the state will use to improve both energy efficiency and code initiatives. State officials plan to adopt a code that goes 30 percent beyond the requirements set forth in ASHRAE 90.1-2004 and the 2006 IECC.

The **New York** State Assembly passed legislation this summer that will encourage homes to meet green building standards, which leaders hope will lead to improved water conservation, indoor air quality, natural resource conservation, and use of nontoxic building products. To promote these practices, the legislation includes provisions for financial incentives to residents who meet the determined efficiency standards.

In September, an ad hoc committee comprised of home builders, an energy rater, and staff from both the Energy Office and Board of Building Standards of **Ohio** pushed to re-adopt the 2006 IECC—a code they abandoned earlier in the year. They have not yet come to a final vote.

**Tennessee's** legislature established the 2003 IECC as a mandatory minimum for all construction on or after January 1, 2009.

In April, Dallas adopted an ambitious green construction ordinance that will dramatically reduce **Texas's** water and energy consumption. Starting October 9, 2009, new homes must function 15 percent more efficiently than the 2006 IECC requires and also meet four of six high-efficiency water reduction standards. These standards will become more stringent in 2011.



On November 29, Kelly Kozlowski of the *Detroit Free Press* explained in detail how to purchase windows that will best keep cold out and heat

in. In the article, *How to Pick the Right Windows to Keep Out Cold*, she pointed to the NFRC label as an essential, referring to it as the most reliable source of efficiency information available.

Popular homeowners Web site, *Multi-housingnews.com*, ran a piece November 17 that focused on energy efficiency. The article, *New York Building Scientist Details How to Promote Energy Efficiency in Existing Buildings*, examined how even the smallest of holes and air leakages can lead to a dramatic reduction in energy efficiency. Among other points, the author called for windows that were properly installed and have an overall rating determined by NFRC.



In a November 6 *Engineering News Online* article, Brindaveni Naidoo highlighted the success of South Africa's first rotatable-guarded hot box (RGHB) that was recently certified by the NFRC and has earned significant acclaim for its accuracy. NFRC International Coordinator Bipin Shah refers to the accuracy of the construction of the South African RGHB as "mind boggling," given the challenges and deadlines presented to the team responsible for engineering the product.



A Q&A in the October 31 edition of *Tulsa World*, *Modern Windows Save on Heating Bills*, heralded the superior energy efficiency insulated glass units provide home owners. The writer focused on the U-factor, a relationship he simplistically described as "the more air between the glass, the better insulator it is." He notes the U-factor as the essential quality of a window and cites the NFRC Web site as the best resource for information on the U-factor and other related issues.