Wausau achieves NFRC 'ACE' certification

Wausau Window and Wall Systems' design engineers, John Kolbeck and Tom Mifflin, are among the first manufacturers to earn Approved Calculation Entity certification through the National Fenestration Ratings Council.

ACE-certified users analyze performance data for commercial fenestration energy ratings. Accessing NFRC's Component Modeling Approach software tool, they review libraries of approved frames, glass and spacer components. These libraries help users configure fenestration products for a project, and allow them to obtain a U-factor, solar heat gain coefficient and visible transmittance rating for those products. Performance values are then compared to the energy requirements of local codes, such as California's Title 24, to determine compliance.

Mifflin, Kolbeck and their colleagues at Wausau also are involved with an industry pilot project for the NFRC commercial labeling and compliance process at the University of California-Berkeley's Li Ka Shing Center for Biomedical and Health Sciences. When completed in 2011, the five-story, 200,000-square-foot facility will house 30 research laboratories, several lecture halls, the Henry H. Wheeler, Jr. Brain Imaging Center, and highly specialized instrumentation and containment areas for handling viruses and stem cell cultures.

Mortenson wins first solar power generation project

Mortenson Construction has been selected by enXco, an EDF Energies Nouvelles Company, to build a 1.8 megawatt direct current solar photovoltaic array in Belle Mead, N.J. It is the first solar power generation project for Mortenson, a leading wind-energy contractor in North America.

The ground-mount fixed tilt solar array, utilizing 25,000 photovoltaic modules, will be constructed for enXco customer Carrier Clinic, a not-for-profit behavioral healthcare system, on nearly 14 acres and will be the largest solar power system on a New Jersey healthcare system campus. Using a clean, safe and sustainable energy source, the solar array is expected to supply 50 percent of Carrier Clinic's electrical services during periods of peak demand.

Since entering the renewable energy market in 1995, Mortenson has become a leading builder of wind power projects in North America. Today, Mortenson has been involved in the construction of more than 80 wind power projects, totaling more than 8,000 megawatts across the U.S. and Canada. Mortenson currently employs more than 2,200 people nationwide with dedicated teams to help deliver renewable energy projects to its growing list of customers.

COMMENTARY by JIM FERGUSON, LEED AP

Four tips for a first LEED project

Work begins days after landing the job

Congratulations! You won your first LEED job. Now what?

There are challenges in building a sustainable construction project that require your attention right away; documentation, processes and education. If you have solid documentation in your current work, you can easily learn and adapt to what the U.S. Green Building Council is looking for in submittals. Within days of winning the job, you'll want to start putting processes in place to track the various parts of the job you're responsible for managing. Construction is involved with about a third of the points in a LEED project – sustainable sites, water efficiency, energy and atmosphere, indoor environmental quality and innovation and design.

FOR MORE INFORMATION
www.usgbc.org.

While this is not a complete list, these items will help you get started on your first LEED project.

No. 1 Understand the LEED goals and how you impact them

Meet with the design team and LEED administrator for the project. They are great resources and may have historical information that can help you on the project. They will also understand the strategy the project has to attain the LEED goal.

No. 2 Establish management plans

> Construction waste management: Should be tracked and measured for diversion from landfill. A potential of 3 points are available just in recycling.

> Construction activity pollution prevention: This prerequisite for LEED can typically be fulfilled by using the design for construction storm water management.

> Material content has three different parts: recycled content; regional material that is mined or manufactured within 500 miles of the site (and helps your score);

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wood certified by the Forestry Stewardship Council.

No. 3 Establish a LEED 'champion'

The champion's job is to ensure the processes that you set up are followed and tracked. Part of that tracking is to report where you are in relation to your goals at least every month. As the project develops, the ability to attain points can change. You need to know what the project score is so the team can adjust the strategy to attain the LEED goal. In addition to tracking, LEED champions can also help train your staff and subcontractors how to be successful with LEED. A large part of the success on your project will be educating your personnel to follow new processes. I suggest that your champion has LEED AP training and is experienced with sustainability. It's not required, but will help you be more successful on your first LEED project.

No. 4 Your subcontractors and vendors need to also know what is required

For some, the submittal process may be more difficult because a big part of LEED is understanding which volatile organic compounds, or VOCs, are part of their materials. VOCs are a big driver in indoor air quality and properly managing IAQ will make your job easier. Paperwork is only one part of the process that requires attention. Field activities will also need to change for a successful project.

All ductwork should be protected from dust getting inside the duct. That means wrapping the ends of the duct before and after installation to keep the duct work clean. All material should now be stored on dunnage. Many subcontractors do this already but some will need to learn it. A LEED job may also preclude you from using the HVAC system as temporary heat. Given how well our buildings are insulated and sealed, this may become a standard practice on all jobs in the future. Another issue to watch out for is the trip to the lumber yard to get more supplies. The adhesives, paints and wood that we picked up in the past should be checked for compliance so we don't lose a point by mistake.

The LEED process can be initially confusing and requires attention for you and your project to be successful. There are great resources to help you manage the LEED process that are available online. Tool kits and software with templates and prebuilt processes can minimize the amount of frustration of getting started. The design team and LEED consultant can also help you learn the process. We've also found our subcontractors can be great resources in helping us be successful. Depending on the complexity of the project, you may want to hire a consultant who can help you with your project. There are several online templates to help you select a consultant. Another good resource is your local chapter of the USGBC. Your first LEED job will have the steepest learning curve, but also holds the potential and opportunity to build a better project and help you develop processes that will help your company overall. ///

As the General Superintendent for The Neenan Company, Jim Ferguson oversees the field operations and is active in the scheduling, staffing, safety, and quality control of projects.

EMerge Alliance announces first DC power standard

Delivering an innovative platform for unprecedented flexibility, sustainability and energy efficiency in commercial buildings, the EMerge Alliance recently announced the release of the EMerge Alliance Standard, the first roadmap for the utilization of safe, low-voltage direct-current power in commercial interiors.

The new industry standard allows buildings of today to adapt to the needs of tomorrow by defining critical physical and electrical requirements that help achieve reduced energy losses by eliminating device-by-device electrical conversions from alternating-current power to DC power; use of safe class 2 power levels wherever practical as defined by the National Electrical Code; broad capabilities for faster and simpler moves, adds, and changes in occupied spaces; and movement towards interoperable device-level controls and smart grid integration at the building level, among others.

In the standardized scheme, AC power is converted to low-voltage DC for efficient distribution at the room level, eliminating the inefficiency of numerous AC to DC power conversions at the device level.

The Standard also provides for an optional connection to on-site alternative power generation, including solar panels and micro-turbines that naturally generate DC power.

DOE releases data in commercial building energy goals

The U.S. Department of Energy and the DOE national laboratories are releasing technical support documents that suggest how to achieve 50 percent energy savings in four key commercial building sectors. This is taking place less than two years after launching the Net-Zero Energy Commercial Building Initiative, which aims to achieve marketable net-zero energy commercial buildings by 2025.

The technical support documents were created by the DOE national laboratories under the direction of DOE's Building Technologies Program. They describe the assumptions, methodologies, and analyses used to reach 50 percent energy savings over ASHRAE/IESNA Standard 90.1-2004 in general merchandise, grocery store, lodging, and medium office buildings.

The technical support documents demonstrate that higher levels of energy performance can be achieved in the commercial building industry. These reports are often the basis for Advanced Energy Design Guides — "how to" guides that target architects, engineers, and other design practitioners.

Report data is also shared with members of DOE's Commercial Building Energy Alliances, which are comprised of commercial building owners and operators. Each alliance works with DOE to reduce the energy use and the environmental footprint in the retail, commercial real estate, and hospital sectors, as well as to help disseminate valuable building information within each sector.