

LEED® Update

The US Green Building Council's Leadership in Energy and Environmental Design program has expanded significantly in the past couple of years, and it is due to grow again at this year's Greenbuild conference in November with the launch of LEED for Homes.

The LEED for Homes pilot has included 375 builders and 6000 registered home projects throughout the country. Two hundred homes have been certified in a rating system that has undergone continuous improvement during the pilot phase. Eleven revisions to the



*Pleasant Hill Residence, Freeport, Maine
Project Designed and Constructed by Taggart Construction*

original rating system have refined LEED for Homes, responding to problems and questions raised by builders during the pilot. The LEED for Homes delivery method differs markedly from the process for the "commercial" LEED programs. Local providers – consulting firms approved by USGBC – were designated to deliver program services to home builders. Twelve providers were chosen for the pilot program; additional providers will be approved by USGBC to meet demand following program launch. Providers guide builders and maintain documentation during the project, and they are empowered to certify projects upon completion.

LEED for Neighborhood Development is another rating system in development. A project of USGBC, the Congress for the New Urbanism, and the Natural Resource Defense Council, LEED for Neighborhood Development entered the pilot phase earlier this year, with an overwhelming response from development projects throughout the US. Four of the 238 pilot projects are in Pennsylvania – two in Pittsburgh and two in Oakmont. The pilot is projected to be completed in 2008, and a rating system launch is anticipated in 2009.

The LEED for Existing Buildings committee has been working for the past year on extensive revisions to that rating system. Renamed LEED for High Performance Operations to recognize its emphasis on building operations, the draft revised document was submitted to public comment in August.

Other LEED rating systems currently in place include:

- LEED for New Construction, for new commercial and institutional buildings and for significant renovations.

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The Green Building Association of Central Pennsylvania is a coalition of building professionals and citizens who are interested in improving the sustainability of the systems in our region. The mission of the GBACPA is to promote environmentally responsible design, planning, construction and operation of the built environment through education, outreach and networking. For information write: info@gbacpa.org or call: 717.497.5768 or visit our web site at www.gbacpa.org.

Residential Green

Green building professionals who design and construct commercial and institutional buildings have seen some remarkable progress in the past couple of years. Building owners – both private and public – are recognizing the very real financial benefits of green building practices. State and local governments are mandating high performance practices for public buildings, and creating incentive programs to encourage adoption of such practices in private projects. Large building owners such as educational institutions are finding that they can enjoy significant operating cost savings as they move toward sustainable campuses.

Commercial and institutional buildings represent relatively large opportunities for conserving energy and resources through green building practices. Also, owners of such buildings are generally able to appreciate the long-term benefits of high performance measures. The residential marketplace presents some significant hurdles to widespread adoption of green building practices. Owners are highly dispersed and relatively small building size offers fewer opportunities to achieve synergies among building systems, compared to larger commercial and institutional buildings. Homebuilders face similar constraints; most are small businesses that would be taxed unduly by the effort required to learn and apply green building standards.

Patience and persistence are probably what is needed for us to find our way to green building practices being as common in residential construction as they are in commercial and institutional building. Ten years ago, early adopters found that green practices did indeed add to building cost. But the “green premium” decreased quickly as design and construction professionals became accustomed to the integrated process that produces high performance buildings, and as manufacturers developed building materials and equipment that contributed to energy and resource efficiency and healthful interiors.

In home building, integration will bring benefits, but the relatively small scale of the buildings will limit the system synergies that have translated to significant cost reductions in commercial and institutional construction. On the other hand, as home builders and remodelers become more accustomed to green building practices, they will be able to guide their customers toward the practices that will provide optimal benefits in relation to cost. As builders and their customers become increasingly comfortable with green practices, they will be able to apply a suite of such measures to make residences “as green as the budget allows.”

Home builders and remodelers do not have to develop their own ideas for green building practices. The U.S. Green Building Council’s LEED for Homes rating system will be launched at this year’s Greenbuild conference in Chicago, and the National Association of Homebuilders published green building guidelines about a year ago. Both rating systems were developed to be applied on a decentralized basis, LEED by regional providers and NAHB by local homebuilder associations.

LEED-EB Training Workshop in Lancaster



Armstrong Corporate Headquarters—Lancaster, PA
LEED-EB Platinum Certification

GBACPA and Armstrong World Industries will host a one-day workshop on LEED for Existing Buildings in Lancaster on November 28. The workshop will be held at Armstrong’s recently certified LEED-Platinum building on the company’s Columbia Avenue campus.

Workshop participants will gain the knowledge needed to maximize building performance, achieve LEED certification, and take the LEED Professional Accreditation exam.

Early registration fee (through 11/20/07) is \$345 for USGBC members and \$445 for non-members. Register for this important training workshop at the USGBC website. (www.usgbc.org)

Armstrong World Industries will host the training workshop as a Platinum level USGBC sponsor. GBACPA also acknowledges the financial support of Johnson Controls, an organization member of the association, as a local sponsor.

Changes in the GBACPA Member Management and Communication System

The GBACPA board recently decided to move from its current membership management and communication system to a fully integrated system. The current system was built on several separate elements:

- A database of member information and a website maintained by the executive director,
- Emailing to members and nonmembers through Cooleremail, and
- Event registration using Acteva.

While each of these elements is web-based, the three elements are not integrated. An event, for instance, would require setting up the registration on the Acteva site, linking the Acteva web page to the GBACPA website (and setting up the event on the website), and preparing and emailing an announcement using Cooleremail. The new system will integrate all of these actions, simplifying the communication tasks and tracking member activities.

We expect to launch the new system in the fall. Members will notice several changes:

- Renewal notices will be sent automatically via email. Members may renew using a credit card or they may print the renewal notice and send a check by mail.
- Email communications will have a somewhat different appearance. The association website will look much the same as it does today, but navigation will be somewhat different.
- Event registration, including secure credit card transactions, will occur at the GBACPA website.

Communications with our members will be enhanced greatly through the new system. Emailing will be simplified, and it will be “targetable” to specific categories of members. We will also initiate a monthly electronic newsletter that will provide members with more timely news and notifications than we have been able to offer with paper newsletters.

So this is the final newsletter you will receive from GBACPA. We will begin our second decade “paper-free.”

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7group was formed in 1999 by seven companies that provide complementary services in integrated design and the LEED® process. The 7group partners have worked together to create some of the country’s most successful green building projects, and in the process, they have provided valuable information regarding the financial and environmental benefits of the integrated design and building process.

Over-designed systems, call-backs, and costly mistakes are far too prevalent in traditional design and building projects. The integrated design process pulls the team together early, and maintains communication among team members throughout the project to overcome these drawbacks of the traditional process. The efforts of 7group on past projects have resulted in significantly smaller HVAC systems, fewer light fixtures, elimination of perimeter radiation, optimized HVAC location, and other integrated solutions that can lower first cost and operating costs.

While the core of integrated design is the relationships among the design professions, 7group uses many tools to facilitate successful implementation of green projects. These tools include energy modeling, daylighting studies, building commissioning, life-cycle analysis, and materials research.

7group has expertise and experience in:

- Integrated design
- LEED consulting, facilitation, and documentation
- Overcoming barriers to LEED implementation
- Architectural consulting
- MEP engineering consulting
- Solar engineering
- Daylighting studies
- Energy modeling
- Sustainable materials consulting
- Specification writing
- Building commissioning



7group

www.sevengroup.com

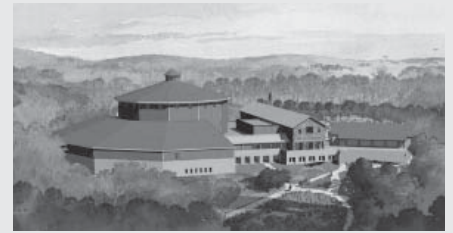
GBACPA Bronze Member

Kinsley has been providing award-winning and high-quality general contracting, design/build and construction management services to our clients for over 40 years. Kinsley's projects are diverse in size and varied in complexity, serving clients located within a 125-mile radius of York, PA and Baltimore, MD. The majority of our projects are performed for clients with whom we have developed repeat business relationships. Kinsley Construction is a family-owned business that has evolved into one of the largest full-service firms in the nation (as measured by annual rankings in the *Engineering News Record*).

Kinsley is "growing" in sustainable design and green buildings in Central Pennsylvania and Maryland. The following LEED projects are currently under construction:

Greenway Tech Center, York, PA Kinsley has just completed the general construction of the shell building renovations, and is continuing as the Construction Manager for the interior tenant improvements for Lifetime Brands. The work involved demolition of five structures and the renovation of two attached structures; and required the use of recycled, reused or salvaged materials. We are seeking LEED Silver Certification on the project.

Gettysburg National Battlefield Museum Foundation, Gettysburg, PA Kinsley is currently providing construction management services for the new Gettysburg National Military Park Museum and Visitor Center. The building totals 139,000 square feet and will contain a museum and visitor center and also specific areas for the conservation and storage of collections. This is a public/private partnership with the National Park Service. We are seeking LEED Silver Certification on this project.



YMCA of York, York, PA Kinsley provided pre-construction CM services for the new natatorium and outdoor pool project. We are seeking LEED Silver/Gold Certification on this project.

217 International Circle, Hunt Valley, MD Kinsley is currently providing design/build services for the renovation of this 32,000 square-foot, two-story office building. This is the first Green project in Baltimore County. We are seeking LEED Platinum Certification on this project.

www.rkinsley.com

Met Ed SEF—GBACPA Bronze Member

The Metropolitan Edison Company Sustainable Energy Fund was established by donation of more than \$8 million by Met Ed to the Berks County Community Foundation. Since it was established in 2000, it has provided financial support within the Met Ed service area to promote:

- Development and use of renewable and clean energy technologies;
- Energy conservation and efficiency programs;
- Sustainable energy businesses; and
- Projects that improve the environment in relation to Met Ed transmission and distribution facilities.

Support is provided through grants and low-interest loans, or through equity investments.

A seven-member advisory board, consisting of representatives from independent power producers, weatherization providers, electricity suppliers, industrial and commercial electric power customers, environmental groups, and Met Ed, oversees the grant and loan recommendation process. Projects that received funding during fiscal 2006 (July 1, 2005 through June 30, 2006) include:

- The Mid Atlantic Renewable Energy Association - \$1000 for the Renewable Energy Festival in Kempton, PA.
- 2006 Clean Energy Expo at the Bryce Jordan Center at Penn State - \$5000.
- AFC Financial - \$30,000 to provide a fully functioning energy efficiency home improvement consumer loan program for the Met Ed / Pennelec service territory.
- Community Energy - \$500,000 for a 24 mW wind energy project on Bald Mountain in Bear Creek Township, PA.
- Fiberblade LLC - \$500,000 for development of a wind energy manufacturing facility.



For more information about the Met Ed SEF, visit the Berks County Community Foundation website at www.bccf.org.

Ganflec Architects & Engineers, Inc. is a full-service design firm that incorporates sustainable design practices into all of its projects. The firm uses an integrated design approach that includes the entire design team from the project inception through construction and commissioning. Ganflec's mission statement defines the firm's approach to building projects:

Through the use of an integrative design process, provide our clients with sustainably designed projects which will provide a better environment for current and future generations.

Ganflec's design services include:

- Architecture
- Site design
- Mechanical, electrical, and plumbing
- Structural
- Facility management

Ganflec is in the process of submitting LEED® documentation for the Northampton Water Treatment Plant, which will be the first LEED-certified water plant in the eastern U.S. Other sustainable projects on which Ganflec has provided design services include:

- Pennsylvania State Bank, West Hanover branch
- Londonderry School
- AES/PHEAA cafeteria addition
- Anne Arundel County (MD) police station vegetated roof
- Granger pipeline, which conveys landfill gas to an industrial facility

To learn more about Ganflec's capabilities and experience, visit www.ganflec.com, or email greenteam@gfnet.com.



GBACPA Bronze Member

GBACPA Gold Member

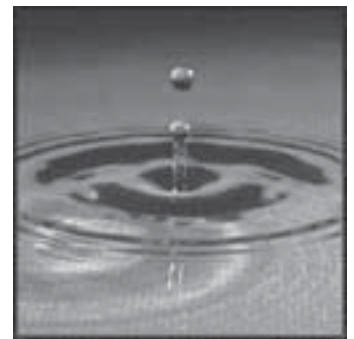
Aqua Cura

David Sheridan, the GBACPA executive director, operates two firms. Aqua Cura, formed in 2002, is a consulting firm that specializes in sustainable water management and green building. Water management projects have included:

- Low-impact stormwater management measures for commercial and institutional projects in several locations in Pennsylvania.
- Concept design for graywater treatment in a New York City office building.
- On-site wastewater management concept design for an elementary school in southeastern Pennsylvania.
- Technical assistance to the Susquehanna River Basin Commission in implementing stormwater management demonstration projects under a Targeted Watershed Grant from U.S. EPA

Green building projects include:

- Assistance in LEED documentation to achieve Gold certification for a laboratory building in Pennsylvania.
- Facilitation of a Green Communities charrette for a senior housing project in southeastern Pennsylvania.
- Training in green building practices through seminars and web-based programs.



In 2006, David Sheridan formed a development company – Sustainable Community Development Company – to bring green building and smart growth practices into efforts to revitalize Pennsylvania's small towns. The company is nearing completion of land planning for its first project – twenty high-performance residences in the Borough of Carlisle. Preliminary evaluation indicates that the project may achieve Gold certification under the LEED for Homes rating system. Building is anticipated to begin in the spring of 2008, with the first units ready for occupancy toward the end of next year.

Lancaster Co. Career & Technology Center Framing Tour—Green Home

This article submitted by Kim Patrick, project manager for the LCCTC green home.

On June 8, throughout the morning and into the afternoon, builders from Lancaster County and surrounding areas came to the Lancaster Co. Career & Technology Center for a Framing Tour. The tour was designed to educate builders about green building relative to framing methods and products. The [NAHB Model Green Home Building Guidelines](#), which have guided the design of this green “*Community Education Project*,” were highlighted.

There was much discussion about green building protocols and their requirements. This particular project is educational in nature so although we are building to one model, the learning experience is valuable and of great significance to the students and builders involved. One builder entered the tour somewhat reluctantly and said, “I guess I need to learn more about green building.”

Over 70 people, the majority from the building industry, toured the project. Several green building technologies were on display including advanced framing, concrete forms, jobsite recycling, and rainwater harvesting. The overriding theme of the day was that, the greatest improvements result from an approach that examines the interaction of all the building systems—what the experts call a “systems” approach.

Energy performance does not end with increased R-values, the use of renewable energy, and/or more efficient HVAC equipment. Rather, there needs to be a balance between these features and careful window selection, building envelope details, air sealing measures, duct sealing, and proper placement of an air barrier from foundation to attic to create a truly high-performance, energy efficient home that is less expensive to operate and more comfortable to live in than a conventional home.

This systems approach is perhaps the greatest educational challenge whether teaching students or seasoned builders. System thinking is design intensive and requires a set of skills that may be outside the comfort zone of conventional builders. Product specification is easy. Training or retraining a labor force is difficult. It is the goal of the Lancaster County Career and Technology Center to address this challenge by training students in systems approach before entering the workforce.

The next event at the Lancaster Co. Career and Technology Center will be in December when builders and the public will be invited to a Mechanical Tour. LCCTC expects the house to be sold and occupied by about June 2008.

Let's Get MorningStar to Harrisburg

As many of you know, Penn State competed in this year's Solar Decathlon, an international competition sponsored every two years by the U.S. Department of Energy. The Solar Decathlon is a competition among architectural and engineering design schools to create a house that is self-sufficient in energy and conserving of resources. This year, twenty teams from North America and Europe assembled and demonstrated their houses in October.

GBACPA hosted a bus trip to DC on October 19, the day on which final standings were announced. The bus was sponsored by Armstrong World Industries, Lambdin Construction Management, and Zerodraft Central PA. GBACPA members and guests saw Penn State barely miss the podium, moving from third place to fourth in the final competition. The Penn State entry – called MorningStar – scored well in market viability (and first in the “hot water” competition).

MorningStar is back in University Park, where it will eventually be placed as a permanent structure – and used as living quarters by students – at the Center for Sustainability. But first, it will be taken to New York City for display at a technical conference in January 2008. We can get MorningStar to stop in Harrisburg on its way to New York, opening for public tours on about December 3 and spending most of the month on the lawn south of the capitol building.

MorningStar will provide a unique opportunity to help Pennsylvania's legislators to understand technological concepts like net metering (the electric meter running backwards), solar heat, and solar electric power production near the conclusion of the special session on energy. It will also allow members of the public to examine technologies that they have heard of, but that might be a bit abstract.

If we want to see MorningStar in Harrisburg, we must raise sufficient funds to pay the extra costs of rigging and transportation (this is not a simulation; it is a full-sized, small house) and operating the house while it is in Harrisburg. We estimate that about \$25,000 will be needed.

If you are interested in making a contribution, send your check made payable to Penn State University to GBACPA, P.O. Box 1759, Harrisburg PA 17105-1759. Note on the check that it is intended for MorningStar.

LEED for Existing Buildings Will See Extensive Changes

The U.S. Green Building Council launched LEED for Existing Buildings in 2004 to provide a pathway toward higher performance for buildings that were not undergoing renovations substantial enough to fit into LEED for New Construction. After two years, with only very modest uptake of LEED-EB in the marketplace, the Existing Buildings Core Committee began an intense period of evaluation and revision. Each credit and prerequisite was submitted to a number of questions:

- Does it require best green practices while being reasonably achievable and verifiable?
- Does facility management typically control the actions and processes involved in earning the credit?
- Can a business case be made for pursuing this credit?
- Is the credit vague or confusing?
- Or the burden for achieving or reporting too high relative to the beneficial outcomes?

Revised LEED-EB was posted for public comment in month as LEED for x. Some of the more significant changes were:

- In Sustainable Sites, the alternative transportation credit was made less prescriptive, inviting flexibility in achieving the objective of fewer single-occupant automobile trips.
- A metering credit – worth up to three points – was added to Water Efficiency.
- The Optimize Energy Performance credit gained five points, and a pathway for buildings that are not appropriate for Energy Star.

LEED® Update

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- LEED for Core and Shell, to cover the buildings that are constructed by a developer, with interior spaces to be fitted out by tenants.
- LEED for Commercial Interiors, the companion of LEED for Core and Shell, covering tenant improvements.
- LEED for Schools, launched in April 2007, focusing on the unique aspects of high-performance school construction.

A number of other LEED rating systems are in the works, including systems focused on retail and health care, and guidance that can be applied to campus situations.

USGBC and the LEED Steering Committee have recognized the likely confusion and difficulties of proliferating rating systems. Responding to these potential problems, the LEED Steering Committee is implementing some significant changes in the way rating systems are developed and delivered. The program will gradually move toward “One LEED”. Building teams will be provided with rating systems that fit the specific type of building and use, as well as regional conditions, such as climate and local ordinances. Eventually, we will probably no longer use the familiar LEED reference guides and application guides. We will be issued rating systems tuned to specific project types and locations. Further, we will probably see individual credit refinements occurring on a fairly regular basis, rather than the large-scale changes embodied in version updates. It is currently out of member ballot.

Metal Members

GOLD MEMBERS

Aqua Cura/Sustainable Community Development

BRONZE MEMBERS

7group

Energy Opportunities

Forbo Flooring

Ganflec Architects & Engineers

Highmark

Johnson Controls

Kinsley Construction

McClure Company

Met Ed SEF

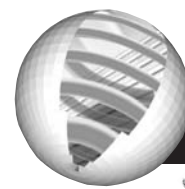
STV Group

T-Ross Brothers Construction

Trane Co.

Wagman Construction

Wohlsen Construction



Visit Our Web Site
www.gbacpa.org



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The Benefits of Membership

All GBACPA members receive our quarterly newsletter, special e-mailings, invitations to networking and educational events, and access to the Members Only section of the web site. Organizational and “metal” memberships can enter a firm description on the GBACPA web site and publish case studies. Small orgs (<20 employees) get two memberships, large orgs (>20 employees) get four memberships. Metal members receive discounts to events, free web link, advance event sponsorship opportunities and more. Make checks payable to “GBACPA, Inc.”.

Membership levels are as follows:

Associates - \$50	Bronze - \$1,000	Gold - \$3,500
Small Organizations - \$250	Silver - \$2,000	Platinum - \$5,000
Large Organizations - \$500		



Welcome Our New Organization Members

Caldwell, Heckles & Egan
 Johnson Controls
 Triangle Refrigeration

Home Builders Assoc. of Metro Harrisburg
 Ritchie Engineering
 T-Ross Brothers Construction

Board of Directors

- Dale Hair** - KD3 Design Studio
- Mark Lambdin** - Lambdin Construction Associates
- John Boecker** - 7group
- Stephanie Adams** - C.H. Briggs
- Doug Aldinger** - Erdman Anthony
- Jack Berger**
- Barbara Moncrief** - Interface, Inc.
- Don Santostefano** - Lebanon Valley College
- Marcus Sheffer** - Energy Opportunities
- Laurie Johnson** - Zerodraft Central PA
- Steve Coulson** - McKissick Associates
- STAFF: Dave Sheridan - Executive Director**

Our Renewing Member Organizations

Aqua Cura	Architects Residential Design	Citizens for Pennsylvania’s Future
Conexus	Dodge Regupol	Energy Professionals Insulation
Enterprising Environmental Solutions	Flood & Sterling	Forbo Flooring
Frescatore Consulting	Gateway Construction	Harkness Fry Architecture
JEM Group	KD3 Design Studio	PA Dept of Military & Veteran Affairs
PA Housing Finance Agency	SGS Architects Engineers	Strategic Building Solutions
The Stone House Group	USA-Gypsum	Weinstein Realty Advisors
Wickersham Construction & Engineering	Zerodraft Central PA	