



MIDDLE TENNESSEE CHAPTER NEWSLETTER

September 2007
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In This Issue

- Notes from the Chair - Mike Leonard
- 2008 Call for Nominations
- Letters from the Regional Chair - Sara O'Mara
- Letters to the Editor - What Is the Right Kind of Building?
- Generation Partners: A Call for Comments - Louise Gorenflo
- LEED-NC Energy Modeling Workshop Flyer
- Green Advantage Workshop for Contractors Flyer
- Morgan Park Place West - Paul Lynes
- Tankless Water Heaters: Engineering Considerations - Winston Huff
- 2nd Annual USGBC Middle Tennessee Chapter Green Tie Gala and Invitation
- Kilowatt Ours Sneak Preview
- Urban Housing Gets Energy Efficiency Makeover - Laurie Parker
- Nashville Public Housing 1st in State to Go Geothermal - Laurie Parker
- TLC Goes Carbon Neutral - Mary Ann Swiderski
- Local Happenings

Next Meeting

What: "Green Residential: 10 Ways to Green your Home" An overview of the USGBC LEED for Homes Program. Practical ways to "green" your home followed by a panel discussion of local experts to answer residential green building questions.

When: Thursday, September 27, 2007 11:30 am 1:00pm

Where: Tennessee Engineering Center, Adventure Science Center, 800 Fort Negley Blvd., Nashville, TN 37203

Cost: Chapter members, \$15. Non-Members, \$20.

Lunch will be served.

RSVP: RSVP's ARE REQUIRED. Please do so **by Noon, Monday, Sept. 24** to Terah Huber at thuber@tmpartners.com or 377-9773.

Notes from the Chair

- Mike Leonard



If you can remember back to our January membership meeting, I mentioned that our Chapter theme for 2007 would be LEED – *Local*. In a PowerPoint slide, I outlined 3 commitments that we would focus on in the coming year; 1) Community, 2) Information, and 3) Responsibility.

In a commitment to expand our *Community* of friends and network partners, our Chapter has reached out to a variety of like-minded organizations, forming partnerships and holding joint meetings. Committing to the sharing of *Information*, our chapter membership meeting topics, First Friday LEED work sessions, and focused newsletter articles, have all emphasized local resources and information necessary to implement green strategies. And particularly with the passage of the LEED Ordinance in Metro Nashville, our Chapter has demonstrated a commitment to the concept of local *Responsibility*, making sure that we do our part to further sustainable efforts here at home in Middle Tennessee.

In a few of my past "Notes from the Chair", I've attempted to outline prerequisites, or green strategies, that would serve to address our specific and somewhat unique issues in Middle Tennessee. Well, now it's your turn to chime in! The text below is an excerpt from a letter I received recently from the USGBC headquarters. It is addressed to Chapter Leaders, which is why I'm sharing it with all of you:

"The LEED Steering Committee (LSC) invites your participation in an effort to begin to "regionalize" LEED – that is, to adapt LEED to specific local conditions to enhance its effectiveness. Chapters and Regional Councils can play an important role in this process. Recognizing that chapters are in very different stages of development and may have different priorities, we hope that each

chapter will choose to participate to the extent they are able.

While "regionalization" is used to describe this effort, "adaptation to local conditions" is a more accurate description. Local conditions could be defined by climate, geography, airshed or watershed, urban-rural setting, and other factors. Because regions may contain wide variation, we do not expect that adaptation would be applied uniformly across an entire USGBC region. At the same time, it is important that LEED retains its national identity and not become a series of different "regional" rating systems.

Our first step in this work is to identify (1) high priority environmental issues in your regions that differ from national patterns – the "local conditions" and (2) LEED prerequisites or credits that could be adapted to address these issues more effectively. The LEED Steering Committee is requesting assistance from the Chapters, Regional Councils and our Technical Advisory Groups in identifying issues and working toward adapting LEED to these local conditions."

LEED – *Local*

Through this letter, the LSC is requesting that Chapters transmit feedback through our Southeast Regional Council by October 15th. In the interest of time, and as a way to give all of our Chapter members and friends an opportunity to participate in this process, we will hold a work session at our First Friday meeting October 5th to discuss our issues and priorities in Middle Tennessee. Stay tuned for a meeting announcement with venue and times.

I am proud of our Chapter's growth in 2007, and am excited to see where the future will lead us in our quest for a sustainable region.

Mike

Think Globally – Act Locally.

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2008 Call for Nominations



Dear Chapter Members:

The USGBC – Middle Tennessee Chapter Nominating Committee is now soliciting nominations for the 2008 Chapter Board of Directors. The Nominating Committee has been charged to solicit candidates for the Board that bring the membership diversity, leadership qualities, and other qualifications needed to assure strong and dynamic local leadership. Please note the following special features for this year's elections and further explained in attached materials:

- Nominations will be accepted for 5 Board seats.
- Candidates will be selected for the slate to provide a desirable mix of expertise, potential contributions, leadership experience, diversity, and continuity for the overall Board as outlined in the attached criteria.
- Members will have an opportunity to meet the candidates at the October membership meeting. Bios will also be distributed at the meeting and will be posted on the chapter website at the online voting booth. Additional campaigning by the candidate and supporters is permitted following the attached guidelines developed by the committee.

We hope you will consider this exciting opportunity to help shape the Chapter's future and that of the green building industry. And, remember, although its main responsibility is providing overall policy direction, the Board also offers lasting business relationship and friendships.

You may nominate yourself by completing the application form (available on our Chapter website); or, nominate another member by asking them to do so. The application must be completed in its entirety and submitted to Chapter Vice-Chairman, Fernando Rodriguez, by fax (615) 231-6301 or e-mail fjrodriguez@tcco.com no later than Tuesday, October 23. Please direct questions on these materials or procedures to fjrodriguez@tcco.com. Thank you!

All candidate bios will be posted to the online elections booth on the chapter website. Registered chapter members will be able to log in and cast one vote per open seat. All votes of individuals from any one member company will be tallied as equal percentages of one vote per company. For example, if there are 10 local chapter members from one company, each of their votes will count at 10% of the final vote counted from their company.

Recent Chapter Events



A panel of Metro government representatives discussed the new Metro LEED ordinance at the August Membership Meeting.



Mark West gave a walk-through of the LEED for Homes Rating System at the September First Friday meeting.



Movie-goers enjoy some Green Drinks before a presentation of 11th Hour.



Letter from the Regional Chair- Sara O'Mara

In this month's newsletter I thought I would share with you some information that I came away with when I attended the Green Residential Advocacy Training in Washington, DC which was held on August 19-20.

KEY MESSAGES – LEED for Homes

OVERVIEW

Green homes have a significant contribution to make in reducing climate change and energy dependence and improving the health of families who occupy them.

LEED for Homes is a national, voluntary green building rating system that promotes the design and construction of high performance "green" homes.

USGBC developed the LEED for Homes rating system in response to marketplace and USGBC member input requesting a rating system that provides a consistent and dependable national benchmark for the residential marketplace, reflecting the same technical rigor and consensus-based integrity that are hallmarks of all LEED Rating Systems.

LEED FOR HOMES PILOT STATS

- 450 builders registered to participate in the pilot
- 7,700 units are pursuing certification under LEED for Homes pilot.
- As of August 2007, more than 200 homes have been certified by 12 LEED for Homes Providers

KEY ELEMENTS

Given its role in transforming the built environment to sustainability within a generation, and the critical importance of building more green buildings of all types, the marketplace asked that the LEED for Homes rating system address several fundamental points:

LEED for Homes is for all types of housing.

LEED Homes are cost effective to build.

Builders as well as architects and designers have a role in the consensus development process of LEED for Homes.

While not part of the LEED for Homes rating system, expert guidance for green residential renovation is an important part of market transformation.

- USGBC and ASID are developing Green Residential Renova-

tion Guidelines to provide detailed best practice guidelines for both renovations well as operations and maintenance of green homes.

LEED for Homes is working collaboratively with local and regional rating systems already in place, as well as with complimentary national programs.

Even as a national benchmark, LEED for Homes addresses unique regional needs.

BUILDING A PROGRAM FOR SPEED AND SCALE

- LEED Homes are rated by LEED for Homes Providers, local organizations with demonstrated experience and expertise in their region's market.
- The Market sets the price.

Timeline

2000	Development of LEED for Homes begins
August 2005	Launch of LEED for Homes Pilot
March 2006	First certified LEED for Homes pilot project
Summer 2007	First public comment period
Greenbuild 2007	Launch of LEED for Homes (expected)

At this meeting the following Advocate Mantra was shared with us and I thought it was so great that I wanted to share it with you:

Never doubt that the work of a small group of thoughtful committed citizens can change the world.

Indeed, it's the only thing that ever has.

– Margaret Mead

Please let me know if you have any questions regarding this information. I can be reached at 704-556-0550.

Thank you,
Sara O'Mara



Local Statistics:

Middle Tennessee Chapter Members	385
Middle Tennessee Accredited Professionals	207
Middle Tennessee Certified Projects	2
Middle Tennessee Pre-certified Projects	1





Letters to the Editor- What Is the Right Kind of Building?

The "Letters to the Editor" section is the place for our readers to express their views and opinions. Please limit your letter to no more than 300 words, and the newsletter staff will try to include your letter in the newsletter. We reserve the right to edit letters for content and length. Submit letters to cdenson@ssr-inc.com before the second Thursday of the month to be considered for that month's newsletter

What is the right kind of building?

When a structure meets some of the LEED Green points, does that mean it is the right kind of a building? If you do not have a right kind of a building sited correctly on the land, what do you have? Disjunction! The disjunction between the land and the building can blur and coarsen the final product. Giving a little more thought to the build-ability of a place creates a more positive character to the particular place and to the building.

The building should be predetermined to the last detail, and instead of being "fit" the site, be interconnected to the site. A case in point, the official plan for the University of California at Berkeley in 1914 was laid out really well and was interconnected into the site with buildings facing a large elongated town green like the University of Virginia that Thomas

Jefferson designed or like the green mall at Peabody at Vanderbilt. In later years, the plan of the University of California at Berkeley was allowed to become eroded and disjointed, becoming a veritable hodgepodge of buildings.

With a right kind of a building, the volume of earthwork, which has a powerful visible impact, should be regulated by putting limits on the amount of ground that is disturbed and displaced. A right kind of a building should take in the "spirit of place" and only use those materials, colors and textures that would be visually pleasing and would blend into the environment.

The direction of a right kind of a building is important. The orientation of the building

to capture prevailing breezes is essential as well as sunlight patterns that should be and could be calculated. A great many buildings are usually oriented to face east and west so that most rooms will have some sun. The bad point here is that the structures that are facing west suffer from heat and glare. Buildings can be designed to face north and south if most of the working area is on the south side.

Maury Miller III
Earth Friends Photography
Architectural and Location Photography
Watershed Coordinator for West and Middle Tennessee
Through Southeast Watershed Forum

Generation Partners: A Call for Comments - Louise Gorenflo

In the hearings and hallways prior to the recent Senate and House votes on the Energy Bill, TVA actively lobbied against a renewable energy portfolio standard (RPS). TVA, along with the other major southeastern utilities, beat the drum that meeting a RPS would be a challenge for the Southeast because we do not have the renewable resources enjoyed by other regions. The Senate passed a bill without a RPS. The House did pass a bill which included the RPS but exempted TVA from its requirements.

In its September 2003 Technical Notes on Important Air Quality Issues, TVA concluded that "although a considerable amount of solar photovoltaics (PV) capacity exists in the Tennessee Valley, the large land requirements and high capital cost of solar PV systems make them a nonviable renewable energy source at the present time." TVA's forecast of renewable energies' contribution to its overall generating capacity is minuscule.

TVA's Generation Partners program is its only solar and wind renewable electricity program. A solar or wind generation source is installed

by a residential or small commercial power customer served by a participating TVA distributor. TVA agrees to purchase 100% of the green power output at a rate of 15¢ per kWh for a period of ten years. Residential users may also qualify for an additional \$500 incentive to help offset startup costs. A credit is issued by the local power distributor on the monthly power bill. Energy consumed at the home or business is billed at the standard rate.

TVA will change its Generation Partners pilot program at the end of this year into a net metering program and intends to reduce what it pays from 15¢ to 10¢ a kWh. The 15¢ purchase rate is a critical incentive for TVA homeowners and small businesses to install wind and solar generating capacity. This is the only renewable incentive available to churches, schools, and nonprofits. Presently TVA spends less than \$20,000 a year to purchase Generation Partners' electricity. This \$20,000 has gone a very long way to encourage an emerging Valley industry and goodwill for TVA.

Unlike other utilities around the country which are building a 20% renewable capacity, TVA has no plans to make renewable energies a significant part of its generating capacity. TVA projects a continuing growth of power demand which it plans to meet by plunging the agency further into debt through an intensive nuclear power plant construction program. Energy efficiency and most certainly renewable energy have a very minor part in TVA's vision for meeting future demand.

Your comments are needed to keep the Generations Partners' 15 cents purchase price for renewable electricity. TVA needs to hear from those who live and work in the TN Valley that we want our electrical power supplier to follow the leadership of other utilities across the nation and build a 20% renewable electricity capacity. Send your comments to TVA's Green Power Switch at greenpowerswitch@tva.com and copy your comments to gil@cleanenergy.org. For more information, visit the Solar Valley Coalition website (solarvalleycoalition.net).



LEED-NC

Energy Modeling for LEED-NC Projects

Are you ready to enter the rapidly growing green building market?

Attend the **Energy Modeling for LEED® for New Construction (LEED-NC) Projects Module** presented by the U.S. Green Building Council. This training session will teach you to manage energy modeling during design and successfully leverage this powerful decision-making tool.

WHY LEARN ABOUT LEED?

Ask any of the 5000 building owners seeking LEED certification right now. Owners and developers are demanding green facilities that save money while protecting the environment, improving health and performance of students, and creating a better learning environment. USGBC's LEED-NC Green Building Rating System™ is the nationally recognized standard for green buildings. LEED is already being used by green building projects in all 50 states and the market continues to grow.

WHO SHOULD ATTEND?

Industry professionals seeking to increase their understanding of the LEED-NC Rating System and green building strategies, benefits and resources:

- Architects
- Engineers
- Owners
- Manufacturers
- Developers
- Designers
- Consultants
- Contractors
- Government Officials

WHAT'S COVERED

- Energy modeling protocols of ASHRAE Standard 90.1 for LEED-NC Energy and Atmosphere credit compliance
- Information on common pitfalls, misunderstandings, documentation
- LEED Project case studies and a sample exercise
- Available tools and resources

CONTINUING EDUCATION CREDITS AVAILABLE



HOST



Middle Tennessee Chapter

October 16, 2007
8:30 am – 12:30 pm
Nashville, TN
Tennessee Engineering Center
Adventure Science Center
800 Fort Negley Blvd.
Nashville, TN 37203

FACULTY

USGBC workshops are conducted by the top green building practitioners in the country. The following instructors are currently scheduled for this workshop (subject to change):

John McFarland

REGISTRATION

To register for this or any USGBC workshop, visit www.usgbc.org/workshops/register

FEES	USGBC MEMBERS*	NON-MEMBERS
Early	\$175	\$205
Late (begins 10/09/07)	\$225	\$275

Students *NEW!* \$150 (limited availability)
(FULL-TIME STUDENTS ONLY)

For info on student rates and all workshop inquiries, contact workshop@usgbc.org or call 202-742-3820.

Fee Includes:

- A discounted price on the LEED-NC Reference Guide print edition (\$125 + S&H) when purchased at registration
- Educational handouts
- Refreshment breaks

Join USGBC today and start saving!

Members receive discounted rates on all workshop offerings and reference materials.

**Attendees whose firms are national members of USGBC*



Builders, Developers, Contractors, Subcontractors and Trades People

Put yourself ahead of the curve and distinguish yourself in the marketplace by becoming Green Advantage[®] Certified.

October 18 – Nashville, TN



The Environmental Certification program that staffs your project with construction field personnel who have demonstrated their knowledge of green building practices and LEED[®].

The workshop is an 8 am to 5 pm course taught by green building experts which will prepare trainees for the Green Advantage[®] Commercial Exam.

Practitioners who pass the Exam become Green Advantage[®] Certified for a three-year period and are listed on the Green Advantage[®] national register

Green Advantage is about training and certifying construction trade personnel; the people in the field who are responsible for actually building green buildings.

Builders with a sufficient percentage of their building staff who are Green Advantage[®] Certified are eligible for a LEED[®] Innovation Credit.

Workshop Details

Date: Thursday, October 18, 2007

Time: 8:00 AM to 5:00 PM

Location:

The office of Kraft CPAs –
555 Great Circle Rd, Suite 200
Nashville, TN 37228

Cost: \$450* Includes Exam

Exam Details

Date: Thursday, November 1, 2007

Time: 8:00 AM to 10:00 AM

Location:

AGC of Tennessee –
Middle Tennessee Branch
2924 Foster Creighton Dr
Nashville, TN 37204

Visit www.greenadvantage.org or
www.dvgbc.org to register.



**USGBC
EDUCATION
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* Refunds are limited to 80% and must be requested in writing to info@dvgbc.org no later than two weeks prior to the workshop. No refunds will be given if the registrant cancels less than two weeks before the workshop. Attendee substitutions may be made. Transfer of workshop fee to a future workshop may be made if the transfer request is made one week before the workshop. No refund or transfer to a future course will be allowed if the registrant does not show up for the workshop, contact us in advance, or does not send a substitute.

Green Advantage[®] is not affiliated with any LEED[®] products or trainings. Practitioners interested in LEED accreditation or training should look for classes that are specifically sanctioned by the USGBC as LEED.



Morgan Park Place West: A Lesson in Value - Paul Lynes, PE

A vacant lot with abandoned railroad tracks in 2002 represented an opportunity to Tony Werthan and Todd Zeitlin, partners in Werthan Zeitlin Ventures. The tracks, abandoned in the early 1990's, lead to Tony Werthan's family business, Werthan Packaging, Inc. Located between 4th and 5th Avenue North on Van Buren Street, the lot borders Morgan Park. From this setting, Werthan and Zeitlin envisioned creating a development reminiscent of the brownstones in New York City.

With a desire to build enduring homes, Werthan and Zeitlin began to learn about building concepts that were not common even a few years ago. Construction began on Morgan Park Place West in 2005, after three years of planning and researching. Even though the LEED for Homes Pilot Program did not exist in 2005, the features of Morgan Park Place West compare to LEED's current pilot program. The development has characteristics that match all nine of LEED'S categories--innovation and design, location and linkages, sustainable sites, water efficiency, energy and atmosphere, materials and resources, indoor air quality, and awareness and education.

Innovation

Morgan Park Place West was created by a team of professionals involving multiple disciplines. The design team included New Urban Construction, LLC, Lawrence Brothers, LLC, DAAD Architects, Southface Energy Institute, Kevin Guenther of Design Resources, Lose & Associates, and Katzeit Design. Building Outside the Box, a program sponsored by the Cumberland River Compact, was a major contributor to the effort.

Location

As Germantown has developed, Morgan Park Place West has seen a blossoming of entrepreneurial efforts in the neighborhood. A variety of community resources, from public transportation to libraries and cultural centers, make Morgan Park Place West an attractive location for residential, commercial, or mixed-use occupants.

Sustainable Sites

The design team implemented erosion controls as the project began and as construction continues today. The landscaping design utilizes hydro-seeding, native plants that are drought tolerant, and large plants and trees to shade hardscapes. The use of organic lawn care products eliminates the use of traditional pesticides. With more than 10 units per acre, the size of the development also contributes to its sustainability.

Water Efficiency

Stormwater is effectively managed by low impact devices, such as bioswales. A drip irrigation system provides water to plants and other landscaping on an ongoing basis. Interior water is conserved through high efficiency fixtures and Energy Star dishwashers and clothes washers.



The kitchen is equipped with Energy Star appliances and bamboo flooring.

Energy and Atmosphere

Energy-saving appliances reduce annual operating energy costs by an estimated 30-50 percent. Each unit qualifies as an Energy Star home, which is considered to be 40 percent more efficient than traditional construction. The refrigerator, dishwasher, furnace, and air conditioning system are also Energy Star rated. VRV (Variable Refrigerant Volume) heating and cooling systems were installed in the new units. These systems are on the leading edge for residential use and are a great deal more efficient than the higher SEER rated conventional (20 plus SEER) HVAC systems. Rinnai tankless water heaters have been installed to provide continuous hot water while using approximately 50 percent less energy.

Special attention was given to energy-saving construction details, including special sealing for moisture and triple pane Pella© windows along with programmable thermostats to significantly reduce heat loss. Additional insulation and sealing around the windows adds to the energy efficiency.

Cellulose insulation with closed-cell foam provides excellent insulation, especially when combined with cotton batting made from recycled blue jeans. Each garage door is insulated to minimize heat loss as well.

High-albedo, white thermoplastic polyolefins (TPO) roofing materials have been used to increase the solar reflectance, which in turn reduces the heat island effect. Power saving night lighting provides protection and conserves energy.

Materials and Resources

The choices of building materials, as well as design, influence the efficiency and ambiance of each unit. Bamboo flooring, a rapidly renewable resource, is 25 percent harder than oak flooring. The engineering "I" floor joists are stronger than traditional lumber. The finger-jointed studs use kiln-dried lumber and have less waste. California corners use less wood and allow each corner to be insulated, which is not feasible in traditional framing.

The solid-core doors reduce noise and last longer. The door and drawer hardware has been chosen because of its durability, and granite counter tops are serviceable and long lasting. The carpet has a minimum of 50 percent recycled materials and low VOCs.

The deck system is made of cantilevered steel and Trex, which reduces wood use and lasts longer. There is no pressure-treated wood that requires staining or finishing.

Indoor Air Quality

Several features reflect a true quality of indoor air. Certified air tightness testing has demonstrated less than 5 percent leakage, whereas the typical house has 20-30 percent leakage. The solid wood cabinetry eliminates off-gassing from particle board construction. The paint is low and no VOC, and carbon monoxide detectors are installed in each unit. Each interior door has a one-inch opening to increase air flow. Outside air is used for make-up air to provide a continuous source of fresh air, and there are separate air returns on each floor.



High efficiency, ductless split system air conditioning.



Insulation consists of a combination of closed-cell foam and cotton batting from recycled blue jeans.

Awareness and Education

Due to the publicity that Morgan Park Place West is receiving, the development is becoming a demonstration in sound building practices, as well as LEED-oriented features. For example, the Morgan Park Place West received the 2007 Governor's Environmental Stewardship Award from the Tennessee Department of Environment and Conservation for its efforts in green building.

Estimated LEED Rating

Given the features presented, how would Morgan Park Place West compare to the pilot program rating for LEED homes? A non-official estimate might be at least 75 points, which would be a Gold LEED rating, which is something to applaud considering there was no LEED residential rating system in

place when the project began. Kudos to Morgan Park Place West for proactively working toward a vision of sustainability!

Paul Finger Lynes, PE, is the President of Paul Lynes, LLC and is an environmental engineer in Nashville, TN, assisting organizations implement sustainable environmental practices. He is working with Metro Parks and the Friends of the Green Hills Library to implement sustainable stormwater management techniques. He was instrumental in the development of Fanning Bend, a green development in Franklin County, and he has worked extensively with a variety of industries to implement Environmental Management Systems. Mr. Lynes can be contacted at 615-948-7647 or PFLynes@PaulLynes.com.

Tankless Water Heaters, Part 2: Engineering Considerations - Winston Huff

Last month in part 1 of this article, we discussed the benefits of tankless gas water heaters and how they worked. In part 2 this month, we'll look into engineering considerations.

ENGINEERING CONSIDERATIONS



On larger applications condensing type water heaters can be used. They do not have the energy loss of maintaining hot water in a storage tank and they can operate at over 90 % energy efficiency. photo: Aerco Water Heaters

While tankless water heater manufacturers want to sell heaters for all applications, owners need to know that there may be other products that can better serve their water heating needs. A key factor to remember with tankless heaters is to keep it simple. Installation in non-residential applications can lead to complex designs that may not offer advantages to the owner.

When hot water fixtures are located long distances away from a heater, recirculation

pumps are installed to circulate the water from the longest run of pipe back to the heater. The result is that there is a supply of hot water at all times to all the fixtures. The constant circulation of water in these heaters can shorten the tankless manufacturer warranty from 10 years to three years.

To respond to this issue, a small 1.5 Kilowatt per Hour (kWh) 6-gallon storage heater can be installed in the recirculation loop to maintain the water temperature. While solving the problem, this does reduce the energy savings. Another method is installing more than one heater.

In some areas with hard water, lime deposits can accumulate at the heating element, reducing the efficiency of the heating element during low flow conditions. To respond to this issue, manufacturers recommend cleaning the fixture every few years or installing water softeners. Some models have sensors that will notify when the unit needs to be cleaned.

It is very important to keep the GPM flow in mind. Inlet cold-water temperature can be as low as 40 degrees in some wintertime conditions. The amount of energy used is directly related to the temperature difference between the water entering the heater and the water exiting the heater.

Tankless heaters are limited by the amount of energy they can use to heat water. Most heaters will provide 8 GPM at 120 degrees.

However, if higher temperatures are needed, the amount of available hot water decreases. It is important to know the temperature and flow of the required hot water and find a heater that will meet these demands.

When the demand exceeds 6 to 8 GPM, tankless manufacturers recommend installing more than one heater in parallel, and some applications recommend storage tanks. It is important to follow the manufacturer recommended installations for each application. These systems can result in complex designs and installations that complicate installation, start-up and maintenance. Energy savings compared to tank type heaters are lost when tanks are installed.

For example, two tankless heaters with a storage tank will require the contractor to install two heaters, one tank, nine valves, three relief valves, a check valve, a circulation pump and eight pipe connections. There could be maintenance and warranty issues when something goes wrong. If so, does the owner call the contractor, tankless manufacturer, pump manufacturer, or engineer? In the end, there is little or no space saved. Some manufacturers suggest owners use approved contractors to help eliminate some of these issues.

Next month we'll conclude our discussion in part 3 with a look at different types of water heating solutions for building owners and developers.



2nd Annual USGBC Middle Tennessee Chapter Green Tie Gala and Invitation

Mark your calendars! The planning committee for the Green Tie Gala is in full swing preparing for this year's event. The 2006 Gala was a resounding success and the committee plans to build on that momentum to make the 2007 Gala even better. Two of the major highlights this year will be our speaker, Susan Szenasy, Editor in Chief of Metropolis Magazine, and the entertainment—the live band and local favorite Guilty Pleasures.

Szenasy's editorial style pushes readers to think beyond what they think is possible. She promises to bring that same style along with her expertise in sustainability to our celebration in October. You can learn more about her and her accolades at the Metropolis website (<http://www.metropolismag.com/mediakit/>).

Guilty Pleasures has been the gold standard in Nashville for 80's cover music since the genre came into vogue. Their high-energy shows are regular sell-outs and merit praise from publications like the Nashville Scene. Thanks to a friend of a friend and a fortuitously open date, we've been able to book them for Gala.

New to our event and another highlight will be a silent auction benefiting our chapter's efforts to further the green building cause. Silent auctions are always a great opportunity to splurge on yourself or a loved one and get a good deal at the same time. This one will be no exception.

Be sure to keep your eyes open for more information as October 20th approaches. Sponsorship opportunities are available now; please contact Laura Schroeder (l.schroeder@hawkinspartners.com) for inquiries.

Again, please reserve Saturday October 20, 2007, on your calendars. The 2007 Green Tie Gala will be bigger and even better than the very successful event we held in 2006. Come be part of our chapter wide celebration – as a USGBC Middle TN member you're doing great things for our community, and you deserve to have some fun!

Event Details:

What: Dinner, Drinks, Speaker and Dancing

When: Saturday October 20, 2007

Where: City Hall Entertainment Space 12th Ave. South (The Gulch)

Contact: Eric McKinney (ericm@amconst.com)



NAME _____

COMPANY NAME _____

EMAIL _____ PHONE NUMBER _____

NUMBER OF TICKETS _____

TYPE OF TICKET: ENTIRE EVENING (DINNER, SPEAKER, MUSIC) - \$100
 LATE COMER (MUSIC) - \$25

AMOUNT ENCLOSED _____

SEND ALL CHECKS TO: USGBC MIDDLE TENNESSEE CHAPTER
P.O. BOX 111211
NASHVILLE, TN 37222

CHARLIE HOWELL, DAVE PELTON AND JEFF BARRIE INVITE YOU TO

Save the Date

Tuesday, October 23rd 2007, 5:30pm

Trust for the Future and Kilowatt Ours present a

Private Sneak Preview & Awards Dinner

Honored Guests:

Jayni & Chevy Chase

For twenty-five years, Trust for the Future has been working hard in Nashville, advocating for environmental protection and the conservation of our natural resources. Please join us as we unveil our Plan to Re-Energize America, and honor those who work to make our world a better place.

On **Tuesday, October 23rd, 2007** at David Lipscomb University's Shamblin Theatre, we will present local conservation heroes with our Promethean Energy Award, followed by a sneak preview screening of the new National Edition of *Kilowatt Ours: A Plan to Re-Energize America*. This documentary film was produced by Trust for the Future board member Jeff Barrie, an award winning filmmaker. Kilowatt Ours will be broadcast nationally on public television stations this winter, showing the way for Americans to save energy and reduce electricity bills.

Also, mark your calendars now for the world premiere of Kilowatt Ours on Thursday, October 25th at the Historic Belcourt Theatre, 2102 Belcourt Ave. in Nashville.
Showtimes: 7:00pm and 9:00pm

SAVE THE DATE

Tuesday, October 23rd

**KILOWATT OURS
SNEAK PREVIEW
& AWARDS DINNER**

Shamblin Theatre
David Lipscomb University

Watch for your invitation soon.





Urban Housing Gets Energy Efficiency Makeover - Laurie Parker

Metro Development & Housing Agency (MDHA) is working on their fourth energy-efficient makeover. Made possible by funding from the Hope VI grant, the John Henry Hale Homes housing development, located off of Charlotte Pike at 499 16th Avenue North, has been torn down and is being replaced with Energy Star certified homes.

Special assistance from NES Senior Services Specialist Tony Viglietti has helped MDHA decide which energy upgrades will provide the most bang for the buck. MDHA is installing Argon gas-filled, Energy Star windows, new bathroom exhaust fans, and R-19 crawlspace insulation. Water heaters with an efficiency rating of 0.92 and heat pumps with an energy efficiency ratio (EER) of 11 will compliment the other energy-efficient upgrades. Each unit will also have an Energy Star refrigerator, which costs less to operate than standard models.

Other energy-efficient measures include low-flow showerheads and 1.6 gpf flapperless toilets to reduce water consumption. Flapperless toilets eliminate the possibility that a worn flapper will allow water from the tank to leak into the bowl. When construction is complete, all 228 units will be Energy Star certified.

Energy Star vs. Standard Construction

To earn the Energy Star label, a home must meet guidelines for energy efficiency set by the U.S. Environmental Protection Agency. These homes are 20-30% more energy efficient than standard homes.

This label identifies a home as having earned the Energy Star. Any home three stories or less can earn this label if it has been verified to meet EPA's guidelines including: single family, attached, and low-rise multi-family homes; manufactured homes; systems-built homes (e.g., SIP, ICF, or modular construction); log homes, concrete homes; and even existing retrofitted homes.



Energy Star qualified homes can include a variety of 'tried-and-true' energy-efficient features that contribute to improved home quality and homeowner comfort, and to lower energy demand and reduced air pollution:

- Effective Insulation
- High-Performance Windows
- Tight Construction and Ducts
- Efficient Heating and Cooling Equipment
- Efficient Products (i.e. Lighting Fixtures and Appliances)

Third party verification makes Energy Star homes different from standard construction. An independent Home Energy Rater must conduct onsite testing and inspections to verify the energy efficiency measures, as well as insulation, air tightness, and duct sealing details.

Construction of an Energy Star home depends on the attention to details, from the footings to the ridge. It encourages the use of best practices for water management, extensive air sealing of exterior and interior walls, and installing the duct system within the building envelope.

Third party testing to conduct a Blower Door and Duct Blaster test will prove how successful the builder has been in these areas.

NES' Tony Viglietti says, "Previous projects by MDHA have tested well, such as the 25-percent reduction in energy consumption and greenhouse gas emissions at Sam Levy Homes. We are confident the John Henry Hale homes will make the grade as well."



Registered Tennessee LEED projects (As of April 10)

New Construction	40
Existing Building	2
Commercial Interiors	3
Core and Shell	7





Nashville Public Housing 1st to Go Geothermal - Laurie Parker



Crews broke ground on the new geothermal energy system at Parkway Terrace in November.

Parkway Terrace Apartments (196 N. 7th Street) is the first low-income housing development in the state to go geothermal. Geothermal uses 40-60 percent less energy than a standard heat pump and reduces harmful greenhouse gas emissions.

Geothermal relies on the Earth's natural thermal energy to heat and cool water underground. The system can operate very efficiently because the temperature underground is about 57 degrees.

NES is working to educate these tenants about the importance of conservation. NES will install individual meters at Parkway Terrace and will provide a monthly report detailing the kilowatts used.

Other energy efficient initiatives with the Metropolitan Development and Housing Agency (MDHA) include Shelby Court (11 units) and Sam Levy Homes (228 units). Both are now Energy Star certified.

NES Senior Energy Adviser Tony Viglietti says, "NES has made a commitment to reach out to public and affordable housing programs in Davidson County. NES realized that low-income housing did not fulfill its purpose if the residents living there could not afford their electric bills."

Blower Door test results clearly show that each Energy Star Unit is 1) saving energy/money and 2) reducing greenhouse emissions that are harmful to the environment. Specifically, at Sam Levy, energy consumption and the impact of emissions have both been reduced by 25-percent a year. The energy rating at Shelby Court improved more than 10 points after renovations were complete.

With energy prices on the rise, geothermal is gaining in popularity as residents and

businesses alike look for ways to cut costs. Lipscomb University has installed their first geothermal system to heat and cool the new \$10.5 million Ezell Center for Biblical Studies. Lipscomb became the first university in Nashville to use this environmentally-friendly technology.

NES and TVA have worked together to help facilitate the installation of a 110-ton geothermal unit at the Governor's Mansion, as well as, an installation for the Tennessee Board of Realtors. NES is also working with Metro Public Schools and the Concrete Association.



Sam Levy renovations included air sealing, higher R values in walls, attic & slab, new windows, and new HVAC system.

TLC Goes Carbon Neutral - Mary Ann Swiderski

NASHVILLE – TLC Engineering for Architecture, already a leader in sustainable building design services in the Southeast, is becoming a greener organization in practice as well.

John Douglas Benz, AIA, Chairman, announced that the board of directors has approved a series of sustainability policies aimed at helping the environment. One key initiative is for TLC to become carbon neutral by purchasing renewable energy credits (RECs) to offset the energy used for power, lighting, heating and cooling in the firm's nine offices. The credits will go to a portfolio of small landfill gas-to-energy projects throughout the U.S that are certified by "Green-e", the nation's leading independent renewable energy certification and verification program. We use these projects because the methane they destroy for fuel has 21 times the global warming potential than carbon dioxide. Most of the world's climate scientists agree that the emission of greenhouse gases has a significant negative impact on the cli-

mate and global warming.

TLC will also purchase renewable energy credits for all travel associated with green projects, green design services and commissioning. Employees are being asked to do their part by turning off lights in work spaces and conference rooms when they aren't in use and shutting down computers and other electronic equipment at night and on weekends. Water-conservation measures are also being initiated. Several of TLC's offices have had water- and energy-saving policies in place for some time with much success.

"This endeavor illustrates TLC's firm belief that we are all stewards of the environment. As a firm, we are passionate about sustainability, not just in green building design but in the way we live our lives," said Russell Skrabut, PE, LEED-AP, director of the Nashville office.

The planned interior renovation of the Nashville office is designed to achieve LEED for Commercial Interiors certification. Some of

the green features will include water- and energy-saving equipment and appliances, energy efficient lighting and equipment, sensor faucets, and carpet and furnishings that are low in chemical-emitting compounds. Recycled and local materials will be used where possible to reduce waste and cut down on transportation costs. The office staff already recycles office and plotter paper.

TLC provides structural, mechanical, electrical, plumbing, fire protection, communication, technology and security system design services. TLC is a member of the U.S. Green Building Council.





Local Happenings

SEPTEMBER

Thursday 9/27 - Membership Meeting

What: LEED for Homes with speaker J. Mark West
Where: The Tennessee Engineering Center in the Adventure Science Center, 800 Fort Negley Blvd.
When: Thursday, September 27, 2007, 11:30 am - 1:00pm
Cost: Chapter Members, \$15; Non-Members, \$20.
RSVP: RSVP's ARE REQUIRED. Please do so by Noon, Monday, September 24 to Terah Huber at thuber@tmpartners.com or 377-9773.

Friday 9/28

What: LEED AP Exam Review - Materials and Resources and Innovation & Design Process - FULL
Where: Smith Seckman Reid, 2995 Sidco Dr., Nashville, TN 37204
When: 1:00 pm – 4:00 pm
Cost: Free for USGBC chapter members, \$20 for non-members.

OCTOBER

Friday 10/5 - First Friday

What: "Regionalism" of LEED
When: 12-1pm
Where: TBD

Thursday 10/11

What: LEED AP Exam Review - Indoor Environmental Quality - FULL
Where: Smith Seckman Reid, 2995 Sidco Dr., Nashville, TN 37204
When: 1:00 pm – 4:00 pm
Cost: Free for USGBC chapter members, \$20 for non-members.

Tuesday 10/16

What: LEED-NC Energy Modeling Workshop
Where: Tennessee Engineering Center, Adventure Science Center, 800 Fort Negley Blvd.
When: 8:30 am - 12:30pm
Registration: REQUIRED: Before 10/9 - USGBC National Members - \$175; Non-Members, \$205; After 10/9 - USGBC National Members - \$225; Non-Members, \$275
www.usgbc.org/workshops/register (Go to the chapter website for registration instructions)

Thursday 10/18

What: Green Advantage® Training Workshop
Where: The office of Kraft CPA's, 555 Great Circle Rd., Suite 200, Nashville 37228
When: 8:00 am – 5:00 pm
 Visit www.greenadvantage.org or www.dvgbc.org to register.

Saturday 10/20

What: Green Tie Gala w/ Featured Speaker, Susan S. Szenasy
When: Saturday, October 20, Starts at 6:00 for Entire Evening, 9:30 for Late-Comers
Where: City Hall, 405 12th Ave. South, Nashville, TN
Cost: \$100 for Entire Evening, \$25 for Late-Comers
RSVP: Send in invitation from this newsletter with check Visit chapters.usgbc.org/middletn or article in this newsletter for more info.

Tuesday 10/23

What: Kilowatt Ours Sneak Preview w/ guests Jayni & Chevy Chase
When: Tuesday, October 23, 5:30 pm
Where: Shamblin Theatre, Lipscomb University, Nashville
 Visit www.kilowattoursneakpreview.org for more information.
RSVP: RSVP by October 9 to Jacyn at jacyn@kilowattours.org or 615-340-5005
Cost: \$125 for individuals and \$1000 for tables. Make checks out to "Trust for the Future" and mail to PO Box 60322, Nashville, TN 37206

Wednesday 10/24 – Thursday 10/25

What: Southeast Solar Summit
When: Wednesday and Thursday, October 24 and 25
Where: Oak Ridge National Laboratory Conference Room, Oak Ridge, TN
 Visit <http://www.ornl.gov/sci/solarsummit/> for more info on registration and agenda.

Thursday 10/25 - Membership Meeting

What: Membership Meeting
Where: The Tennessee Engineering Center in the Adventure Science Center, 800 Fort Negley Blvd.
When: Thursday, October 25, 2007, 11:30 am - 1:00pm
Cost: Chapter Members, \$15; Non-Members, \$20.
RSVP: RSVP's ARE REQUIRED. Please do so by Noon, Tuesday, October 23 to Terah Huber at thuber@tmpartners.com or 377-9773.

NOVEMBER

11/15 – 11/16

What: Summit for a Sustainable Tennessee
When: Thursday and Friday, November 15 and 16
Where: Lipscomb University, Nashville, TN
 Visit www.sustainabletn.org for more info.

Would you like to:

- be a member?
- be an accredited professional?
- register and certify your building?

Visit us at www.usgbc.org/chapters/middletennessee/