

MIDDLE TENNESSEE CHAPTER NEWSLETTER

May 2007
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Next Meeting

When: Thursday, May 24th - 11:30am - 1:00pm
Where: The Tennessee Engineering Center in the Adventure Science Center, 800 Fort Negley Blvd.
Cost: Chapter Members, \$15; Non-Members, \$20. Lunch will be served.
Speaker: Terry Campbell, Forest Product Solutions
What: Designing and Building with FSC Certified Wood
 Come learn about this new exciting training guide that will connect you and your projects to responsible forest management and Forest Stewardship Council (FSC) certified forest products.
RSVP: By Noon, Tuesday, May 22nd to Terah Huber at thuber@tmpartners.com or 377-9773.



Letter from the Regional Chair

Southeast Regional Council News & the Real Cost of Green - Sara O'Mara

The Southeast Regional Council (SERC) of the United States Green Building Council (USGBC) had its first face-to-face meeting for 2007 on February 2-3 in Knoxville, TN. At this meeting, we formed working committees to establish our region's 2007 goals. We felt that our goals needed to align with USGBC National Strategic Plan Goals: Organizational Excellence, Advocacy and Influence, Research, LEED, Education, and Community. I will share more details about our goals next month.

There continues to be concerns from building owners as to how much LEED costs, so I thought it might be beneficial for people to see actual construction cost numbers related to LEED projects. Keith Sanders is one of the two SERC representatives of the South Carolina Chapter. Keith created a report that in my opinion squashes the myth that LEED projects cost 5-20% more than the normal commercial buildings. The below information was compiled by Keith on April 17, 2007 for all LEED certified projects in South Carolina. I find that this information is extremely helpful in educating people on the real cost of real LEED projects.

Cost Analysis for LEED Projects In South Carolina

CERTIFIED PROJECTS									
Project Name and Owner	Location	System, Certification Level, Score & Date	Type	(Gross) Building Area SF	Bldg Construc. Cost (not inc. land or site work)	Cost (\$/SF)	LEED Construction Premium (%)	Payback Period	
Herman N. Hipp Hall Furman University	Greenville, SC	LEED-NC v2.0 Gold/2003	Higher Education: Ed. Dept., Econ. & BA Dept., Rushing Center for Advanced Tech., Cont. Ed., Grad. Studies	40,000	\$4,200,000	\$105			
Cox & Dinkins Office Building JTC Developers, LLC	Columbia, SC	LEED-NC v2.1 Certified/2003	Commercial Office (private)	11,083	\$957,000	\$86	1.74%	<7 years	
Advanced Material Research Laboratory Clemson University	Anderson, SC	LEED-NC v2.1 Silver/2005	Higher Education: laboratories and offices	111,270	\$22,000,000	\$198	<3%		
West Quad Living/Learning Center USC	Columbia, SC	LEED-NC v2.1 Silver/2005	Higher Education: multi-unit residential (apartments, dormitories)	130,000			0%		
QS/1 Corporate Headquarters QS/1 Data Systems	Spartanburg, SC	LEED-NC v2.1 Silver/2005		115,000	\$12,000,000	\$104		<7 years	
Edisto Beach State Park Education Center SCPRT	Edisto Beach, SC	LEED-NC v2.1 Certified/2006	Intrepriptive Center	7,635	\$1,500,000	\$196	0%		
The Urban Alliance/Noisette Headquarters The Noisette Co.	N. Charleston, SC	LEED-CI (Pilot) Certified/2006	Commercial Offices	11,500	\$987,757	\$86			
Just Fresh, Seaside Palmetto Food Group, LLC	Mt. Pleasant, SC	LEED-CI Certified/2006	Restaurant	4,700	\$437,100	\$93	2.70%		
North Charleston Elementary School Charleston County School District 4	N Charleston, SC	LEED-NC v2.1 Silver/2006	School: K-12 education	90,000	\$10,300,000	\$114	0%		
Fraternity Quad Renovations Clemson University	Clemson, SC	LEED-NC v2.1 Silver/2007	Higher Education: multi-unit residential (apartments, dormitories)	139,000	\$26,000,000	\$187			

APRIL 17, 2007

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I spoke to Keith about sharing this report with you; he said that if anyone had any specific question regarding the information above for South Carolina to feel free to contact him. Keith Sanders, AIA, LEED AP, CDA Architects 1136 Washington Street, Suite 600 Columbia, SC 29201. His phone number is 803-799-6502 x120.

The next SERC meeting is going to be held in Atlanta, GA on June 1-2, 2007. One of the items we will be discussing is how chapter/state can compile the above type of report for each chapter in our region. If anyone has specific questions relating to our region, feel free to contact me at somara@choateco.com

"Silver" Chapter Sponsor

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BUILDERS, INC.
www.pgbuilders.com

"Green LEEDer" Chapter Sponsor

American Constructors, Inc. www.amconst.com
 TLC Engineering for Architecture www.tlc-engineers.com
 Alfred Williams www.est1867.com



April Meeting in Review - Fernando Rodriguez

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Mayor Bill Purcell discusses Nashville's green accomplishments at the April Membership Meeting



Gina Baker describes the features of the Noisette development

Mayor Purcell accepted our invitation to speak about the environmentally responsible accomplishments of Nashville under his leadership and gave us an opportunity to publicly recognize and thank him for signing the U.S. Mayor's Climate Protection Agreement. The Mayor highlighted Nashville's accomplishments over the last eight years but also challenged us all to not become complacent with the city's status and to continue to proactively change Nashville for the better. He announced that he would be representing Nashville in Minneapolis later this month to receive a Green Roof Award of Excellence in recognition of Nashville's downtown Public Square being the largest green roof in the United States. This award is given by Green Roofs for Healthy Cities, a non-profit industry association that promotes green roofing. Mayor Purcell also mentioned that he supports the LEED Ordinance sponsored by Council members Briley, Cole, Adkins, and Jameson, and indicated that he believed it would pass the Third Reading.

Gina Baker, Director of Sustainable Design for Burt Hill Architects, spoke after the Mayor, and presented the Master Plan for Noisette, a 3000-acre sustainable community located in North Charleston, South Carolina. Her presentation illustrated a unique case study for restoring existing blighted neighborhoods into an integrated "city-within-a-city" as opposed to building a completely new "Greenfield" planned community.

Resource Development Update - Laura Schroeder

I want to thank those of you that have stepped forward and offered your support to our local chapter. First, I'd like to welcome Alfred Williams & Company as our newest annual GreenLEEDer sponsor. Secondly, I'd like to thank TN Waste for offering to be our Gala Title Sponsor again this year. Speaking of our Gala, we are in the planning stages for this event and working to make it even better than last year. As part of the festivities for the evening, we will be including a silent auction. We welcome anyone that would be interested in sponsorship for the evening as well as contributing to the auction. Consider donating any items that promote health, sustainability, energy-efficiency, etc. The possibilities are endless! All efforts will help to make this such a success. Thanks again and I look forward to hearing from you.

Membership Notes - Michelle Fox

Visit <http://chapters.usgbc.org/middletn/membership.html> to join. Chapter membership allows any individual, regardless of whether or not his or her company is a member, to participate in the chapter and take advantage of local chapter benefits.

We at the Middle Tennessee Chapter of the USGBC would like to invite you to participate in one of the most exciting and growing communities in the world! The first step is to come and participate in our next monthly meeting. You will be able to network with a very diverse group of professionals who are committed to transforming the way communities are designed, built, and operated, and who envision environmentally responsible, profitable and healthy places to live and work.

And if that's not enough for you, the USGBC connects members to resources you can't find anywhere else:

- Monthly member e-newsletter with the latest news on USGBC and LEED.
- Private LEED workshops for your employees
- Free company subscription to the award-winning GreenSource magazine.
- Searchable database of LEED Credit Interpretation Reports (CIRs)
- Members-only reports and research.
- USGBC Member Day prior at Greenbuild.

Plus, you will be able to have a voice in legislative outreach efforts and stay up to date with federal and local government green building programs and incentives.

If you are already a member, congratulations! You are helping to lead the way!

Membership Contest: Bring a Guest

Bring a guest to a regular monthly meeting. In order to encourage your participation we are having a fun contest.

- The member who has the most guests attending chapter meetings March-June will receive a gift in appreciation.
- The member who has the most guests who become new members between now and the June meeting will receive a gift as well.

In order to qualify, you must RSVP your guest's name for attendance to the meeting that they will be attending along with your own. The gifts will be presented at the June meeting; we will see you there!

Contact Michelle Fox at mafox-1@hotmail.com with questions about the contest.

Review of LEED AP Exam Cram Session - Jamie D. Qualk

On Friday April 27th, the day after our Chapter hosted nearly 80 people for our monthly membership meeting, the Chapter held a LEED AP exam study session with 115 attendees at Smith Seckman Reid's Nashville office. Many people attended both events, but the majority attended either one or the other. If anything indicates the explosion of interest in LEED and the U.S. Green Building Council's priorities, the attendance at these back-to-back events certainly does.

Jacob Halcomb of SSRCx did a wonderful job of covering all of the "basics" within the three-hour period. On behalf of the Chapter, I would like to thank Jacob for taking time out from his schedule to lead the discussions. I would also like to thank Bob Oglesby of Everton Oglesby Architects for providing the inspiration for the event in addition to the 115 lunches for everyone who came out.

Jacob's discussion covered the following areas of expertise:



- In-depth familiarity with the LEED rating system
- Understanding of LEED project registration, technical support and certification process
- Knowledge of LEED documentation and submittal requirements and processes
- Demonstrated knowledge of design and construction industry standards and process
- General understanding of standards referenced in the Rating System and to which credits they apply
- Comprehensive fundamental knowledge of sustainable design strategies and practices, including integration, application within the LEED Rating System, and role in creating high-performance green buildings
- Familiarity with key green building and sustainable design resources and tools

He also made sure to tell everyone where to find the tools or guides necessary to achieve the above-mentioned knowledge and understanding. Thank you to all who came out for the event, and stay tuned for more opportunities like this one in the future.





The Forest Stewardship Council in 2007, and Beyond

-Terry Campbell

For close to fifteen years, the Forest Stewardship Council (FSC) has continued its growth around the world as the only global forest certification system. FSC's independence and multi-stakeholder process has social, economic, and environmental components and represents communities, businesses, and organizations focused on forestry issues. According to Michael Washburn, PhD and former Vice President for FSC-US, "Buyers and sellers of FSC-certified products benefit from the assurance that their production and consumption respectively have done no harm to the environment or local community near the forest... FSC-US encourages this rapidly growing market transformation effort that translates directly into proven and tangible improvement in forestry practices worldwide."

When the US Green Building Council (USGBC) developed its Leadership in Energy and Environmental Design (LEED) standard, the founders wanted to provide an incentive for use of responsible forest products as defined by FSC certification. To do this, FSC was written into the Material & Resource (MR) section as an MR credit 7- Certified Wood. Therefore, LEED project teams that planned, designed, and worked to use FSC certified wood could earn a credit and contribute to more responsible forestry. As more LEED project teams began to use FSC wood, the market demand for FSC certified wood products grew. This symbiotic relationship between LEED and FSC resulted in forestry that is practiced above national and local standards; and green buildings that demonstrate their commitment to better forestry.

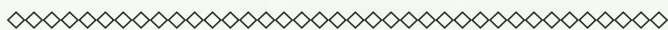
The original goals of improving the building industry and forest management were lofty; and for many years it was unclear if USGBC, FSC, LEED, or Green Building would succeed. However, the founders of both of these systems and others involved in sustainable business continued to push for market transformation. Because of these efforts, the early part of the decade experienced a rush of corporate, municipal and federal government, and institutional interest in the green building movement. This resulted in an explosion of LEED registered projects, USGBC membership, and the development of competing green building standards. LEED is now seen as the leadership standard for green building in North America and the FSC market has grown along with it. However, the work is not yet done!

Market transformation is a process in which changes are made in the way products are grown, processed, delivered and sold. Transforming a market requires consumers to be curious and research sustainable products prior to purchasing. If the product originated from a sustainable practice such as organic agricultural, responsible forestry, or a renewable energy source, then the product gets a green light. When consumers make a conscious choice to purchase sustainable products, a message is sent to the production industry that there is a demand for this type of product. Over time, individual choices can create an entire market shift towards sustainability. Wal-Mart's recent announcement that it plans to offer organic products and hold its suppliers to a higher standard of sustainable business shows that the sustainable message is already moving mainstream.

Because the building and forest products industries in the US pre-date the founding of the country and have been instrumental in its prosperity and growth, the challenge of shifting industry attitudes and business practices has been a much harder task than anyone could have anticipated. Therefore, it is no surprise that the inclusion of FSC in the LEED standard has created confusion, frustration and even disillusionment as to how to complete projects while meeting this expectation.

Despite these challenges, FSC and LEED have overcome obstacles and continue to inspire and influence change. Since its inception, FSC has progressed on a healthy growth trajectory while continuing to certify more acres under its standard. Additionally, manufacturers and suppliers are realizing the importance of earning the Chain-of-Custody (COC) certification. In order to continue transforming our goals into reality we need to educate building project teams, building material manufacturers, suppliers, landowners, and others about how they can get involved with these two emerging green business opportunities. LEED, Green Building, and FSC are here to stay; educating the forest products market is an ongoing process.

To learn more about certified wood products, come hear Terry Campbell speak at our May membership meeting.



Local Statistics:

Middle Tennessee Chapter Members	259
Middle Tennessee Accredited Professionals	147
Middle Tennessee Certified Projects	2
Middle Tennessee Pre-certified Projects	1



Registered Tennessee LEED projects (As of April 10)

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



Would you like to:

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

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





LEED for New Construction Technical Review Workshop Certification Requirements and Process

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

Attend the LEED® for New Construction and Major Renovations Technical Review Workshop presented by the U.S. Green Building Council. Gain the knowledge needed to maximize building performance, achieve LEED certification and take the LEED Professional Accreditation Exam.

WHY LEARN ABOUT LEED?

Ask any of the 5000 building owners seeking LEED certification right now. Owners and developers are demanding green buildings that save money while protecting the environment and occupant health. The USGBC's LEED Rating System™ is the nationally recognized rating system 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 for New Construction Rating System and green building strategies, benefits and resources:

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

WHAT'S COVERED

- LEED for New Construction and Major Renovations:
 - Technical requirements
 - Certification process
 - Project case studies and strategies
- Green building costs and benefits
- Available tools and resources

CONTINUING EDUCATION CREDITS AVAILABLE



HOST



MIDDLE TENNESSEE CHAPTER

June 28 2007
8:30 am – 5:00 pm
Nashville, TN

Millennium Maxwell House – Nashville
Grand Ballroom West.
2025 Metro Center Blvd.
Nashville, TN 37228

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):

Jason Hainline
John McFarland

REGISTRATION

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

FEE	USGBC MEMBERS*	NON-MEMBERS
Early	\$345	\$445
Late (begins 06/21/07)	\$375	\$495
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:

- Online access to LEED for New Construction Reference Guide and a discounted price on the print edition (\$125 + S&H) when purchased at registration
- Educational handouts
- Continental breakfast, lunch and 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.

Solar Ready Buildings

- Steve Johnson, Light Wave Solar Electric



An example of a Solar Ready Home

In my line of work, I have talked with many building owners who wanted to install solar. Most of them gave no consideration as to the addition of solar components during their design. Often the orientation is wrong, the south facing roof is cluttered with plumbing vent stacks, exhaust fans, attic vents, or gas venting. A chimney or dormer may ruin a beautiful expanse of south facing roof that has a great orientation. Hip roofs may chop up the roofline into areas that cannot be used. If the house orientation is determined by a street or other immovable objects, consideration may be given to the roof of an attached garage, carport, workshop, barn, storage shed, canopy, porte cochere, or trellis. A walkway might be built between an outbuilding and the main structure providing an opportunity to adjust site orientation without affecting the main structure.

Are you asking your clients whether they are interested in solar energy now or whether they expect to be in the future? Of course, architects, engineers, and contractors are at the forefront of design, and if they don't offer solar options, who will? I know many owners have an interest in solar but may not be ready for it at this moment. These are the clients that should be offered a solar option. The point is to allow for solar in the conceptual stages so that it is a part of the design and afforded consideration as the design evolves. When implemented at this stage, making a building "Solar Ready" may be a relatively inexpensive option.

Here are a few guidelines for consideration:

Surface Area

Allow 100 square feet of unshaded south facing roof per kW of photovoltaics installed. For a house, this usually means around 200 to 600 feet. However, remember to allow about 20% of the roof space for access and to pull back from the edge a couple of feet. This means you might consider 80% of available

solar space usable under general conditions. There are exceptions to this rule of thumb. For amorphous silicon (thin film), allow 166 square feet per kW installed. As noted above keep roof penetrations (plumbing vent stacks, fans, exhausts, etc.) away from the designated solar south roof area.

Slope

A 30 degree slope is optimal for our location, that is a 7/12 pitch. However, 20 to 50 degrees also work which is a pitch between 4/12 and 12/12. The shallow pitch will perform better in the summer and the steeper pitch will perform better in the winter. Another rule of thumb is latitude (36 degrees for Nashville) plus or minus 15 degrees. Provide a permanent anchor at the ridgeline for roofs over 8/12 pitch to attach a safety rope. Sometimes panels are installed completely flat or vertical for various reasons. In these instances, the owner and design team should be informed of the appropriate production factors.

Shading

Obviously the less shade the roof receives, the better. An instrument should be used to predict shading throughout the year. People may forget in July that the sun dips down to 30° altitude in the winter. A neighboring building that may not cast a shadow in December may create a problem in June.

Also, remember the installation of solar panels can reduce heat gain to the building and this could be a significant contribution over the system life. Sometimes panels are mounted in an awning type formation over second story windows (dorm of office type situation) which will prevent solar gain through the second floor windows in the summer but allow it in the winter while generating electricity all year round. See <http://www.susdesign.com/tools.php> for some design tools on sun angles and shading overhangs.

Azimuth:

Production loss at 22.5° off due south (SSW or SSE) is only 1%, at 45° (SE or SW) losses increase to 5%. For solar purposes, 180° is due south. Slight western orientation maximizes evening production which would be advantageous for TOU (time of use) metering when it is implemented in the future.

Conduit:

For residential applications, provide a ¾" EMT conduit from near the eventual solar panel location (maybe in the attic, above a drop ceiling or up on a flat roof) to a metal junction box near the meter base. From this junction box, continue the conduit to the main

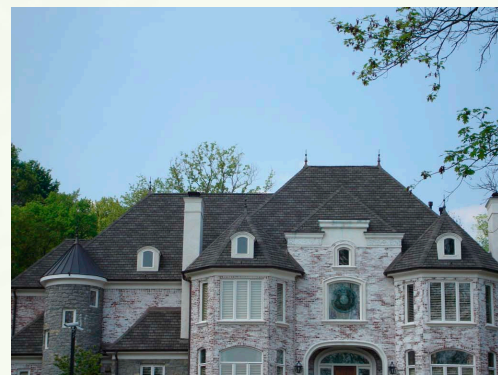
panel. If the system is expected to use more than 500 square feet of roof, make it a 1" conduit. Romex and PVC are not allowed within a house for a PV output circuit as per NEC 690. For commercial applications, provide a 1" EMT conduit or larger.

Qualifications:

Work with a NABCEP certified solar designer to make sure the system you are associated with is properly and safely designed and installed. Remember there are shading, orientation, mechanical, structural, and utility issues that require special training and information. Communication among team members is important. Make sure your team doesn't put up an expensive clunker because no one allowed for inter-row shading or some other design criteria that was not considered. NABCEP is a national certification for solar design and installation and requires its members to earn Continuing Education Units (CEUs) to keep up with technical growth and change. Every single PV system deserves professional design and installation.

These above guidelines are for general consideration, and there are exceptions.

Realtors should be aware of the marketing power of a **Solar Ready** house. It adds almost no cost and provides a viable option for the future. Many solar panels today come with a 25-year warranty and are expected to last for 50 years. Make your next building **Solar Ready** and let's build a sustainable future together.



An example How NOT to build a Solar Ready Home



Can the Athens of the South Learn from the Home of Harvard and MIT?

- Jim Deming, Tennessee Interfaith Power & Light

The title question above remains in my mind after a recent visit to Cambridge, Massachusetts. I was there to see my son and his new bride, but while in the vicinity, I stopped in to see Rob Pratt - an officer with the Kendall Foundation - at his office in Boston. Rob stated that Cambridge, MA, home of Harvard and MIT, will be the first project for a nationwide model to provide up-front capital to reduce energy consumption in commercial and residential buildings.

The capital for this lofty endeavor will come from two primary sources in the Cambridge area. The first is a fund set up by the New England Utilities called the "Forward Capacity Market." This fund was the response of the utilities to assure a steady power base for the northeastern US. The second major source is a surcharge on power bills paid by the customer that goes normally for service and demand-side marketing issues. The two funds will total about \$50 million. In Rob's words, TVA would be our equivalent funder for a southeast version of the Forward Capacity Market. The good news for many folks is that there will be no public funds as a part of the total. This may explain why the Governor of Massachusetts, local elected officials, and utility executives are positive about the project and have given it a lot of media pub-

licity. Everybody seems to win with this new model.

The \$50 million will be leveraged to establish a revolving loan fund that will provide money for energy improvements in four sectors: large and small commercial and large and small residential. To manage the project, the Kendall Foundation has financially underwritten the establishment of the non-profit Cambridge Energy Alliance (CEA) and it will take the lead at the community level. The CEA has four major tasks:

1. Raise more capital through work with private funders and banks.
2. Solicit participants and Energy Services Companies (ESCOs) for the energy savings program and screen them.
3. Process the legal, contract, and verification work for each applicant.
4. Develop a public awareness campaign and create momentum.

Eventually, the CEA will have about seven staff and will be self-supporting through the payback on energy savings. Projects can include multiple ways to save energy, from adding insulation to replacing windows to installing new units for heating and cooling, and there will be standards for both the ESCOs

and the improvements. Here's the really good news: the payback for the actual work will be done only through energy savings by the customer, thus allowing many applicants- even those with limited resources - to participate in the program. Through an extensive marketing campaign, CAE is planning for a 50% penetration rate beyond the normal 7-8% penetration rate in the residential market.

How novel is this approach? Well, it got an hour of air time that same afternoon on Ira Flatow's Science Friday on National Public Radio. Rob was a panelist on a group that included the president of MIT, the Mayor of Cambridge, and an administrator from Harvard. Rob shared that the City of Boston also wants to start their own program and according to the mayor of Boston, they aim to start with a capital base of \$500 million in its revolving fund. (That's the same as half a billion!)

Can we do it here in the Athens of the South? Can we put together a coalition from the private and public sectors to use our creativity, teamwork, and expertise to solve our energy problems? *What answer ye, southern frontier pilgrims?*

For more information on the Alliance, see www.cambridgeenergyalliance.org.

Start Saving for a Lower Electric Bill - Laurie Parker, NES



Conserving energy is no more difficult than replacing your old light bulbs with compact fluorescents or turning off your computer when it's not in use. A computer that runs 24 hours a day uses between \$75 and \$120 worth of electricity each year.

Don't get overwhelmed when it comes to cutting back on your energy usage. Start with the small, no-cost projects like turning up your thermostat to 78 degrees or higher in the summer and rinsing clothes in cold water and washing in warm. Hot water washes use 50 percent more energy.

You can also try these easy energy savers:

Skip the bath. Take a quick shower instead of a bath. A five-minute shower, for instance,

uses up to 50 percent less hot water than a bath.

Turn off all sources of heat. Try to do your baking, washing, drying and ironing early in the morning or in the evening to reduce the number of appliances that are in use during the hottest time of the day.

Take the dollar bill test. Close your refrigerator door on a dollar bill and try to pull it out. If the dollar comes out easily, you may need new seals or a new refrigerator.

Avoid over-drying clothes. Clothes should dry within 40 to 60 minutes in the dryer. If you are buying a new dryer, look for one with a moisture sensor. It will turn off automatically when clothes are dry.

De-energize your home before a vacation. Set your air conditioner to 85°F, or turn it off completely in moderate weather. Unplug major appliances, except your refrigerator and freezer. Turn your electric water heater off or a gas water heater to the pilot setting.

Shut down pool heaters and reduce pump operating times.

Use fans to combat summer heat. A 60-watt ceiling fan costs between \$.08 and \$1.50 to operate monthly, which is much less than an air conditioner.

Low-cost Improvements:

- Weather-strip and caulk around doors and windows to seal up air leaks.
- Install low-flow showerheads. They'll save you 10-16 percent on water heating costs.
- Add insulation where it's needed. Ceiling insulation should have an R-Value of 30.
- Wrap your water heater in an insulation blanket to reduce heat loss.

Ready to take a bigger step towards being an energy conscience consumer?

Why not replace old appliances with Energy Star certified appliances? Energy Star refrigerators use about 20 percent less energy than

conventional models. An Energy Star clothes washer uses half the amount of water and electricity per load.

Test your green thumb to reduce both heat gain in the summer and heat loss in the winter. Proper landscaping can make a significant difference in the amount of energy that is required to maintain a comfortable home.

Summer shade is created by strategically locating plants along the sunny borders of your house, including the south-facing roof and wall surfaces that receive the most direct sunlight. Also, shade walls that generally face east or west. They receive considerable direct sunlight in the morning and afternoon.

To find more energy saving advice, visit www.nespower.com.



Biggest Users – NES Top 10 Customers - Laurie Parker, NES

Last month, we explained how electricity is generated by the Tennessee Valley Authority (TVA) and delivered to Nashville Electric Service (NES). Now you know where the power comes from, but once it makes its way to Nashville, where does it all go? A significant amount is used by just ten customers.

(In order by energy consumption)

1. DuPont
2. Vanderbilt University
3. State of Tennessee
4. Metro Board of Education
5. Metro Water & Sewer
6. Metro Government
7. Metro District Energy System (DES)
8. Hospital Corporation of America (HCA)
9. Bridgestone Americas Holding
10. GAF Materials Corp



A look at tire manufacturing at Bridgestone Americas Holding.

These top ten customers supply over 10% of the gross revenue for NES. DuPont produces fabrics and a specialty resin that is used in disposable microwave trays, dryer sheets, pillow stuffing, and soft drink bottles at their Old Hickory facility.

Vanderbilt University is the largest private employer in Middle Tennessee and the second largest private employer in the state. While the Metro Board of Education oversees 71 elementary schools, 36 middle schools, and 15 high schools.

Metro Water & Sewer supplies drinking water to customers in Davidson County, as well as parts of Rutherford and Williamson counties. Wastewater is treated at one of three treatment plants: Central, Whites Creek, or Dry Creek. The Metro District Energy System (DES) provides energy for heating and cooling nearly 40 buildings in downtown Nashville including the new Schermerhorn Symphony Center. The city has used DES for three decades.

At its founding in 1968, Nashville-based HCA was one of the nation's first hospital companies. Their energy consumption includes their corporate office and several local hospitals including Centennial, Summit, Skyline, and Southern Hills Medical Centers.

The Bridgestone plant in LaVergne is the largest subsidiary of Bridgestone Corporation, based in Tokyo, Japan. Bridgestone manufactures and markets tires for almost every kind of vehicle. The GAF Materials Corporation plant in Nashville produces fiberglass products for one of North America's largest building products manufacturers.



Local Happenings

MAY

Thursday 5/17 - EGB

What: Study meeting for the Habitat for Humanity presentation on May 17th. Everyone who is volunteering for the next class should attend to go over the material. Anyone else who is interested in presenting in the future, or just to learn a little more about sustainable living is welcome to come as well.

Tuesday 5/22 - Let's Do Math!

What: Metro's Dalewood Middle School students will work with Perry Wilson, founder of If I Had a Hammer and nationally recognized for his work with students learning mathematics through experiences in construction.

Where: Jane Elliott Hall TSU Campus 3500 John A. Merritt Blvd. Nashville, TN 37209

When: 10a.m.- Noon

Cost: Complimentary

Light refreshments will be served.

RSVP to jlyles@mrsh.org by May 18

Tuesday 5/22 - Education Session and Product Showcase

What: The Green Event
Shaw Industries presentation (CEU credits available) 3pm-4pm
Open House Showcase, 4pm-7pm

Who: Nashville Carpet Center

Where: The Vanderbilt Student Life Center, 310 25th Avenue South

When: 3-4 p.m., Continuing Education Class, 4-7 p.m., Showcase Reception

Complimentary Valet Parking

RSVP by e-mail to greenevent@nashvillecarpet.com

Thursday 5/24 - USGBC Chapter Membership Meeting

What: Sustainable Wood Update

Who: Terry Campbell, Forest Products Solutions

Where: The Tennessee Engineering Center in the Adventure Science Center, 800 Fort Negley Blvd.

When: 11:30 am – 1:00 pm

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

Lunch will be served.

RSVP: By Noon, Tuesday, May 22nd to Terah Huber at thuber@tmpartners.com or 377-9773.

JUNE

Friday 6/8 - First Friday

What: LEED-CI Charette (hands-on work session)

Where: Tennessee Engineering Center

When: Friday, June 8th, 11:30 am - 1:00pm

Thursday 6/21 - Membership Meeting

What: Eco-Friendly Design

Who: Architect Ken Wilson of Envision, a Washington D.C. based multidisciplinary design firm with a focus on sustainability and smart design

Where: Vanderbilt Student Life Center, 310 25th Avenue South, Nashville

When: Thursday, June 21st, 2007 11:30 am - 1:00pm

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

Thursday 6/28

What: LEED For New Construction Technical Review

When: Thursday, June 28, 2007, 8:30 a.m. – 5:00 p.m.

Where: Millennium Maxwell House - Nashville
2025 Metro Center Blvd.
Nashville, TN 37228

Who: This workshop is hosted by the Middle Tennessee Chapter of the U.S. Green Building Council. The faculty for this workshop will be Jason Hainline and John McFarland.

How: To pre-register, go online to www.usgbc.org/workshops/workshoplist.aspx and search for workshops in Tennessee. On-site sign-in and registration for the workshop begins at 8:00 a.m. (Limited spaces are available)