



# *Giga-Joule*

November, 2012

<http://www.ashrae4greenville.com/newsletter.php>

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## *Meeting Announcement*

The November meeting will be held on Thursday, November 8th at the Roper Mountain Science Center. The details are listed on the Programs Page.

## *A Message from the President*

Our November meeting topic will be the Building Energy Quotient (bEQ). Tom Phoenix, ASHRAE Society Treasurer, will be delivering the presentation and Randy Jones, ASHRAE Region IV DRC, will also be in attendance. Mr. Phoenix serves as chair of the bEQ committee, so please come prepared to ask the expert. We hope to have good attendance for this meeting, so please come help us out.



We are currently having some issues with our website, so please reply directly to the email containing the newsletter this month. I apologize for any inconvenience, and hope to have the issue fixed shortly.

All presentation slots for this ASHRAE year have been filled, so please take a look at the revised schedule at the bottom of this document and attend as many as possible. We still like to hear of ideas for future meetings, so please let me know if you have a topic that would make for a good meeting. Also, we are always looking for new faces to participate on a committee or serve on the Board of Governors. If you would like to hear more information on what this would entail, please let me know.

**Ryan Tonnsen**  
**Greenville ASHRAE President**  
[president@ashrae4greenville.com](mailto:president@ashrae4greenville.com)

## *Membership Corner*

### *ATTENTION ALL MEMBERS:*

**The first of (2) Membership Promotion Meetings is scheduled for NOVEMBER.**

**Please Invite a Friend!!!**



**All members who bring a potential new Member to this meeting in November will be eligible to attend free of charge and so will their guest...A friend and a completed application is all you need to participate. Please see me at the sign in table with your guest, and application. (I will have applications on hand for ALL interested guests)**

We are looking forward to continued growth in our Greenville Membership and need your help in achieving this...we have some great programs and even some social events, golf tournaments etc. planned throughout the season to encourage you invite your friends and colleagues. Thanks all members who recently joined via a Membership Promotion Meeting, a transfer in, or just the desire to be a Member, we appreciate your support. Welcome back to our existing members, and especially those who serve on the board...we could not do this without everyone's participation. Our 2nd and last Membership Promo meeting for this year will be in the SPRING of 2013.

Now...we need you to share with your friends and colleagues the benefits of being a Member of the Greenville Chapter of ASHRAE. **Invite, invite, and then invite some more...**any new potential Non-Members. Don't forget about those Young Engineers – ASHRAE offers a special membership for engineers currently under the age of 35 to encourage them to be involved...these are our future leaders.

**Existing MEMBERS** – Ask Me about Upgrading your Membership by going online to [www.ASHRAE.org](http://www.ASHRAE.org) to update and complete your BIO...this process will automatically upgrade your membership based on the information that you supply...it's quick and it's easy ~ After all it's all about YOU!

#### **Just a reminder:**

**Chapter Members** in good standing (paid dues) **\$10.00** per meeting – lunch included.

**Non-Chapter Members** **\$15.00** per meeting – lunch included.

I am always available to discuss your questions and concerns, or if you have a good idea or suggestion on how we can increase membership – We are interested!

Drop me an email [Membership@ASHRAE4GREENVILLE.COM](mailto:Membership@ASHRAE4GREENVILLE.COM) or call me at 444-0219

Best Regards,  
Dorothy Bertolini  
Membership Chair – ASHRAE Greenville SC  
[membership@ashrae4greenville.com](mailto:membership@ashrae4greenville.com)

# Chapter Programs

This month's technical presentation is "Building Energy Quotient™ (bEQ) - ASHRAE's Building Energy Labeling Program." Please RSVP so that we can make arrangements to have the appropriate amount of food available.

## November Meeting

### **Program: "Building Energy Quotient™ (bEQ) - ASHRAE's Building Energy Labeling Program"**

This presentation will provide an overview of ASHRAE's new building energy labeling program, Building Energy Quotient™ (bEQ). bEQ consists of two separate components, the As-Designed Rating and the In-Operation Rating. The As-Designed Rating is intended for new buildings and requires an energy model that will accurately predict the new building's potential energy usage. The In-Operation Rating assesses the performance of existing buildings that have been in full operation for a minimum of 12 months, and compares that operation to similar building types.

The objective of bEQ is to provide motivation for reducing energy use in commercial buildings by expressing the energy performance of buildings in a tangible way. Research has shown that public display and disclosure of the energy efficiency attributes of a building and its energy use intensity (EUI) will lead building owners to strongly consider cost-effective energy efficiency improvements at the time of design and construction and in any subsequent renovations. The procedures of bEQ, and a comparison of bEQ to other rating systems, will be discussed.

**Presenter: Thomas H. Phoenix, P.E., Fellow ASHRAE, ASHRAE-Certified Building Energy Assessment and Building Energy Modeling Professional, 2012-13, Treasurer ASHRAE**



ASHRAE-Certified Building Energy Assessment and Building Energy Modeling Professional,  
2012-13, Treasurer ASHRAE

Thomas H. Phoenix, P.E., Fellow ASHRAE, ASHRAE-Certified Building Energy Assessment and Building Energy Modeling Professional, is principal and vice president, Moser Mayer Phoenix Associates, Greensboro, N.C.

As the Society's treasurer, Phoenix serves on the Board of Directors and ASHRAE's Executive Committee, chairs the Finance Committee and is vice chair of Members Council and the Advocacy Committee.

His past service includes chair, Building Energy Quotient Committee and Building Performance Metrics Multidisciplinary Task Group; vice chair of planning, Professional Development Committee; member, Site-Source

Presidential Ad Hoc Committee and ASHRAE Foundation Board of Trustees; and Board of Governors, North Piedmont Chapter. He also served two terms on the Board of Directors as vice president, a director-at-large and director and regional chair for Region IV.

Phoenix is the recipient of an Exceptional Service Award, a Distinguished Service Award and a Regional Award of Merit.

He was awarded a Bachelor of Science in engineering operations from North Carolina State University in 1975.

**Location:** Roper Mountain Science Center ([www.ropermountain.org](http://www.ropermountain.org))

**Date:** Thursday, November 8, 2012

**Time:** 11:30 a.m. Doors Open  
11:35 a.m. Lunch Served  
11:45 a.m. to 12:00 p.m. Chapter Business  
12:00 p.m. to 1:00 p.m. Main Program

**Cost:** Lunch Program: \$10/chapter member \$15/non-chapter member (catered lunch)

**Education Credit:** This program qualifies for 1.0 PDH (including NC PE) for the full program

**Please RSVP to [lowed@cxconsultants.com](mailto:lowed@cxconsultants.com)  
No later than Noon Tuesday, November 6, 2012**

# *Chapter Technology Transfer*

## *USGBC Now Accepting Comments on LEED v4*

The U.S. Green Building Council (USGBC) has opened its fifth public comment period on the next version of its Leadership in Energy and Environmental Design (LEED) green building program. The comment period closes on Monday, December 10th. A robust dialogue on LEED has been ongoing between USGBC and members of the building community, and the results of this discussion, and the final version of this program will have a significant impact on the built environment for years to come.



To find out more information and join the conversation on LEED v4, visit <https://new.usgbc.org/leed/v4/#comment>.

“LEED v4 will have the greatest impact of any rating system we’ve developed by focusing on building performance and rewarding innovative product manufacturers who offer best in class products,” said Scot Horst, Senior Vice President, LEED, USGBC. “LEED v4 will help change the way project teams think, integrate, plan, execute and operate their buildings.”

LEED v4 will allocate almost 20 percent of all points to optimizing energy performance over ASHRAE 90.1-2010 and promises to help further cut CO2 emissions more than any LEED rating system in its 12 year history.

The new version will include data centers, warehouses and distribution centers, hospitality, mid-rise residential, and existing schools and retail. There will also be more options for projects outside of the U.S to increase worldwide adoption.

“Engaging people is at the core of the LEED development process, and this draft reflects the thoughtful comments and recommendations we’ve received from over 21,500 stakeholders,” added Horst. “LEED v4 raises the expectations for what LEED project teams are being asked to deliver. We will launch the LEED v4 beta testing period in November which will provide an additional opportunity to explore the new program inside and out, and help refine support tools and resource.”

LEED v4 will be fully launched in 2013 and promises to simplify the reporting process.

# ASHRAE Learning Institute

## Seminars & Courses at ASHRAE's Winter Conference and AHR Expo in Dallas, TX

### 2 WAYS TO REGISTER

Internet: [www.ashrae.org/dallascourses](http://www.ashrae.org/dallascourses)

Phone: Call toll-free at 1-800-527-4723 (US and Canada) or 404-636-8400 (worldwide)








### Full Day Professional Development Seminar

\$485/\$395 ASHRAE Member -- Earn 6 PDH/.6 CEU or 6 AIA LU credits

<p><b>The Commissioning Process in New &amp; Existing Buildings</b> Saturday, Jan 26 – 8:00 a.m. to 3:00 p.m.</p> <p><b>Data Center Energy Efficiency</b> Saturday, Jan 26 – 8:00 a.m. to 3:00 p.m.</p> <p><b>Healthcare Facilities: Best Practice Design &amp; Applications</b> Saturday, Jan 26– 8:00 a.m. to 3:00 p.m.</p>	<p><b>Complying with Standard 90.1-2010</b> Tuesday, Jan 29 – 9:00 a.m. to 4:00 p.m.</p> <p><b>Energy Modeling Best Practices and Applications: HVAC/Thermal</b> Tuesday, Jan 29 – 9:00 a.m. to 4:00 p.m.</p>
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### Half-Day Short Courses

\$159/\$119 ASHRAE Member -- Earn 3 PDH/.3 CEU or 3 AIA LU credits

<p><b>Air-to-Air Energy Recovery Fundamentals</b> Sunday, Jan 27 – 2:00 p.m. to 5:00 p.m.</p> <p><b>Humidity Control: Applications, Control Levels and Mold Avoidance</b> Sunday, Jan 27 – 2:00 p.m. to 5:00 p.m.</p> <p><b>Air-to-Air Energy Recovery Applications: Best Practices</b> Monday, Jan 28 – 8:30 a.m. to 11:30 a.m. </p> <p><b>Application of Standard 62.1-2010: Multiple Spaces Equations &amp; Spreadsheet</b> Monday, Jan 28 – 8:30 a.m. to 11:30 a.m.</p> <p><b>Combined Heat &amp; Power: Design through Operations</b> Monday, Jan 28 – 8:30 a.m. to 11:30 a.m. </p> <p><b>Understanding Standard 189.1-2011 for High-Performance Green Buildings</b> Monday, Jan 28 – 2:45 p.m. to 5:45 p.m.</p> <p><b>Introduction to Ultraviolet Germicidal Irradiation (UVGI) Systems</b> Monday, Jan 28 – 2:45 p.m. to 5:45 p.m. </p>	<p><b>Commissioning Process &amp; Guideline 0</b> Monday, Jan 28 – 2:45 p.m. to 5:45 p.m.</p> <p><b>Evaluating the Performance of LEED® -Certified Buildings</b> Monday, Jan 28 – 2:45 p.m. to 5:45 p.m.</p> <p><b>Optimization of HVAC Systems &amp; Components: Techniques &amp; Real-World Examples</b> Tuesday, Jan 29 – 9:00 a.m. to 12:00 p.m. </p> <p><b>Energy Management in New and Existing Buildings</b> Tuesday, Jan 29 – 9:00 a.m. to 12:00 p.m.</p> <p><b>Avoiding IAQ Problems</b> Tuesday, Jan 29 – 9:00 a.m. to 12:00 p.m.</p> <p><b>Designing Toward Net Zero Energy Commercial Buildings</b> Tuesday, Jan 29 – 1:00 p.m. to 4:00 p.m.</p> <p><b>Understanding &amp; Designing Dedicated Outdoor Air Systems</b> Tuesday, Jan 29 – 1:00 p.m. to 4:00 p.m.</p> <p><b>Laboratory Design: The Basics and Beyond</b> Tuesday, Jan 29 – 1:00 p.m. to 4:00 p.m. </p>
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Myrna Dayan, CEM, LEED Green Associate  
Chapter Technologies Transfer Chair, Greenville Region IV  
[myrna@mail.ashrae.org](mailto:myrna@mail.ashrae.org)

# ***HISTORY***

A significant milestone is coming up in the Greenville chapter, namely the chapter's fiftieth anniversary in December of 2013. This is a good time to do a little time traveling.

As the recently minted historian I inherited a box of documents dating back three decades. Who knows where the older stuff is. Sorting through it I discovered a number of profiles of people and companies that have not seen the light of day in a long time and may have never been published. We will periodically be publishing some of these oldie goldies. The starting point of our time travel is a profile of Benny Bootle written in 1996.

-D. Cortright - Historian (2012)

## **HISTORY OF A PERSON - BENJAMIN T. BOOTLE**

By Bob Speer - Historian (1996)

The following notes are made from an interview with Benjamin T. (Benny) Bootle on May 8, 1996 in Benny's office in Greenville SC.

Benny graduated from the University of South Carolina in 1953 with a Degree in Mechanical Engineering.

He first worked for a textile machinery firm in Spartanburg SC doing design work for textile machines. He then went to work for L.L. Hyatt, Inc. a mechanical contracting firm located in Spartanburg, which was to be Benny's introduction to a long career associated with the HVAC industry. He was involved as a HVAC project manager on the plant and Animal Science Building at Clemson University. He then went to work for the Trane Company in early 1955, and attended the Trane Company's six month training class in LaCross Wisconsin. He returned to Greenville to work with Russ Beck in the Greenville SC Sales Office of the Trane Company. The office was later headed by Bob Knowles until 1961.

In 1961 Benny assumed The Trane Company franchise for Greenville. He proved to be very successful as a Trane Office Manager establishing one of the early full service companies for Trane. This foresight was a major contributor to the success for the Greenville office as the sales agency for The Trane Company. Under Benny's leadership the Greenville office became a major supplier to textile industry as this industry started to use process air conditioning in plants throughout the south.

It should be noted that the systems used in the textile industry are somewhat unique to this area, due to the lint in the air in textile plants a conventional coil type of air conditioning system cannot be used. The most common system is an air washer, this system cleans the air and allows for the control of humidity in textile operations. These systems require large volumes of chilled water, leading to this area becoming a major market for centrifugal chillers.

Benny later added Compressor Services a compressor rebuilding company, and Engineered Control Systems a controls company to further service the HVAC industry in the Greenville area.

In 1963 Benny obtained his Professional Engineering registration

In the early days with Trane Benny operated with one salesman and one secretary. Most of the actual sales were handled through wholesale supply houses. With the increase in the use of air conditioning and the associated increase in the complexity of the systems the sales shifted to direct sales to the contractors.

Benny was involved with ASHRAE in its early days in South Carolina becoming a member of the original South Carolina Chapter of ASHRAE. At this time there was only one chapter for the entire state. The meeting locations were rotated between the cities of Columbia, Spartanburg, Greenville, Charleston, and at this time there were no interstates, therefore to attend a meeting in Charleston it would involve a full day's travel. The meetings were generally held in hotels in each city, of which none exist today. Some of the early members were King Rouse, Tom Curley, Ben Leppard, Marc Duralack, Fred Bailey, Jap Boles, Francis Freeman, these were engineers, contractors, and sales reps active in the industry at the time.

Through the years Benny has been a major contributor to the growth of ASHRAE in this region. Early in his career he was active at the local chapter level holding each position in the local chapter. He was instrumental in the formation of the Greenville Chapter in 1963.

Benny became President of the Greenville Chapter in 1966 and after leaving office started his long service to ASHRAE at the regional and national level. He has served for many years on the Nominating Committee, and the Admissions and Advancement Committee and also held positions on the Research and Meetings Committees.

In addition to his support of ASHRAE with his time and effort, Benny has been very generous in his financial support of ASHRAE. He was instrumental in the establishment of a Region 4 Scholarship Fund administered by the ASHRAE Foundation. He has offered matching funds for chapter donations to complete the establishment of this fund.

He has also challenged the Region 4 Chapters to meet PAOE goals by providing donations in the chapters name to the ASHRAE Research Fund. This has helped the Region 4 research effort and has resulted in substantial donations by Benny for many years.

ASHRAE would be hard pressed to find anyone who has put in more "TIME, EFFORT, and MONEY" into ASHRAE than Benny Bootle.

In addition to his long association with ASHRAE, Benny is an enthusiast and collector of antique automobiles and motorcycles. He is very active in the Antique Automobile Collectors Association and served as President of this association in 1995. He has a nationally recognized collection of automobiles.

Benny has been a strong supporter of the University of South Carolina College of Engineering serving on the Board of Directors for many years. He was instrumental in the establishment of the Frank B. Herty Scholarship Fund named after an engineering professor who Benny considers a major influence in his life.

Benny considers his "PE" registration and his work with ASHRAE as some of his most important accomplishments in his career.

It can truly be said that Benjamin T. (Benny) Bootle is prominent member of ASHRAE.

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Benny Bootle passed away on Dec 1, 1996 at the age of 65. His memory lives on in the scholarship named in his honor.

- D. Cortright

**Devon Cortright**  
**Historian, Greenville Region IV**



## Event Dates for 2012-2013

Thursday 09/13/2012	LEED Litigation	Presenter: Stephanie Burton
Thursday 10/11/2012	Today's Project Design Challenges ..... A Contractor's Perspective	Presenter: Bill Caldwell
Thursday 11/8/2012	Building Energy Quotient (BEQ)	Presenter: Thomas Phoenix
Thursday 12/13/2012	Solar Thermal Additional Seminar: Primary Secondary vs. Variable Primary debate	Presenter: Chris Edmondson, Distinguished Lecturer
Thursday 01/10/2013	Mold Control	Presenter: Andy Schauder
Thursday 02/14/2013	Acoustics/Vibration Best Practices for HVAC Equipment	Presenter: Dwight Landry
Thursday 03/14/2013	Residential Energy Efficiency	Presenter: James Groman
Thursday 04/11/2013	Responsible Use of Refrigerants Additional Seminar: Thermal Storage-Peak Load Avoidance	Presenter: Julian De Bullet, Distinguished Lecturer
Friday 4/26/2012	ASHRAE Golf Tournament	
Thursday 05/9/2013	HVAC Equipment Research at Oak Ridge National Laboratories	Presenter: Heather Buckberry



**ASHRAE**  
Technology for a Better Environment

**Region IV**  
**Greenville Chapter**