



Giga-Joule

April 2013

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

Meeting Announcement

The April meeting will be held on Thursday, April 11, at the Roper Mountain Science Center. For more information, please contact our Secretary, Liz Ambrose, at secretary@ashrae4greenville.com.

A Message from the President

This month Julian De Bullet will be discussing the responsible use of refrigerants. There will also be an additional seminar on thermal storage-peak load avoidance. Please note that Julian De Bullet is an ASHRAE distinguished lecturer, so we would like as many attendees as possible.



Please be sure to take a look at our spring golf tournament, planned for May 10th at Furman University Golf Course. The forms will be included with the Giga-Joule email, and please contact Lee Chapman (lee.b.chapman@jci.com or 864-234-3802) to RSVP.

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.

All presentation slots for this ASHRAE year have been filled, so please take a look at the 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.

Ryan Tonnsen
Greenville ASHRAE President
president@ashrae4greenville.com

Chapter Programs

This month, there will be two (2) one-hour technical presentations, entitled “**Responsible Use of Refrigerants**” and “**Thermal Storage-Peak Load Avoidance.**” Please RSVP so that we can make arrangements to have the appropriate amount of food available.

April Meeting

Presenter: Julian R. de Bullet

Julian R. de Bullet has over 40 years experience in the HVAC industry. He is Vice President, Business Development with FAFCO Thermal Storage. His career has concentrated on the applications of Chilled Water and All-Air systems as a manager of applied equipment sales and of a service/performance contracting operation. Recently he was Director of Industry Relations for a major HVAC manufacturer.



As ASHRAE Vice President (2001/2003), he served on the Board of Directors and the Executive Committee and was Chair of Member Council and Publishing Council. He is Past President of the National Capital Chapter and was Director and Regional Chair for ASHRAE Region III. He is an ASHRAE Distinguished Lecturer with over 300 Seminars delivered around the world with topics including “Responsible Refrigerant Use”, “Sustainable HVAC Systems”, “Variable Primary Flow System designs” and “90.1 and LEED”. He is a member of ASHRAE TC 8.2 Centrifugal Chillers and has co-authored numerous ASHRAE Handbook chapters. He chaired the Professional Development Committee, (Responsible for the ASHRAE Educational programs), was a voting member of the Publications and Education Council and the Society Advocacy Committee. He has co-authored ASHRAE Position Documents on Energy Efficiency, Natural Refrigerants and Ozone Depletion. He is a Life Member and holds the Distinguished and Exceptional Service Award

He presently serves on both the Honors and Awards Committee and the Nominating Committee.

He is a Graduate of the London University system in England, where he obtained an Electrical Engineering degree and a Diploma in Marketing.

Program: “Responsible Use of Refrigerants”

This presentation discusses the practical application of Standards 15, 147 and 34, including how to retrofit existing Mechanical Rooms to meet the Standard. Emphasis is placed on the safety of the persons and property on or near the premises.

The presentation also discusses the practices and procedures that will reduce emissions into the atmosphere of halogenated refrigerants used in refrigeration and air-conditioning.

Ever wonder why you hear so many different dates on the phase out of refrigerants? Want to know which refrigerant is being phased out when and what will replace it? This lecture will describe the current status of refrigerants and provide our best guess on where things are going in the future.

Program: “Thermal Storage-Peak Load Avoidance”

This presentation will explore the benefits of shifting peak load of the HVAC system to save energy costs. Producing and storing ice at night, when energy costs are lowest, and discharging cooling during the high on-peak rate period, reduces demand charges and can lower peak power usage.

We will discuss the application of a chiller circulating a cold glycol/water solution through dedicated ice tanks. During the on peak discharge cycle the glycol/water solution is piped through the tanks. The cooled solution is then circulated to satisfy the building cooling load.

Sustainable designs and high performance standards such as ASHRAE Standard 189 will be discussed along with a life cycle analysis.

Location: Roper Mountain Science Center (www.ropermountain.org)

Date: Thursday, April 11, 2013

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. “Responsible Use of Refrigerants” Program
1:00 p.m. to 2:00 p.m. “Thermal Storage-Peak Load Avoidance” Program

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

Education Credit: The Technical Programs qualify for 1.0 PDH (including NC PE) each – 2 PDH total.

**Please RSVP to secretary@ASHRAE4greenville.com
No later than Noon Tuesday, April 9, 2013**

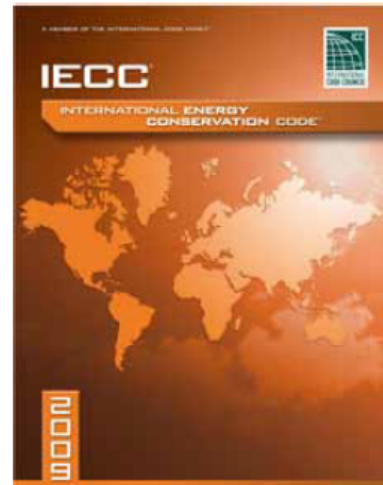
Chapter Technology Transfer



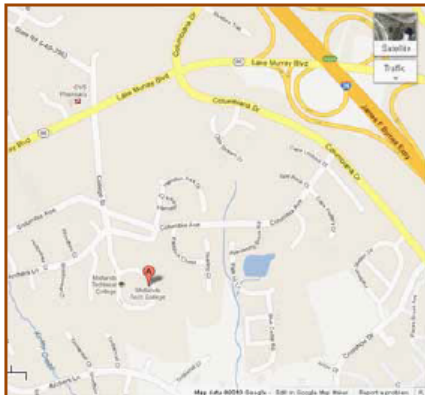
Moving from 2006 to 2009 IECC in Commercial Buildings; A Primer for Designers, Builders, and Code Officials

On January 1, 2013, the 2009 International Energy Conservation Code (IECC) became a requirement in the State of South Carolina, replacing the 2006 version. The South Carolina Energy Office is offering two training classes for architects, engineers and codes officials to help make the transition to the new code compliance. Each class will go into detail about the 2009 IECC and how it relates to the International Building Code and will outline major differences between the 2009 IECC and the 2006 version. The course will also provide an introduction to ASHRAE 90.1-2007, the reference standard cited by the IECC as an additional path to demonstrate energy code compliance. The course will introduce various tools available for use by both the design professional and code official to demonstrate code compliance and to stay abreast of the latest code changes and best practices for design, review and inspection of building construction for IECC compliance. Finally the course will provide a brief discussion of where future editions of energy codes are headed and conclude with a short question and answer session.

Continuing education credit for building code officials has been applied for through the SC Building Codes Council. AIA and GBCI credits have been applied for through the US Green Building Council-SC Chapter. Thank you to the USGBC-SC for their support of this program. For more information about their programs, visit: <http://www.usgbcsc.org/>



Course Location & Registration Information



Monday April 29, 2013

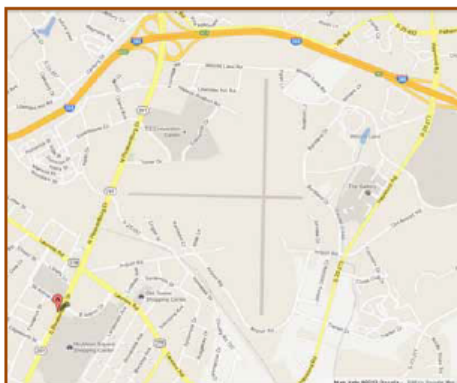
8:30am-4:30pm

\$15 fee includes box lunch

Midlands Technical College, Northeast Campus

151 Powell Road, Columbia, SC 29203

Registration: <http://www.midlandstech.edu/cce/weatherization>
(click on course schedules on the upper left)



Tuesday April 30, 2013

8:30am-4:45pm

\$15 fee includes box lunch

Greenville Technical College, Buck Mickel Center

216 South Pleasantburg Drive, Greenville, SC 29607

Registration: <https://aceweb.gvltec.edu/wconnect/ace/CourseStatus.asp?Course=122R06591010&DirectFrom=Search&Origin=Search+Results>
or call the registration desk at 864-250-8800

Course Outline

- I. Introduction (8:30 AM - 8:45 AM)
- II. History of Building Codes and Energy Codes in SC (8:45 AM - 9:00 AM)
- III. IECC Structure and Format (9:00 AM - 9:30 AM)
- IV. IECC Compliance Paths (9:30 AM - 10:00 AM)
- V. Break (10:00 AM - 10:15 AM)
- VI. Major Differences Between 2009 and 2006 IECC (10:15 AM - 12:00 PM)
- VII. Lunch (12:00 PM - 1:00 PM) *box lunch provided*
- VIII. Relationship between IECC and ASHRAE 90.1 (1:00 PM - 1:30 PM)
- IX. Compliance Tools and Resources (1:30 PM - 2:30 PM)
- X. Break (2:30 PM - 2:45 PM)
- XI. Plan Review Best Practices for IECC Compliance (2:45 PM - 3:30 PM)
- XII. Inspection Best Practices for IECC Compliance (3:30 PM - 4:15 PM)
- XIII. Where codes and high performance building standards may go in the future (4:15 PM - 4:30 PM)
- XIV. Q&A and Discussion (4:30 PM - 4:45 PM)



Course Instructor: M. Dennis Knight, P.E.

Mr. Knight is a practicing Mechanical and Fire Protection Engineer specializing in building energy using systems and high performance building design, construction, operation and maintenance. He founded Whole Buildings Systems, LLC, in 2011 and has over 38 years of experience in the building industry. Prior to starting WBS, Mr. Knight was a Principal and Director of Practice Management for Liollo Architecture in Charleston. He has also owned and managed both a successful engineering firm and a construction company. Mr. Knight's expertise lies in his ability to understand and manage complex facility and campus/district wide design, construction and energy management projects. In the past two years he has conducted energy audits on over 3 million square feet of commercial and industrial facilities and routinely monitors the energy consumption and performance of over 10 million square feet of k-12 school facilities in South Carolina.

Mr. Knight's is a registered professional engineer, LEED AP and LEED EB O&M accredited professional, a Building Performance Institute certified Building Energy Analyst and Envelope Professional, an ACG certified commissioning authority and an ASHRAE certified Building Energy Modeling professional. His in-depth knowledge of whole building design is reflected in his current service to numerous national, state and local entities. He currently serves as the Chair of ASHRAE's energy modeling conference and the former chair of ASHRAE's Research Promotion committee and the former chair of ASHRAE's TC 7.1 committee, that developed the first ASHRAE handbook chapter for "Integrated Building Design". Mr. Knight currently serves as the vice chairman of ASHRAE's Multi-disciplinary Task Group for BIM (Building Information Modeling).

During the past six years Mr. Knight has been as a distinguished lecturer for ASHRAE and has presented seminars and programs to ASHRAE Chapters, the USGBC, the Building Enclosure Council, the AIA and others on such topics as ASHRAE 90.1 compliance, energy modeling, building information modeling, and commissioning energy using systems. He has also been an adjunct professor at the College of Charleston in the Masters of Environmental Science program where he taught energy auditing and greenhouse gas emissions inventory practices and procedures.

Mr. Knight holds a Bachelors of Science in Physics and a minor in Economics from the College of Charleston.




Myrna Dayan
Chapter Technologies Transfer Chair, Greenville Region IV
myrna@mail.ashrae.org

History

Chapter Anniversary.

Friends, the Greenville Chapter is approaching a milestone, a golden anniversary. The Greenville Chapter of ASHRAE was chartered in December of 1963. In order to be chartered one has to apply. 50 years ago this month the application was submitted. A replica was produced for the 25th anniversary, a copy of which appears below. 50 years ago a group decided that it was time to stop driving to Columbia once a month to attend the ASHRAE meeting, before there was an I-26 and cars were less comfortable. A drive to Columbia took a good deal more effort. Scan through the names on this list. Some of those folks are still with us.



Greenville Chapter of ASHRAE

25th ANNIVERSARY

STATE OF SOUTH CAROLINA
COUNTY OF GREENVILLE
APRIL 11, 1963

We the undersigned members of the National Society of Heating, Refrigerating, and Air Conditioning Engineers, Inc. this date hereby petition the South Carolina Chapter, American Society of Heating, Refrigerating, and Air Conditioning Engineers and also petition the American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc. 345 East 47th Street, New York, 17, New York.

This petition is for the establishment of a Greenville Chapter to serve the Counties of Greenville, Spartanburg, Pickens, Oconee, Anderson, Laurens, Abbeville, Greenwood, Union, and Cherokee.

NAME	MEMBERSHIP NO.	SIGNATURE
1. <u>HARRISON R. KING</u>	<u>328360</u>	<u>Harrison R. King</u>
2. <u>JAMES E. WALDRON</u>	<u>656480</u>	<u>James E. Waldron</u>
3. <u>CLAYTON C. MCKENNON</u>		<u>Clayton C. McKennon</u>
4. <u>BARRY T. BOATMAN</u>		<u>Barry T. Boatman</u>
5. <u>WILLIS E. WAGNER</u>		<u>Willis E. Wagner</u>
6. <u>JASPER C. BOLES, JR.</u>	<u>60200</u>	<u>Jasper C. Boles, Jr.</u>
7. <u>GEORGE R. MORGAN</u>		<u>George R. Morgan</u>
8. <u>JOHN D. CRYSTON</u>		<u>John D. Cryston</u>
9. <u>FRANCIS E. GUYTON</u>		<u>Francis E. Guyton</u>
10. <u>CHARLES W. CRISTON</u>	<u>92840</u>	<u>Charles W. Criston</u>
11. <u>JOHN EDWARD GRANCOSE</u>		<u>John Edward Grancose</u>
12. <u>THOMAS O. CURTIS JR.</u>	<u>122270</u>	<u>Thomas O. Curtis Jr.</u>
13. <u>H. ANGLIM BOWEN</u>		<u>H. Anglim Bowen</u>
14. <u>PALMER COVIL</u>	<u>124820</u>	<u>Palmer Covil</u>
15. <u>GEORGE C. LOUIS</u>	<u>374480</u>	<u>George C. Louis</u>
16. <u>HARVEY S. WELCH JR.</u>		<u>Harvey S. Welch Jr.</u>
17. <u>R. F. WEBB</u>		<u>R. F. Webb</u>
18. <u>H. J. HARR JR.</u>		<u>H. J. Harr Jr.</u>
19. <u>J. C. HARRISON</u>		<u>J. C. Harrison</u>
20. <u>JAMES T. Mc CARROLL</u>		<u>James T. Mc Carroll</u>
21. <u>R. KING ROUSE</u>	<u>538840</u>	<u>R. King Rouse</u>
22. <u>BEN A. LEPPARD</u>	<u>363170</u>	<u>Ben A. Leppard</u>
23. <u>Ben M. SPAN</u>	<u>594200</u>	<u>Ben M. Span</u>
24. <u>M. E. LENNON</u>	<u>362740</u>	<u>M. E. Lennon</u>
25. <u>J. A. FIELDS</u>	<u>189000</u>	<u>J. A. Fields</u>
26. <u>C. EVANS RITMAN</u>		<u>C. Evans Ritman</u>
27. _____		
28. _____		
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Charter Granted 16th day of Dec. 1963

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 5/10/2013	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