February Meeting

Tuesday, February 12, 2013

Modern Variable Speed Pumping for Commercial Hydronic Systems

Speaker: Bill Reid

PDH’s Pending

Past President’s Night &

YEA Night

Please see page 3 for additional meeting information.

Meeting Manager:

Teri Shannon
tshannon@dac-hvac.com

Where:

Embassy Suites, 550 Winter Street, Waltham, MA

Time:

5:30 – 6:00 Social / Registration
6:00 – 7:00 Dinner
7:00 – 8:00 Meeting

Meal:

New England Clam Chowder
Petit Filet Mignon & Grilled Shrimp
Bourbon Chocolate Bread Pudding with Vanilla Bean Sauce

Cost:

ASHRAE Boston Members: $35
Non-Members / Walk-Ins: $45
ASHRAE Student Members: Free

RSVP Deadline and RSVP Cancellation for this meeting is 12:00pm on Friday, February 8, 2012

Please RSVP to Mike Gilroy at mpg@brplusa.com. Upon receiving RSVP, a confirmation email will be sent back to confirm your reservation. If you do not receive a confirmation email, please RSVP again.

You can also RSVP and pay in advance using PayPal on the ASHRAE Boston Chapter Website:

http://www.ashraeboston.org/meeting-registration.html

Thank You
PRESIDENT’S MESSAGE
By: Stephen Nicholas

The Boston Chapter will be providing a technical presentation by Mr. Bill Reid of Urell, Inc. Bill’s Topic will cover “Modern Variable Speed Pumping for Commercial Hydronic Systems”. The PDH’s have yet been determined. Please look for the announcement upcoming in the next few days.

I look forward to seeing you all next month on Tuesday February 12th at the Embassy Suite Hotel in Waltham.

Presidential Award of Excellence
Boston Chapter - 2012-2013

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<thead>
<tr>
<th>Chapter Members</th>
<th>Membership Promotion Points</th>
<th>Student Activities Points</th>
<th>Research Promotion Points</th>
<th>History Points</th>
<th>Chapter Organization Points</th>
<th>Chapter Technology Transfer Points</th>
<th>Chapter PAOE Point Totals</th>
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FREE SUNDAY RIVER & SUGARLOAF DISCOUNT SKI VOUCHERS, SAVE $18 PER ADULT TICKET

The Boston Chapter is participating in the Sunday River/Sugarloaf corporate voucher program again this year. Each voucher entitles you to purchase up to four discounted lift tickets [$67 Adults, $58 Teen, $47 Junior/Senior] at either ski resort by presenting an ASHRAE membership card, picture ID, and voucher. The regular prices are $85/$69/$56. Contact Ed Waldman 508-405-1554, ewaldman1@verizon.net, if you would like any vouchers. There is no charge for the vouchers and there are no blackout dates. Complete rules below:

How To Use Vouchers

1. Bring your corporate voucher to any participating resorts ticket window.
2. Present your voucher, photo ID, and valid ASHRAE membership card to the ticket seller. In the absence of the individual member, immediate family members defined as spouse and children, must present some form of ASHRAE identification, plus a photo ID in order to receive the discount.
3. Each person expecting the corporate pricing must be present with the corporate voucher holder at the time of ticket purchase. The ticket seller will take the voucher in exchange for up to 4 lift tickets.

Materials for the March newsletter are due by February 8, 2012. Please submit employment/want ads in .pdf, .doc or .jpg format. A company logo may also be included. Please send me any ideas you would like to share or include in next month’s issue. Please see the website for additional information www.ashraeboston.org.

EDITOR’S NOTE
By: Stephanie Lafontaine

For more information, please call or e-mail me at: (857) 221-5942, northeastaire@gmail.com
Meet the February Meeting Speaker

Presentation Information:

Modern Variable Speed Pumping for Commercial Hydronic Systems

This presentation highlights the significant opportunities for energy saving by utilizing modern variable speed pumps. The presentation reviews control modes of variable speed pumping as well as sensor location to obtain maximum energy savings while delivering enhanced comfort to the occupants. We will also introduce new concepts such as sensor less control modes, modular pumping systems and permanent magnetic motors. The intent of this presentation is to raise the awareness of the specifying engineer to the opportunities of substantial energy savings with Modern Pumps and technologies.

Speaker Information:

Bill Reid is a Commercial Sales Manager for Urell Inc. He has been with Urell for 18 years in various roles within the company. Bill’s areas of expertise include hydronic heating applications and radiant heating & cooling.

He holds a Bachelor of Science in Marine Engineering from Mass Maritime Academy. He sailed in the US Merchant Marines in the capacity of 2nd & 3rd Assistant Engineer.

STUDENT ACTIVITIES

By: Dan Diorio

The March meeting will be the first of our two ‘Student Nights’. I wanted to provide plenty of advance notice so our student turnout can be strong. A designated Student Night at the monthly meeting provides exposure for the Student Activities Committee and for student members within the Chapter. My plan will be to speak for a few moments in front of the attendees about the committee. I will highlight the types of activities the committee typically plans and recent tours that have taken place. More importantly, I would like to be able to call attention to all of the student members in attendance. There are a lot of employers out there looking for graduating engineers to add to their staff. It’s almost certain that employers will migrate toward the students – asking about your post-graduation plans. You’ll want to be a part of these potential networking conversations – trust me! If possible, please let me know ahead of time if you are planning to attend. That way we will have the most accurate list of student attendees to call out.

Due to scheduling in this busy ASHRAE season, the April meeting will also be designated as a Student Night.

If you all promise not to tell anyone, I can let you in on a secret. The Boston Chapter is in the process of adding a new Student Chapter! Shortly, Benjamin Franklin Institute of Technology will be introduced as our sixth Student Chapter – joining Massachusetts Maritime Academy, Massasoit Community College, MIT, Northeastern University, and Wentworth Institute of Technology. Once all of the paperwork is completed at both the local and Society level, we will formally introduce the student chapter, several members, and the faculty advisor at an upcoming monthly meeting. Northeastern University was the last Student Chapter added (October 2010). This will be an important night to attend so please stay tuned for information.

Please drop me a line at daniel.diorio.2@bc.edu and keep in touch with the workings of the Student Activities Committee. Always feel free to come forward and participate or suggest exciting student activities.
Meeting recap

January Meeting

By: Stephen Nicholas

We had a great meeting last month with over 130 people in attendance. An excellent presentation provided by Rudolph Zaengere, Ph.D on “High Performance Run Around Energy Recovery Systems” with 1.5 PDH’s for the P.E. chapter members. There was also a lot of interest and discussion generated by the presentation with an outstanding business networking opportunity following the presentation as well.

Photos by Brian Marman
Shipping harvested ice to the corners of the globe did have its drawbacks - the loss of product during the long sea voyages being the most obvious. Calculations had to be made of how much the ice would melt so that accurate product pricing at the end use point could be determined. For example, on a voyage to Calcutta, 160 tons of ice was loaded but only 38 tons of ice arrived intact for sale. During a voyage to England, 176 tons was lost during the 51 day passage, which amounted to almost 3.5 tons per day. When travelling to Havana from Boston, losses from melting typically approached 50%.

Beginning in the 1830’s, Tudor’s competition started to grow and he began to lose his monopolistic hold on the ice industry. As demand for ice escalated, competitors started to appear throughout the Northeast. But even as late as 1847, approximately one-half of all the ice shipped within the United States was supplied by “The Ice King”. Total shipments from the Boston area came to nearly 52,000 tons (over 100,000,000 pounds) and went by rail or ship to more than 25 major metropolitan areas. Even with his vast network of ponds, lakes, ice houses and ice cutters, Tudor could not have supplied this huge volume alone, so as a result, his completion continued to grow. By 1880 (over 15 years after Fredrick Tudor died), estimates indicated that the United States consumed nearly 5,000,000 tons of ice, 600,000 tons of which were harvested in the New England area. At the peak of natural ice consumption in 1886, nearly 25,000,000 tons of ice was harvested. As can be seen by these quantities, the demand for ice around the globe continued to grow, but the method used to supply product to the end consumer was very inefficient. A better method had to be devised.

Several interrelated factors led to the decline of one industry (natural ice harvesting) and the growth of another. The first issue was health; as cities expanded and populations grew, people got closer to the bodies of water where the ice was harvested, and pollution of the previously pure water sources became more and more prevalent. Second, and more importantly, throughout the latter half of the 19th century, improvements were made to the industrial machines used to artificially create ice. The development of artificial ice and nascent artificial ice industry was mostly driven by the southern states, who were tired of relying on the North for their ice supplies. Many entrepreneurs started investing money in companies and individuals who promised to build mechanical refrigeration equipment that could make “artificial” ice locally at an economical cost. By 1868, the first artificial ice manufacturing plant was opened in New Orleans by The Louisiana Ice Manufacturing Company, which could make “artificial” ice at a cost significantly less than natural ice. In the late 1880’s, a steam driven ice machine was introduced to India, but it didn’t entirely replace natural ice harvested from North America for another 30 years.

By 1913, the first domestic electric refrigerator was being sold in Chicago. In 1927, General Electric introduced their “Monitor Top” domestic refrigerator, the first hermetic design for home use. By the end of the Twenties, one count had the total number of domestic electric refrigerators at 1.25 million. The thirst for cold that had been pioneered by Frederick Tudor and others like him had started an entirely new industry - mechanical refrigeration - that still thrives today.
Many Engineers have been asked to be involved in or are looking into EnergyStar Benchmarking of facilities. In order to be recognized the EnergyStar score the facility must be reviewed by a Professional Engineer and have the results stamped. Well I have personally reviewed thousands of EnergyStar portfolio manager results and have learned how much you can manipulate the results (I usually have to correct them).

With the property industry calculating the energy use of its buildings at a blistering pace and policymakers driving toward bolder benchmarking and disclosure laws, a new consumer label that would grade all commercial buildings according to their energy efficiency is close to being unveiled. Developed by the American Society of Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE), the mechanical engineering association known for its development of commercial building code standards, the label would measure both the design efficiency and operational performance of buildings, similar to the government’s Energy Star program.

The measurements, which would in fact come from Energy Star, would likely appear side-by-side on the label and receive separate ratings using letter grades like those found on European building labels. An energy certificate with more detailed information about building energy use would accompany the label, although the design of both those items is still being finalized. Other elements also remain under discussion, such as assessing a fee for using the label. It is due to be released at ASHRAE’s Annual Meeting in June. ASHRAE said it would eventually expand the label to include property types not covered by Energy Star, and if that effort is successful, it indicated it would push for an international expansion. Separately, it is ramping up efforts to train U.S. energy assessors to verify compliance with the label. ASHRAE began developing the label a little more than a year ago and chose early on to align with Energy Star, which property owners and managers have used to benchmark more than 70,000 U.S. commercial buildings totaling nearly 10 billion square feet.

ASHRAE’s move to align Energy Star ratings for performance and design efficiency with the label’s grading system would seem to ensure eligibility for a huge pool of properties. It could also help the label gain traction with state and local policymakers who have begun mandating Energy Star benchmarking and the disclosure of building energy use.

In the most dramatic example, ASHRAE said it would extend its label to properties that cannot currently receive an Energy Star rating, which is only available for about 60 percent of U.S. commercial buildings. But to do that, ASHRAE must navigate a tricky and complex path. But to some, a new methodology to benchmark buildings is cause for concern. Part of the issue, is that ASHRAE’s 90.1 code standard does not specify a number of variables that affect performance, such as the building’s operating hours, the efficiency of its equipment or load shifting. “Different people will model in different ways,” he said. Another reason for the gap is that, when a building is designed and engineered, it receives few looks from professionals on the operations side. Often, “a designer designs the building, and there’s no connection after the fact with performance.”

Seemingly, the industry does not yet fully understand the impact of good operating teams and poor operating teams. It’s staggering how many no- and low-cost measures are right at our fingertips in the buildings we go into. This is going to change the way engineers look at facilities and in the long run help all parties involved bridge the gap between design and operations of Facilities.

If you have any subjects you are looking for us to address reach out to me. Thinking with the end in mind and balancing the systems to meet the loads of the buildings. We are also looking at revitalizing the sustainability committee so if you are interested in getting involved in the ASHREA sustainability committee. Our objective is to educate our membership in sustainability. jarmstrong@siemens.com
Greetings ASHRAE Boston, I hope the month of February is finding all of you well. The next Boston Chapter meeting is Tuesday February 12th and this month’s meeting is a YEA night (Young Engineers in ASHRAE); please remember to extend an invitation towards anyone and all you think might be interested in attending this month’s meeting.

As always, I would like to remind everyone to keep the contact information on your ASHRAE profiles at www.ahsrae.org up to date. The contact info on your profile is the main method of providing Society and Chapter news to you, including meeting notices and dues renewal notices. It is important that the Chapter have the correct information on file for you.

As a side note, if you have any questions about your ASHRAE membership or are looking to become more involved with the Boston Chapter and not quite sure how to please feel free to contact me at dandenisi@yahoo.com.

May everyone continue to have an enjoyable month of February,

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**Notice to Members (and Non-Members)**

In an effort to clean up our meeting mailing list, we are asking that all ASHRAE members log in and ensure their information is current and up-to-date, especially the e-mail address. We would like to minimize the amount of returned mail notices that are received plus ensure that our members are receiving the meeting notices in a timely manner. We will soon be switching to sending emails only to members at the email addresses that are listed with ASHRAE. If you are not sure that you have recently updated you information (especially email address!) please take a minute login to http://www.ashrae.org/ with your membership card and update your information. For those that are no longer members, please consider re-upping or follow the new mailing list procedure below.

For all non-members, if you wish to continue receiving notices of the meetings you must opt in by sending a specific request to Enrique de los Reyes at Enrique.de.los.Reyes@mail.ashrae.org. Again this will help to keep our mailing list up-to-date. **As of October 30, all non-members who have not requested to be on the mailing list in this manner will be removed from the list.**

Thank you in advance for your assistance.

Regards,

Dan Denisi  
Membership Promotion Chair

Enrique de los Reyes  
Membership Promotion Committee

Mike Gilroy  
Attendance Chair
Did you know that 100% of the money donated to Research Promotion actually goes towards Research? In fact our Region receives over $4 toward research projects and grants for every $1 donated to ASHRAE Research Promotion.

ASHRAE has a general fund that pays for the remaining expenses, such as salaries, travel, reimbursements, etc. So when you donate to ASHRAE Research, every dollar actually goes into the funding of research development that gives us the information we use on a daily basis from the ASHRAE Handbooks and various other standards and information material that ASHRAE supplies!

This year our Chapter Goal is $21,055, slightly up from the previous two years. Please help out the Chapter by donating to ASHRAE Research Promotion today, no amount is too small.

**Mission: To improve the quality of life and to answer tomorrow's questions through research TODAY.**

Over $2 million is raised annually to help fund $16 million in research projects and student grant-in-aides. There are over 80 research project and student grant-in-aides going on.

Research is used to update the Society's standards and guidelines.

Contributions come from more than 6,700 members, non-members, and companies. 100% of all funds raised go directly to research projects that support the HVAC&R industry.

Active research projects are conducted all around the world at various universities and organizations.

ASHRAE is qualified 501(c)3 and all contributions are tax deductible.

Please fill out the form in this newsletter and mail it to me with whatever contribution you can make or you can go to the ASHRAE Boston website at [www.ashraeboston.org](http://www.ashraeboston.org).

**Mailing Address:**
BR+A Consulting Engineers  
c/o Patrick Duffy  
311 Arsenal St.  
Watertown, MA 02472

Click on the Donation Form under Research & Promotion, or go there directly with this link: [http://www.ashraeboston.org/researchpromo/donation-form.html](http://www.ashraeboston.org/researchpromo/donation-form.html)

Credit card payments can also be made when via Society's ASHRAE website via this link: [https://xp20.ashrae.org/secure/researchpromotion/rp.html](https://xp20.ashrae.org/secure/researchpromotion/rp.html)

I would like give a big **THANK YOU** the following members and Companies for making donations to RP!

**SY 2012 – 2013 January Donors**

- Henry P. Breen, Jr., PE  
- Kenneth W. Crooks  
- John T. Dieckmann  
- David Goodman  
- John A. Iacopucci  
- Amanda Webb
January 8, 2013 Meeting

**Financial Report:**
Bill Garvey reported the financial information for the CRC/Gala event that was held in August of 2012.

**Product and Roster Guide:**
A conference call will be setup before the next meeting. Dan Denisi is part of the committee with Teri Shannon, Dan Diorio and Stacie Suh.

**New Student Chapter:**
Benjamin Franklin Institute of Technology has requested to be added as a new Student Chapter. BOG agreed with adding this school as the 6th local Student Chapter. The Chapter President will follow-up with the school to start the process of getting the school onboard to be the next addition to Boston Chapter Student Chapter.

**Reservation Software**
The Chapter is actively looking into software that will help the Chapter with the reservation process.

**Northeast Building & Facilities Management Show & Conference 2013**
The 8th annual NEBFM show and conference will be held on June 12th and 13th at Boston Convention and Exhibition Center. The ASHRAE Boston chapter will have a booth at the show. Dan Denisi (Membership Committee Chair) and Teri Shannon (President Elect) will be at the booth.

**Community Reach Out Team**
The focus of the current ASHRAE president is to reach out to the local communities. A team consisting of Jim Armstrong, Pat Duffy, Steve Nicholas and Stacie Suh will be working together to reach out to the community.

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**YEA**

*By: Siobhan Carr*

Hello YEA!

Stacie and I are excited about the new year and all the activities we have planned! Our first event will be late February. We will be going back to the Harpoon Brewery. This year’s outing will be slightly different than last years. We have organized a guided tour of the facility, a narrated tasting, soft pretzels and raffle prizes!

Please check your inboxes in the upcoming weeks regarding the date, time and sign up information.

YEA events are held throughout the year and we would really appreciate your input. Please feel free to send ideas and comments to BostonYEA@gmail.com.

Be sure to join Young Engineers in ASHRAE (YEA) on Facebook! www.facebook.com/ashraeYEA#!/ashraeYEA

Do you get the ASHRAE YEA Connection Newsletter? Be sure to subscribe to the newsletter for up to date information on YEA events. To subscribe please contact youngengineers@ashrae.org.
An MIT researcher has developed a technique that provides a new way of manipulating heat, allowing it to be controlled much as light waves can be manipulated by lenses and mirrors. The approach relies on engineered materials consisting of nanostructured semiconductor alloy crystals. Heat is a vibration of matter -- technically, a vibration of the atomic lattice of a material -- just as sound is. Such vibrations can also be thought of as a stream of phonons -- a kind of "virtual particle" that is analogous to the photons that carry light. The new approach is similar to recently developed photonic crystals that can control the passage of light, and phononic crystals that can do the same for sound.

The spacing of tiny gaps in these materials is tuned to match the wavelength of the heat phonons, explains Martin Maldovan, a research scientist in MIT's Department of Materials Science and Engineering and author of a paper on the new findings published Jan. 11 in the journal *Physical Review Letters*.

"It's a completely new way to manipulate heat," Maldovan says. Heat differs from sound, he explains, in the frequency of its vibrations: Sound waves consist of lower frequencies (up to the kilohertz range, or thousands of vibrations per second), while heat arises from higher frequencies (in the terahertz range, or trillions of vibrations per second).

In order to apply the techniques already developed to manipulate sound, Maldovan's first step was to reduce the frequency of the heat phonons, bringing it closer to the sound range. He describes this as "hypersonic heat."

"Phonons for sound can travel for kilometers," Maldovan says -- which is why it's possible to hear noises from very far away. "But phonons of heat only travel for nanometers [billionths of a meter]. That's why you couldn't hear heat even with ears responding to terahertz frequencies."

Heat also spans a wide range of frequencies, he says, while sound spans a single frequency. So, to address that, Maldovan says, "the first thing we did is reduce the number of frequencies of heat, and we made them lower," bringing these frequencies down into the boundary zone between heat and sound. Making alloys of silicon that incorporate nanoparticles of germanium in a particular size range accomplished this lowering of frequency, he says.

Reducing the range of frequencies was also accomplished by making a series of thin films of the material, so that scattering of phonons would take place at the boundaries. This ends up concentrating most of the heat phonons within a relatively narrow "window" of frequencies.

Following the application of these techniques, more than 40 percent of the total heat flow is concentrated within a hypersonic range of 100 to 300 gigahertz, and most of the phonons align in a narrow beam, instead of moving in every direction.

As a result, this beam of narrow-frequency phonons can be manipulated using phononic crystals similar to those developed to control sound phonons. Because these crystals are now being used to control heat instead, Maldovan refers to them as "thermocrystals," a new category of materials.

These thermocrystals might have a wide range of applications, he suggests, including in improved thermoelectric devices, which convert differences of temperature into electricity. Such devices transmit electricity freely while strictly controlling the flow of heat -- tasks that the thermocrystals could accomplish very effectively, Maldovan says. so this paper will trigger more interest and study in that direction."

*Continued on Next Page...*
Most conventional materials allow heat to travel in all directions, like ripples expanding outward from a pebble dropped in a pond; thermocrystals could instead produce the equivalent of those ripples only moving out in a single direction, Maldovan says. The crystals could also be used to create thermal diodes: materials in which heat can pass in one direction, but not in the reverse direction. Such a one-way heat flow could be useful in energy-efficient buildings in hot and cold climates.

Other variations of the material could be used to focus heat -- much like focusing light with a lens -- to concentrate it in a small area. Another intriguing possibility is thermal cloaking, Maldovan says: materials that prevent detection of heat, just as recently developed metamaterials can create "invisibility cloaks" to shield objects from detection by visible light or microwaves.

Rama Venkatasubramanian, senior research director at the Center for Solid State Energetics at RTI International in North Carolina, says this is "an interesting approach to control the various frequencies of the phonon spectra that conduct heat in a solid-state material."

The modeling used to develop this new system "needs to be further developed," Venkatasubramanian adds. "The theory of what wavelengths of phonons, and at what temperatures, contribute to how much heat transport is a complex problem even in simpler materials, let alone nanostructured materials, and these will have to be factored in -- so this paper will trigger more interest and study in that direction."

Story Source:
The above story is reprinted from materials provided by Massachusetts Institute of Technology. The original article was written by David L. Chandler.

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2012 Product Guide

The updated edition of the Product Guide directory has been posted on the ASHRAE Boston website at www.ashraeboston.org.

The Product Guide includes a cross referenced list of local engineers, representatives, wholesalers, contractors and affiliated organizations engaged in the HVAC field.

Please look out for the email from our committee next year for more information on electronic 2013 Roster & Product. Any questions, please contact Stacie Suh at stacie@stebbinsduffy.com and Teri Shannon at tshannon@dac-hvac.com.
Employment Ads

WE’RE HIRING!
Engineers, Designers, and CAD Techs
Boston, MA office

RDK Engineers (RDK) is a specialized mechanical and electrical engineering design firm that has been in continuous operation for well over a century.

We pride ourselves on the quality of our design, our commitment to sustainability, and our unwavering focus on client satisfaction.

Our busy Boston, MA office (Seaport Center) is seeking experienced Engineers, Designers, and CAD Techs to join our team.

The Boston office is engaged in a number of exciting projects in the academic, commercial, hospitality, mission-critical, retail, residential, and science & technology market sectors.

Visit our website to learn more about the open positions and the projects that we are working on. If you are looking for a growth opportunity and a great place to work, then RDK Engineers may be for you! For more information, visit and/or apply via our website at: www.rdkengineers.com.

EOE M/F/D/V
No agencies please

RDK understands how engineering affects people.

ASHRAE Boston Chapter – Employment Ads

The NorthEastAire is published monthly, September through June. It is posted on the Chapter website at www.ashraeboston.org. A link is sent each month to all members of the Chapter, currently over 900.

Newsletter Rate:
$200 for 1/4 page, $400 for 1/2 page, $800 for full page

Website Rate: $300 per calendar month

Format: Word format, company logos in .jpg or .gif

Deadline for March Newsletter:
February 8, 2012

Any questions, please contact Stephanie Lafontaine, Newsletter Editor at 857-221-5941 or northeastaire@gmail.com
WEBMASTER’S NOTES
By: Steve Rosen

The ASHRAE Boston website www.ASHRAEBoston.org will be redesigned as we start our second century!

After our 100th Anniversary Gala Celebration (photos on the website!) this past August, our website designer Donna Harrington of Avant-garde Graphics, Inc. will be revamping our website!

We will be keeping the site current with information. Check back often!

On the Employment page (under the Chapter Updates section), not only will you see job opportunities, but we are now accepting resumes to post for free from any ASHRAE member in good standing looking for work!

Let employers find you on the ASHRAE Boston website! We will continue this year to post past meeting presentations for our members to review, and our Chapter is continuing our efforts to reduce waste by eliminating printed handouts at our meetings. As always you will also be able to link to following:

- Chapter officers and committee chairs contact information (who’s who)
- Chapter monthly meeting info (when, what, where)
- Region I website and view the Chapter history
- Sign up for the e-mailed newsletter
- ASHRAE membership information
- Current chapter newsletter, past newsletters
- Upcoming events and future meetings
- Other functional Chapter committee pages
- Membership, RP, SA, Programs, CTT
- Most recent and past BOG/Meeting minutes
- Online monthly meeting payment system

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ASHRAE BOSTON
UPCOMING EVENTS

Visit www.ashraeboston.org/index.html for more information.

February Meeting
When: February 12, 2013
Where: Embassy Suites, Waltham

March Meeting
When: March 6, 2013
Where: Embassy Suites, Waltham

April Meeting
When: April 9, 2013
Where: Embassy Suites, Waltham

Sustainable Performance Institute
UPCOMING EVENTS
Visit http://sustainable-performance.org/events for more information. All event location is at 38 Chauncy St, 7th FL. Boston, MA 02111.

AFE Chapter 74-Worcester Area-Central MA
UPCOMING EVENTS

USGBC MASSACHUSETTS CHAPTER
UPCOMING EVENTS
Visit www.usgcma.org for more information.

IFMA BOSTON CHAPTER
UPCOMING EVENTS
Visit http://www.ifmaboston.org/events.html for more information.

AEE NEW ENGLAND CHAPTER
UPCOMING EVENTS

IBPSA BOSTON CHAPTER
UPCOMING EVENTS
ASHRAE Seeks Input on Revisions to Data Centers in 90.1 Energy Standard Scope

ATLANTA – Addendum cs to ANSI/ASHRAE/IES Standard 90.1-2010, Energy Standard for Buildings Except Low-Rise Residential Buildings, is open for advisory public review from Jan. 4-Feb. 3, 2013. The addendum proposes changes to definitions for computer rooms and data centers in Standard 90.1 to create a distinction between facilities covered by 90.1 and those which are intended to be under the scope of ASHRAE Standard 90.4P, Energy Standard for Data Centers and Telecommunications Buildings, proposed by ASHRAE in late 2012.

The definition proposed for computer rooms more closely aligns with ASHRAE Standard 100, Energy Efficiency in Existing Buildings, and the U.S. Energy Information Administration’s Commercial Building Energy Consumption Survey (CBECS). In addition, the definition is consistent with Uptime Institutes’ “Tier Standard: Topology” and the Telecommunications Industry Association ANSI/TIA-942 class rating for low-risk Tier I data centers. High risk data centers such as those designed as Tier II or greater per ANSI/TIA942 or ones with mechanical cooling system redundancy are expected to be covered by the 90.4P standard now under development.

Steve Skalko, chair of the Standard 90.1 committee, said with the development of Standard 90.4P feedback is needed from the industry to clarify the scope and definitions of each standard. Energy conservation requirements for high risk data centers, initially covered by Standard 90.1-2010, are expected to be detailed in the 90.4P standard. Computer rooms, which can include low-risk data centers, would remain under the scope of Standard 90.1.

“The costs and approaches used in determining appropriate HVAC applications used to achieve energy efficiency are different,” he said.

Computer rooms, which by the proposed definitions include low-risk data centers, are usually associated with electronic equipment spaces that are not considered risks and therefore money is typically not spent to install levels of component and systems redundancies. Computer rooms may be ancillary functions and add loads in a larger building and often are served from the same central cooling plants.

Computer rooms are designed to provide local data processing and information storage for in-house end users and clients, which the owner has deemed very low risk. Risk choices are made to reduce total life cycle costs associated with not only system selection and operation, but potential failures, business interruptions, continuity plans and overall company specific business model features like staffing requirements, according to Skalko.

By comparison, data centers designed as Tier II or greater per ANSI/TIA942 or ones with mechanical cooling system redundancy carry more risk, he said. Industry studies indicate downtime associated with such risk can cost tens of thousands of dollars a minute, with the potential to negate both past energy savings and future business viability in a single act. The demand for data centers has grown, as the electronic equipment needs have evolved with the huge demand for data processing services and storage in the age of digital devices.

A data center has the function to support the electronic equipment that commonly provides services to outside or external clients, hence the heightened awareness of risk and risk mitigation approaches employed. Data centers can support everything from an individual enterprise all the way to hosting services on the internet and must provide maximum operational run time on a 24-7 basis. These facilities are built with multiple levels of component redundancy, providing at least an N+1 mechanical cooling capacity redundancy, if not greater, as well as operational resiliency (increased staffing hours and expertise), Skalko said.

To comment or to learn more, visit www.ashrae.org/publicreviews.

ASHRAE, founded in 1894, is a building technology society with more than 50,000 members worldwide. The Society and its members focus on building systems, energy efficiency, indoor air quality, refrigeration and sustainability within the industry. Through research, standards writing, publishing and continuing education, ASHRAE shapes tomorrow’s built environment today.
<table>
<thead>
<tr>
<th>Date</th>
<th>Main Program</th>
<th>Speaker</th>
<th>PDH Credits</th>
<th>Meeting Manager</th>
<th>Location</th>
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<tr>
<td>September</td>
<td>LEED Platinum Building Tour</td>
<td>TBD</td>
<td>N/A</td>
<td>Stephen Nicholas</td>
<td>Weston Corporate Center</td>
</tr>
<tr>
<td>Tuesday,</td>
<td></td>
<td></td>
<td></td>
<td><a href="mailto:snicholas@airinds.com">snicholas@airinds.com</a></td>
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<tr>
<td>September 18</td>
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<tr>
<td>October</td>
<td>Refrigeration - The Now and Future and Engineering Challenges &amp; Sustainable Solutions in Supermarkets</td>
<td>Steve Friedman &amp; Mark Cambria</td>
<td>2.0</td>
<td>Stacie Suh</td>
<td>Embassy Suites, Waltham</td>
</tr>
<tr>
<td>Tuesday,</td>
<td></td>
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<td></td>
<td><a href="mailto:Stacie@stebbinsduffy.com">Stacie@stebbinsduffy.com</a></td>
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<tr>
<td>October 9,</td>
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<tr>
<td>November</td>
<td>SMACNA Facility Tour</td>
<td>John Hamilton</td>
<td>N/A</td>
<td>Bob Persechini</td>
<td>SMACNA Boston, Dorchester</td>
</tr>
<tr>
<td>Tuesday,</td>
<td></td>
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<td><a href="mailto:rpersechini@rdkengineers.com">rpersechini@rdkengineers.com</a></td>
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<tr>
<td>November 13,</td>
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<tr>
<td>December</td>
<td>Soldering &amp; Brazing of Copper Piping Systems</td>
<td>TBD</td>
<td>TBD</td>
<td>Dan Diorio</td>
<td>Lantana’s, Randolph</td>
</tr>
<tr>
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<td></td>
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<td><a href="mailto:daniel.diorio.2@bc.edu">daniel.diorio.2@bc.edu</a></td>
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<tr>
<td>December 11,</td>
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<tr>
<td>January</td>
<td>High Efficiency Run around Energy Recovery Systems</td>
<td>Rudolf Zengerle</td>
<td>1.5</td>
<td>Teri Shannon</td>
<td>Embassy Suites, Waltham</td>
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<tr>
<td>Tuesday,</td>
<td></td>
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<td><a href="mailto:tshannon@dac-hvac.com">tshannon@dac-hvac.com</a></td>
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<td>January 8,</td>
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<td>February</td>
<td>Energy Efficient Design with Electronically Controlled Pumps</td>
<td>Bill Reid</td>
<td>TBD</td>
<td>Stephen Nicholas</td>
<td>Embassy Suites, Waltham</td>
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<td></td>
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<td><a href="mailto:snicholas@airinds.com">snicholas@airinds.com</a></td>
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<tr>
<td>March</td>
<td>Organic Rankine Cycle</td>
<td>TBD</td>
<td>N/A</td>
<td>Jim Armstrong</td>
<td>Embassy Suites, Waltham</td>
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<tr>
<td>Wednesday,</td>
<td></td>
<td></td>
<td></td>
<td><a href="mailto:armstrong@siemens.com">armstrong@siemens.com</a></td>
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<tr>
<td>March 6, 2013</td>
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<td>April</td>
<td>Upcoming Challenges to LEED Energy Credits</td>
<td>Chris Shaftner</td>
<td>TBD</td>
<td>Bob Persechini</td>
<td>Embassy Suites, Waltham</td>
</tr>
<tr>
<td>Tuesday,</td>
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<td></td>
<td></td>
<td><a href="mailto:rpersechini@rdkengineers.com">rpersechini@rdkengineers.com</a></td>
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<td>April 9, 2013</td>
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<tr>
<td>May</td>
<td>Installation of Officers</td>
<td>TBD</td>
<td>N/A</td>
<td>Teri Shannon</td>
<td>TBD</td>
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<tr>
<td>Tuesday,</td>
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<td><a href="mailto:tshannon@dac-hvac.com">tshannon@dac-hvac.com</a></td>
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<td>May 14, 2013</td>
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<tr>
<td>June</td>
<td>Golf Outing</td>
<td>N/A</td>
<td>N/A</td>
<td>Bill Garvey</td>
<td>Halifax Country Club, Halifax, MA</td>
</tr>
<tr>
<td>Monday,</td>
<td></td>
<td></td>
<td></td>
<td><a href="mailto:wgarv@aol.com">wgarv@aol.com</a></td>
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<tr>
<td>June 3, 2013</td>
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</tbody>
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<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
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**2011 - 2014**

<table>
<thead>
<tr>
<th>Name</th>
<th>Company</th>
<th>Phone</th>
<th>Email</th>
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</thead>
<tbody>
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**2010 - 2013**

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<th>Name</th>
<th>Company</th>
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<th>Email</th>
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</thead>
<tbody>
<tr>
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