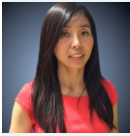


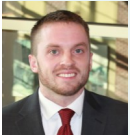
**2015-2016 Officers**



*Stacie Suh*  
President



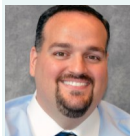
*William Tang*  
President-Elect



*Mike Gilroy*  
Vice President



*Dan Carington*  
Secretary



*Bill Garvey*  
Treasurer

**Table of Contents**

Monthly Meeting	1
President's Message	2
Editor's Note	2
January Meeting Info	3
December Meeting Recap	4
PAOE Points	5
Historical News	6-7
Globalcon 2016	8-9
YEA	10
Webmaster's Notes	10
Upcoming Events	11
Region 1 Dinner Info	12
Grassroots Government Advocacy	13-14
Save the Date!	15
CTTC	16
BOG Meeting Minutes	17
Membership Promotion	18
Student Activities	18
Research Promotion	19
Product Show 2016	20-21
Society News	22
ASHRAE Learning Institute	23
Meeting Schedule	24
Officer & Committee List	25
ASHRAE Research	
Contributor Listing	26

**January Meeting**

Thursday, January 14, 2016

**Main Meeting:**

**Electrically Commutated  
Permanent Magnet Motors  
(ECPM) Technology**

**Tech Session:**

Special Gas Venting Systems

*Past President's & History Night*

[Refer to Page 3 for more information](#)

**Meeting Manager:**

Mark Leonard  
MCL@brplusa.com

**Where:**

Embassy Suites  
550 Winter Street  
Waltham, MA

**Meal:**

N.E. Clam Chowder  
Petit Filet Mignon & Grilled Shrimp  
Cheesecake w/ Fresh Fruit Compote

**Time:**

5:15 - 6:00	Technical Session
5:30 - 6:15	Social/Registration
6:15 - 7:00	Dinner
7:00 - 8:00	Announcements & Main Program

**Cost:**

ASHRAE Boston Members:	\$50
Non -Members / Walk-Ins:	\$60
ASHRAE Student Members with RSVP:	Free

**Special thanks to our Sponsors:**

*Gold:*

RDK Engineers

*Silver:*

- |                                |                                |
|--------------------------------|--------------------------------|
| • Daikin                       | • R. T. Forbes Company         |
| • Filter Sales & Service, Inc. | • Stebbins-Duffy, Inc.         |
| • RG Vanderweil Engineers      | • Victaulic                    |
| • RST Thermal                  | • Equipment Direct Sales, Inc. |



Please register online at [www.ashraeboston.org](http://www.ashraeboston.org). RSVP by 12:00 PM on

**Friday, January 8, 2016**

If you have any questions, you may contact Erin Popa, Attendance Chair, at [ashraebostonattendance@outlook.com](mailto:ashraebostonattendance@outlook.com).

**Thank You**



## PRESIDENT'S MESSAGE

By: Stacie Suh

Hope everyone had a wonderful Christmas and happy New Year!

We are pleased to announce that our new website is up and running. Please check out <https://ashraeboston30.wildapricot.org/>.

We will host our first social event on February 4<sup>th</sup> at Stoddards (Boston). Please join us at this event. It will give members a chance to meet officers, Board of governors and committee chairs. Please contact Deanna for more information. [DAdkison@akfgroup.com](mailto:DAdkison@akfgroup.com)

ASHRAE Boston Chapter had its December meeting at Embassy Suites in Waltham. We are very pleased let you know that our joint meeting with ASPE was a success. We had over 80 people who consist of members, non-members and ASPE members who attended the meeting.

We need your support to get your feedback concerning the main meeting and technical session. Mike Gilroy, CTTC chair, sends out surveys via Survey Monkey to all attendees right after the meetings. **We appreciate your feedback!**

Please refer to meeting recap section written by Andrew Krenning for details on December meeting.

I would like to first thank Tom Watson (Past Society President) for a great presentation on Legionellosis Risk Management Building Water Systems. The presentation was entertaining as Tom engaged members throughout the presentation. Secondly, I would like to thank technical session speaker Ed Block (MIT) for a great presentation on Remarkable Long Term Performance of an Open Water Cooling System-Evolution and Continuous Improvement.

I would like to also thank all attendees at the December meeting. Special thanks to ASPE group and Larry Johnston (ASPE President) for making the joint meeting a success. :)

Next month's meeting will be held on January 14 (Thursday) at Embassy Suites in Waltham, MA. Please note that we are having a meeting on Thursday instead of a typical Tuesday meeting. Please join us in welcoming main meeting speaker Steve Bistak (NovaTorque). The meeting is on *Permanent*

*Magnetic Motors for Higher Efficiency.*

Hope to see you all at the January meeting! I encourage all members to bring along non-members to this event. We need your support to keep Boston Chapter growing and to share the good news with our local community.

ASHRAE Boston chapter has made corporate sponsorship opportunities available. Please contact Will Tang at [wtang@brplusa.com](mailto:wtang@brplusa.com) for more information. We look forward to your sponsorship, which will support Boston chapter greatly. A huge "Thank you" goes out to Daikin, RDK Engineers, RenewAire, RG Vanderweil, Stebbins Duffy, Filter Sales & Service, Inc, R.T.Forbes Company and Victaulic, who are already part of the sponsorship program and supporting Boston Chapter.

ASHRAE Boston Chapter will be hosting a Product show in April 2016. Please sign up with Jeff Schultz. For more information, go to [www.ashraeboston.org](http://www.ashraeboston.org).

I look forward to meeting all of you throughout the year. I would love to hear from you with any thoughts you might have concerning ASHRAE Boston Chapter. You can email me at [stacie@stebbinsduffy.com](mailto:stacie@stebbinsduffy.com)

Thank you



Stacie Suh

ASHRAE Chapter President



Materials for the February newsletter are due by **January 15, 2016**.

Please submit employment/want ads in .pdf, .doc or .jpg format. A company logo may also be included. Feel free to send any ideas you would like to share or include in next month's issue.

For additional information, refer to our website at [www.ashraeboston.org](http://www.ashraeboston.org).

## EDITOR'S NOTE

By: Deanna Adkison

For more information, please e-mail [northeastaire@gmail.com](mailto:northeastaire@gmail.com)

**Tech Session:** Special Gas Venting Systems

**Description of Presentation:**

- |                                      |                                       |
|--------------------------------------|---------------------------------------|
| Venting Categories                   | Draft Calculations                    |
| Governing Codes                      | Boiler Operation Considerations       |
| Appliance Manufacturers Requirements | Common Venting of Multiple Appliances |
| Category IV Venting Materials        | Draft Induction                       |
| System Design                        | Overdraft and use of Dampers          |
| Basic Engineering                    | Designer Responsibilities             |
| Natural Draft / System Losses        |                                       |

Approved for 1.0 PDH

**Speaker Bio:** *Warren E Creamer III (Skip) / Atlantic Air Products*

Skip Creamer is a veteran of the HVAC industry in New England. He has 25 years of experience in leadership / ownership positions with manufacturers' representative firms. For the last 14 years Mr. Creamer has served as President of Atlantic Air Products Mfg., LLC. Atlantic Air Products is a leading duct system manufacturer and distributor of airside HVAC products and systems, including Schebler Chimney Systems. Mr. Creamer is active in the Boston and New Hampshire chapters of ASHRAE as well as the Boston Chapter of SMACNA. He is frequently called upon to make technical presentations on duct system design, boiler ventilation design and generator exhaust system design. Mr. Creamer received his BS in Mechanical Engineering from SUNY Buffalo in 1988 and his MBA from Boston College in 1997.

**MAIN MEETING:**

**Title of presentation:** Electrically Commutated Permanent Magnet Motors (ECPM) Technology

**Description of presentation:**

The presentation will discuss where electric motor efficiency standards have started, and moved to in the US, with Comparison to European standards.

We will discuss what technologies are leading to higher efficiencies

We will discuss how those technologies compare in performance to existing technology for AC Induction motors.

This presentation has been approved for 1.0 PDH.

**Speaker Bio:**

*Steve Bistak / NovaTorque*



Bachelor of Engineering – Stevens Institute of Technology

Over 40 years of experience in Sales, Marketing, & Application of Variable Speed Motors and Drives

Reliance Electric Company

Rockwell Automation

Continental Electric Motors

WEG Electric Inc.

NovaTorque

## December Meeting Recap

By: Andrew Krenning



The ASHRAE Boston Chapter December meeting was held at the Embassy Suites in Waltham. The Chapter meeting was preceded by a cocktail hour where chapter members and guests were able to network.



The chapter meeting was kicked off by ASHRAE Boston President Stacie Suh who welcomed everyone to the final Chapter Meeting of 2015. She also welcomed everyone attending from the ASPE Boston Chapter as part of our joint meeting series.

ASHRAE Boston Chapter Honors and Awards Chair, Darcy Carbone, was introduced to present the 2015 Boston Chapter Hall of Fame honor and plaque to Bill Garvey. She thanked Bill for everything he has done and continues to do for the chapter and recognized him for going above and beyond within the engineering community and ASHRAE. Congratulations Bill.



The main meeting topic Legionellosis- Risk for Building Water Systems Management was presented by Thomas Watson. Mr. Watson is currently the Director of Daikin Learning Institute and is a former ASHRAE Society President. For the past two years he has been the chair of the ANSI/ ASHRAE Standard 188-2015 project committee that developed the first American National Standard that deals with the management for building water systems to reduce the risk of Legionellosis. Mr. Watson started by providing background information including a CDC statistic that estimates there are anywhere from eight thousand to eighteen thousand cases in the USA yearly. He provided definitions to make certain everyone understood the basics of the topic, which included Legionella as the name for the genus aquatic bacteria and Legionellosis is any illness caused by the exposure to Legionella. Mr. Watson talked about the history of the

standard and the purpose of the document, which is to establish minimum risk management requirements for building water systems. The scope of the document was for the design, construction, commissioning, operation, maintenance, repair, replacement, and expansion of new and existing human occupied buildings and their associated water systems. The new ASHRAE 188-2015 is currently a voluntary standard, but has been accepted in New York City. As of August 2015, NYC Council adopted legislation that required adherence to the ANSI/ ASHRAE Standard 188-2015. Specifically, it requires owners to create and file a plan to maintain equipment to comply with section 5, 6 and 7.2. Mr. Watson made it clear that although cooling tower and other mechanical systems get a lot of attention related to this topic, plumbing systems are just as susceptible. Biofilm where the bacterial can grow can be throughout any water distribution system. He also spent time explaining that those with weakened immune systems are most 'At-Risk'. This is why the standard has a specific ANNEX A which is dedicated to Health Care Facilities. Mr. Watson wrapped up the presentation by summarizing the standard which will require facility owners to establish a team and create, practice and audit a water management plan for Legionellosis risk management of their building water systems.



Look forward to seeing everyone at the first 2016 meeting in January, which will be held at the Embassy Suites in Waltham. Don't forget to follow us on twitter @ASHRAEboston and on LinkedIn for all the latest news.



**FREE SUNDAY RIVER & SUGARLOAF DISCOUNT SKI VOUCHERS, SAVE \$19 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 [\$70 Adults, \$58 Teen, \$48 Junior/Senior] at either ski resort by presenting an ASHRAE membership card, picture ID, and voucher. The regular prices are \$89/\$69/\$59. Contact Ed Waldman, [ewaldman1@verizon.net](mailto:ewaldman1@verizon.net), if you would like any vouchers. The voucher is a PDF that can be e-mailed to you, but the resorts have become stricter about showing your ASHRAE card when you purchase the tickets. 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.

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.

**Presidential Award of Excellence**

**Boston Chapter - 2015-2016**

Chapter Members	Membership Promotion Points	Student Activities Points	Research Promotion Points	History Points	Chapter Organization Points	Chapter Technology Transfer Points	Grassroots Government Affairs Points	Chapter PAOE Point Totals
1040	435	510	420	50	865	950	0	3230

**Employment Ads**

**ASHRAE Boston Chapter – Employment Ads**

The NorthEastAire is published monthly, September through June. It is posted on the Chapter website at [www.ashraeboston.org](http://www.ashraeboston.org). A link is sent each month to all members of the Chapter, currently over 1000.

**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 February Newsletter:** January 15, 2016

Any questions, please contact Deanna Adkison, Newsletter Editor at 617-535-8236 or [northeastaire@gmail.com](mailto:northeastaire@gmail.com)



## HISTORICAL NEWS

*By: Eric Edman*



Hello to all,

The Boston Chapter is fortunate to have several ASHRAE fellows within its ranks. We took the time to have an interview with one of our fellows and share a readers digest version of this interview with all of you. We hope that you enjoy this twist from the normal old newsletter.

As always, we welcome input from all of you and very much look forward to seeing you at future meetings.

-The Historical Committee

### **Interview with Joe Lstiburek, P.E, Ph. D.**

**1. What attracted you to the HVAC field?**

I grew up in construction. My father was an engineer and a contractor. I am actually in the building science field and it is related to HVAC, but also many other trades. I became interested in building envelope performance at an early age.

**2. When did you join ASHRAE?**

I joined ASHRAE in the mid 1980's.

**3. What prompted you to join ASHRAE?**

All of my mentors were members of ASHRAE. ASHRAE was the only professional association dealing with building science or building physics. It was natural to join.

**4. What was your first job in the HVAC Industry?**

I started as a contractor building custom homes.

**5. Could you reflect on any issues at the time?**

We were all arguing about what a vapor barrier was and where should it go. After 35 years, the arguments continue. We just know more about it today.

**6. Do you have any advice for a young person thinking about a career in HVAC?**

Building construction will never become obsolete. Your job will never be outsourced abroad. Infrastructure is always local. You will never be out of a job. Ask old people for advice. This has worked for me.

**7. What has ASHRAE meant to you?**

It was a place to learn. It was a place to network.

**8. How has it helped you grow?**

ASHRAE was a place where role models abounded.

**9. Has anybody stood out to you as a person of significance to HVAC?**

Don Gatley, ASHRAE Fellow and the best HVAC engineer on the planet.

**10. What are your special interests?**

Skiing, Skiing, and skiing. Did I mention skiing?

**11. Would you ever consider committee work?**

I have been on ASHRAE committees since I joined. Currently I serve on 62.2.

[Continued on Next Page...](#)

[...Continued from Previous Page](#)

**12. Have you ever served within ASHRAE as an officer?**

No, I have not served at the local chapter level.

**13. Could you think of any major events in HVAC affecting you?**

Not really

**14. Could you think of how ASHRAE could improve?**

More engineers, fewer salesmen and manufacturers, and organizational members. It seems to be becoming dominated by special interests.

**15. What do you feel has been the best single thing about the HVAC field?**

Air conditioning.

**16. What would you change in HVAC if you could?**

Lower ventilation rates. They are currently based on politics and special interests rather than health, science, and engineering.

**17. Could you think of the top three HVAC inventions?**

Air conditioning, Dehumidification, and ERV's.

**18. Do you have any outside interests?**

Did I mention skiing? It's my passion.

**19. What changes has ASHRAE made that you support?**

I really like the process of updating the Handbooks.

**20. Please provide a short bio of your life (see below).**



JOSEPH LSTIBUREK, B.A.Sc., M.Eng., Ph.D., P.Eng., is a principal of Building Science Corporation and an Adjunct Professor of Building Science at the University of Toronto. He is a building scientist who investigates building failures and is internationally recognized as an authority on moisture related building problems and indoor air quality. He is an ASHRAE Fellow.

Dr. Lstiburek is a noted authority on energy efficient construction techniques and heads one of the four the Building America program teams for the U.S. Department of Energy. He is the developer of ADA (the Air Drywall Approach to air barriers). He is a former Director of Research of the Housing and Urban Development Association of Canada.

Dr. Lstiburek has written numerous books and technical papers on building construction and has conducted forensic investigations and served as an expert witness on building failures all over the U.S. He is an expert in the areas of rain penetration, air barriers, vapor barriers, air quality, durability and construction technology.

Dr. Lstiburek received an undergraduate degree in Mechanical Engineering from the University of Toronto, a master's degree in Civil Engineering from the University of Toronto and a doctorate in Building Science at the University of Toronto. Dr. Lstiburek has been a licensed Professional Engineer since 1982.



# GLOBALCON™

Energy, Power, & Facility Management Strategies & Technologies

## 2016

**March 9-10, 2016**  
**Boston, MA**  
Hynes Convention Center

EXPO  
CONFERENCE  
SEMINARS  
CERTIFICATIONS  
SPONSORSHIPS  
*... are available*

— Show Host —

**nationalgrid**

HERE WITH YOU. HERE FOR YOU.

— Presented by —

**AEE**  
Association of Energy Engineers

— Supported by —

**AEE NE**  
Association of Energy Engineers New England

For details, please visit

[www.globalconevent.com](http://www.globalconevent.com)

**ATTEND THE EXPO... EXPLORE NEW TECHNOLOGIES... SLASH YOUR COSTS... IMPROVE YOUR OPERATIONS!**

**Wednesday**  
March 9th, 2016  
10am-4pm  
**Thursday**  
March 10th, 2016  
10am-2pm  
**HYNES**  
**CONVENTION CENTER**  
Auditorium & Hall C  
Boston, MA

**FREE EXPO ADMISSION TICKET**



— Presented by —



— Featuring —



— Hosted by —



HERE WITH YOU. HERE FOR YOU.

**27<sup>TH</sup> GLOBALCON 2016** Conference • Seminars • Workshops • Expo [www.globalconevent.com](http://www.globalconevent.com)

Discover new products,  
techniques, solutions,  
and services...  
Network with industry  
professionals...

VIP GUEST OF:

**ASHRAE - BOSTON CHAPTER**

**COPIES CAN BE MADE  
IF NEEDED.**

**EXPO ONLY**

To register online, print out additional expo tickets, or for more show information, including workshops, visit: [www.globalconevent.com](http://www.globalconevent.com)

**FOR  
EXPO AND  
EXHIBIT HALL  
WORKSHOPS**

**COMPLIMENTARY RAPID EXPO REGISTRATION TICKET**

Fax completed ticket to: (770) 447-4354 or mail to: **GLOBALCON 2016 Registrar, AEE, 3168 Mercer University Drive, Atlanta, GA 30341** or email to: [Connie@aeecenter.org](mailto:Connie@aeecenter.org)

**OPTION 1: Online.** To register online and print out additional expo tickets, visit the GLOBALCON show website at [www.globalconevent.com/FreeExpoPass](http://www.globalconevent.com/FreeExpoPass)

**OPTION 2: Preregister by Fax, Mail, or Email.** Your completed preregistration card must be received no later than February 26, 2016. After this date, register onsite at Hynes Convention Center. Your show badge will be mailed to you at the address you provide below.

Fax completed ticket to: (770) 447-4354 or mail to: **GLOBALCON 2016 Registrar, AEE, 3168 Mercer University Drive, Atlanta, GA 30341** or email to: [Connie@aeecenter.org](mailto:Connie@aeecenter.org)

**OPTION 3: Onsite.** After **February 26, 2016**, complete this card and bring it with you to the onsite Expo "Visitor" registration desk located at Hynes Convention Center. Your show badge will be prepared for you for free show admission (\$95 value).

NAME \_\_\_\_\_  
LAST FIRST MI  
TITLE \_\_\_\_\_  
FIRM \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
CITY \_\_\_\_\_  
STATE \_\_\_\_\_ ZIP \_\_\_\_\_  
PHONE \_\_\_\_\_ FAX \_\_\_\_\_  
EMAIL \_\_\_\_\_

No one under 16 years of age admitted.

**PLEASE COMPLETE AS PART OF REGISTRATION**

**1. Type of Firm/Business (check only one):**

- Commercial  Government  Utility/Energy Producer
- Industrial  Consulting Engineer  Manufacturer/Vendor
- Institutional  Construction/Architect  Press/Trade Media

**2. Occupation/Title (check only one):**

- Manager  Plant Engineer/Facility Manager  Educator/Researcher
- Owner/Developer  Energy Engineer/ Energy Manager  Architect
- Consultant  Vice President, President, CEO  Sales/Marketing

**OPTIONAL:**

- Please send me information on exhibiting in next year's show.

Our product/service is: \_\_\_\_\_

Consider upgrading to attend the conference, seminar, or other show functions. See Website.

For more information on this event visit: [www.globalconevent.com](http://www.globalconevent.com)

For hotel information visit: [www.globalconevent.com/hotels](http://www.globalconevent.com/hotels)

For more information on AEE and its programs, visit: [www.aeecenter.org](http://www.aeecenter.org)



Our Boston YEA event in January will be networking at “Good Life” at 5:30pm on Thursday January 7th located at 28 Kingston Street in Boston. All are welcome!

Part of being an ASHRAE YEA member is meeting other young professionals in the industry. Come regroup after the holidays and reconnect with old friends or connect with new people to discuss career paths and professional goals. Learn about how you can do more with ASHRAE and discuss your goals. Most importantly have fun!

You can RSVP and check out details here: <http://evite.me/ztxh35ctW6>

Remember to stay connected and “like” us on Facebook!

<https://www.facebook.com/bostonashraeyea>

If you will be at the Winter meeting in Orlando there’s a YEA Hospitality event at 4pm on Saturday.

Happy Holidays!

Christine



### **Webmaster’s Notes**

*By: Steve Rosen*

Your Boston Chapter Webmaster welcomes your suggestions as we begin to redesign the ASHRAE Boston homepage!

We will be transitioning towards a new provider that will allow us to have one source management of our over 1,000 members in the Boston ASHRAE Chapter!

- add and/or import contacts to our membership database
- create and modify membership levels, fees and renewal policies
- manage events using the events module
- compose and send out email blasts to different member groups
- manage our finances
- Kevin Doty is working with Wild Apricot and the new website will hopefully be live in February 2016 after we complete our testing!

# 2016 ASHRAE Winter Conference



Jan. 23–27 | Orlando Hilton | Orlando, Fla.

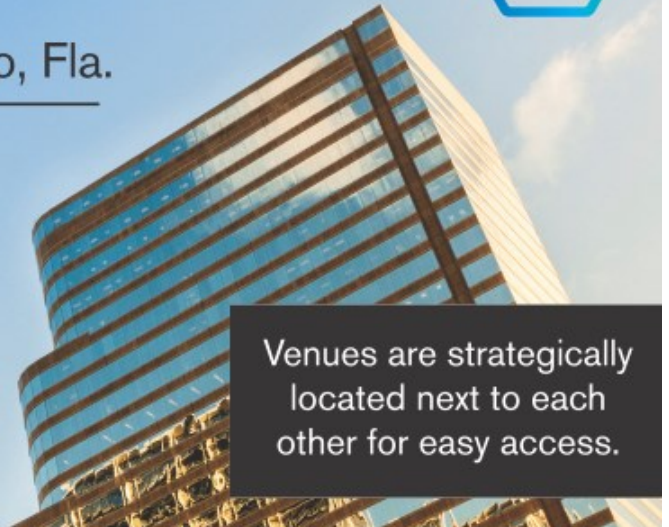
*New Technical Program Tracks, Networking,  
World's Largest HVAC&R Marketplace*

Special first time attendee registration fee available! Low, early-bird registration rates end Nov. 2. Register early! Registration to the ASHRAE Winter Conference includes free access to the AHR Expo!



**2016 AHR Expo**  
Jan. 25–27 | Orange Co.  
Conv. Center | Orlando, Fla.

Venues are strategically located next to each other for easy access.



## ASHRAE BOSTON UPCOMING EVENTS

Visit [www.ashraeboston.org/upcoming-events/announcements.html](http://www.ashraeboston.org/upcoming-events/announcements.html) for more information.

### January Meeting

When: January 14, 2016  
Where: Embassy Suites, Waltham

### February Meeting

When: February 9, 2016  
Where: Metro Meeting Centers, Boston

### March Meeting

When: March 8, 2016  
Where: Metro Meeting Centers, Boston

### April Meeting

When: April 12, 2016  
Where: The Lantana

## BOSTON AREA UPCOMING EVENTS

**I2SL New England- Jan 12, 2016- Joint Event with I2SL New England / USGBC New Years Social**  
[www.newengland6.wix.com/i2slne](http://www.newengland6.wix.com/i2slne)

**NAIOP Boston- 1/29/16- Hotel Hot Streak**  
[www.naiopma.org](http://www.naiopma.org)

**AEE Boston- 1/6/16- 2016 Annual Energy Outlook Forum**  
[www.aeenewengland.org](http://www.aeenewengland.org)

**AFE Boston Chapter 33**  
[www.afechapter33.org](http://www.afechapter33.org)

**IFMA Boston Chapter**  
[www.ifmaboston.org](http://www.ifmaboston.org)

**BOMA Boston Chapter**  
<http://www.gbreb.com/boma/>

**Sustainable Performance Institute**  
<http://www.sustainable-performance.org/>

**AFE Chapter 74-Worcester Area-Central MA**  
<http://chapters.afe.org/chaptersnew/index.cfm?chapterIndex=2>

**USGBC Massachusetts Chapter**  
[www.usgbcma.org](http://www.usgbcma.org)

**AEE New England Chapter**  
[www.aeenewengland.org/](http://www.aeenewengland.org/)

**IBPSA Boston Chapter**  
<http://ibpsa-boston.com/>



**Region I Dinner**  
**Sun. Jan. 24, 2016**  
**7:00 pm**



**@42.00 per person**  
**Includes tax and gratuity**  
**CASH ONLY**  
**RSVP to**  
[darcy@stebbinsduffy.com](mailto:darcy@stebbinsduffy.com)

<http://www.bjsrestaurants.com/locations/fl/i-drive>

**Appetizers**

Spinach and Artichoke Dip Served warm with crisp corn tortilla chips

Chicken Tenders  
Served with honey mustard

**Entrees**

Barbeque Pulled Pork  
Tossed in Red Ale BBQ sauce

Cherry Chipotle Glazed Salmon Oven roasted Salmon topped with cherry chipotle glaze

**Sides**

Rice Pilaf Roasted  
Ceasar Sala



**Locations**

International Drive/Convention Center Area  
321-732-8190  
8103 International Dr. Orlando, FL 32819



ASHRAE Government Affairs Update, 12/18/2015

As of July 1 2015 GGAC changed from Grassroots Government Activities Committee to Grassroots Government Advocacy Committee.

## Federal Activities

### DOE Updates Baseline for Federal Commercial and Multi-Family High-Rise Omnibus Funding and Tax Bill to Be Signed Into Law

Congress is finishing work on H.R. 2029, which combines both the Consolidated Appropriations Act for Fiscal Year 2016 and the Protecting Americans from Tax Hikes (PATH) Act of 2015. President Barack Obama has signaled that he will sign the bill into law.

Often referred to as the “omnibus”, this bill combines the 12 annual appropriations bills into a single package, providing funding levels for federal programs until the end of the 2016 federal fiscal year next September. In a move to meet the needs of the moment, the bill also makes several changes to tax provisions. Below is a summary of the key provisions in the bill of greatest interest to ASHRAE and its members:

The reference standard to the 179D Commercial Building Tax Deduction was changed from ASHRAE Standard 90.1-2001 to Standard 90.1-2007, and extends the deduction until December 31, 2016.

Extends the 45L Credit for Energy Efficient New Homes to December 31, 2016.

[Continued on Next Page...](#)

Program/Subprogram	FY 2015 Enacted (in thousands)	Final Bill	Change
<b>Department of Energy</b>			
Energy Efficiency and Renewable Energy (overall)	1,937,000	2,073,000	+136,000
Building Technologies	172,000	200,500	+28,500
Weatherization Assistance Program	193,000	215,000	+22,000
State Energy Program	50,000	50,000	0
Federal Energy Management Program	27,000	27,000	0
Smart Grid R&D	15,439	35,000	+19,561
Energy Storage R&D	12,000	20,500	+8,500
Energy Information Administration	117,000	122,000	+5,000
Basic Energy Science Research	1,594,500	1,848,700	+254,200
ARPA-E	280,000	291,000	+11,000
<b>Housing and Urban Development</b>			
Community Development Grant Program	3,066,000	3,060,000	-6,000
HOME Investment Partnerships Program	900,000	950,000	+50,000
<b>Department of Commerce</b>			
National Institute of Standards and Technology	863,900	964,000	+100,100
<b>General Services Administration</b>			
Government-wide Policy (includes the Office of Federal High-Performance Green Buildings)	58,000	58,000	0
<b>Department of Education</b>			
Math and Science Partnerships Program	152,717	152,717	0
State Grants for Improving Teacher Quality	2,349,830	2,349,830	0
Teacher Quality Partnership	40,592	43,092	+2,500

[...Continued from Previous Page.](#)

## GGAC Regional and Chapter Activities

### State of New York Reissues Temporary Rules on Legionella

The New York State Register, released on December 2, 2015, has once again published the adoption of emergency rules for the treatment of Legionella. These regulations, which originally became effective in August, implemented requirements that protect the public from the threat posed by Legionella. To ensure that protection is maintained, the Commissioner of Health and the Public Health and Health Planning Council have determined it necessary to file these regulations on an emergency basis. Public Health Law and the State Administrative Procedure Act provide the authority to adopt emergency regulations when necessary for the preservation of the public health, safety or general welfare and that compliance with routine administrative procedures would be contrary to the public interest. The various State agencies intend to adopt this emergency rule as a permanent rule and will publish a notice of proposed rulemaking in the New York State Register at some future date. The emergency rule, which is effective immediately, will expire February 10, 2016.

As with the earlier emergency rule published several months ago, portions of ASHRAE Standard 188-2015 Legionellosis: Risk Management for Building Water Systems are referenced. To review the rule please click [here](#). The rule begins on page 28.

### Water-Based 'Band-Aid' Senses Temperature Changes to Deliver Medicine

MIT engineers have designed what is being called the "Band-Aid of the Future," an adhesive, elastic, gel-like material that incorporates temperature sensors, LED lights, and other electronics, as well as tiny, drug-delivering reservoirs and channels. The "smart wound dressing" releases medicine in response to changes in skin temperature. The key to the design is a hydrogel matrix designed by Xuanhe Zhao, an Associate Professor in MIT's Department of Mechanical Engineering. The hydrogel is a rubbery material, mostly composed of water, designed to bond strongly to surfaces such as gold, titanium, aluminum, silicon, glass, and ceramic. A paper on the technology is published in the journal *Advanced Materials*.

---

Your Boston GGAC committee welcomes your articles and event suggestions!

Please contact Christine Reinders, Stacie Suh or Steve Rosen.

[stacie@stebbinsduffy.com](mailto:stacie@stebbinsduffy.com)

[creinders@CANNONDESIGN.COM](mailto:creinders@CANNONDESIGN.COM)

[steven\\_rosen@AHA-engineers.com](mailto:steven_rosen@AHA-engineers.com)





**New England Association  
Of  
Fire Protection System Designers**

AMERICAN SOCIETY OF CERTIFIED ENGINEERING TECHNICIANS

**Save the Date!**  
**2016 NEAFPSD 25<sup>th</sup> Chapter Anniversary and  
Fire Protection Symposium**  
**March 9, 10 & 11, 2016**  
**Bartlett, New Hampshire**

**All Chapter Members, Engineers, Contractors, Industry Manufacturer Representatives and their Friends and Family are welcome to attend our Chapter's 25<sup>th</sup> Anniversary and Symposium Event.**

*We have signed the Contract, reserved blocks of rooms and coordinated special features for this long awaited, well attended event.*

**We have locked in Outstanding Speakers including our Opening Night Dinner Speaker, founding father, Maurice Pilette, with an overview of our Chapter's 25 year History.**

There will be a formal Table Top Product Show  
Technical Presentations with CEU Credits  
Industry Networking with Latest Industry Topics and Products  
Family Friendly Event with non-technical Activities to do around the Conference Center and nearby North Conway for Family and Friends  
Welcome Bag Giveaway's, Free Raffles and Symposium Gifts to all Registered Guests

Your Symposium Committee has attached the registration form for all attendees and separate affiliate sign-up sheets for the Product Show and Symposium Sponsorships

There is an early Registration Raffle incentive noted on the Attitash Form for all registrations received and confirmed in good standing to Attitash by 3 PM, January 8, 2016.



Early registration is very much appreciated  
For all questions and information contact:  
Paul Taylor - [ptaylor@trojb.com](mailto:ptaylor@trojb.com)



By: Mike Gilroy

## DOE Sets First-Ever Standards for Commercial and Industrial Pumps

By: Lauren Urbanek

Happy New Year, indeed! The U.S. Department of Energy (DOE) issued final energy efficiency standards for commercial and industrial clean-water pumps today, marking the start of a new era in energy savings for this equipment. The new rule will save more than \$1 billion and avoid 17 million metric tons of carbon pollution over the next 30 years, and is one of a number of rules finalized by DOE over the last week as it caps off an eventful 2015 for appliance and equipment standards.

(Look for a wrap-up blog early next week summarizing everything that happened related to efficiency standards as DOE moved forward with proposals and final rules to fulfill its mandate while you were enjoying a holiday break.)

For the pumps energy efficiency rule, DOE worked closely with a working group comprised of efficiency advocates, utilities, and industry representatives to develop this first-of-its-kind standard, which is expected to produce more than \$1 billion in energy bill savings from pumps sold over the next 30 years.

### Why are commercial and industrial pumps important?

Pumps and pumping systems are widespread in commercial and industrial applications. While this standard covers only clean-water pumps ranging from 1 to 200 horsepower, such as those found in heating and cooling systems or drinking water treatment plants, they consume 0.6 percent of all energy used annually in the United States. To put that into perspective, it's roughly equivalent to the annual energy use of the entire state of Wyoming! Despite this large energy use, DOE had not set standards for pump efficiency until now.

### Who will benefit?

DOE's analysis found that there was ample room for cost-effective energy efficiency upgrades to this product, which means that businesses and their customers will reap the benefits. Over the next 30 years, more efficient pumps will save about 33 billion kilowatt-hours of electricity -- enough to power more than 2.8 million U.S. households, while reducing carbon pollution by 17 million metric tons.

The work done to update efficiency requirements will greatly benefit end-users in the short run, too: the efficient pumps covered by this standard will pay for themselves in less than three years on average, which means that commercial and industrial customers will save on their energy bills for years to come.

### How do the new pump standards work?

The standards for the various sized pumps were set at levels jointly agreed to by industry, advocates, and other stakeholders

and will remove the worst-performing 25 percent from the market. DOE surveyed the market and determined the "cutoff" efficiency level for each type of pump, taking into account energy savings, consumer benefits, and manufacturer impacts. Pumps that do not meet the appropriate efficiency level must either be redesigned or removed from the market.

In order to meet the standards, manufacturers can either improve their pump models through hydraulic redesign, polishing, or other design improvements -- or choose to drop inefficient pumps from their product line. A manufacturer might make the decision to drop an inefficient pump if they have another more efficient model in their line that can meet the same pressure and flow requirements.

The standards use the Pump Energy Index (PEI) metric to provide a consistent way to easily understand pump efficiency. Pumps that just meet the standard are assigned a PEI of 1. A pump that is 10 percent better than the standard would have a PEI of 0.9, a pump that is 25 percent better than the standard would have a PEI of 0.75, and so on. This metric is applicable to pumps in whatever form they are sold, whether they are bare pumps or pumps that are sold with controls that reduce the power consumed by the pump when it is not operating at full speed.

For pumps sold with motors and controls, the PEI gives credit to motor and control systems (such as variable speed drives, or VSDs) that can reduce the power consumed by the pump when the pump is not operating at full speed. This will help reduce energy consumption even further: currently many pumps systems are controlled using throttling valves on pipes, rather than controlling the speed and flow of the pump. This is analogous to controlling the speed of your car with the brake alone, while keeping your foot fully on the gas. Variable speed drives have the potential to offer significant energy savings in many applications by reducing the pump's speed and therefore electricity use!

Pumps will be required to meet the new standards by the end of 2019, which gives manufacturers ample time to comply.

As part of the final agreement, the working group recommended additional rulemakings for circulator pumps, like pumps that move hot water through a building, and pool pumps. The pool pump efficiency standard negotiation process is currently underway.

Energy efficiency standards are a critical component of President Obama's climate action plan, which includes a goal of reducing carbon pollution by at least 3 billion metric tons by 2030 through efficiency rules for appliances and federal buildings. It's great that DOE has issued another effective, impactful efficiency standard that will "pump" savings throughout the economy for years to come.



*By: Dan Carington*

**E**very month prior to the main program, the Boston Chapter of ASHRAE's Board of Governors (BOG) meet to discuss Chapter business. This article, based on the secretary's meeting minutes, shall serve as an informative summary for members as to what is happening behind the scenes of the Boston Chapter. Please feel free to contact me with any questions or for additional information.

Meeting Date: December 08, 2015

### Review of November Meeting Minutes

Each Board of Governors meeting begins with a review and eventual vote to approve the previous month's meeting minutes. Any items that required follow-up are updated and closed or are determined to be carried forward once again.

The meeting minutes were approved for November 2015.

### 2015/2016 Schedule

Introduction was made with our guest speaker and Past National President Tom Watson.

Updated December meeting information, joint meeting with ASPE. Tech session and main presentation approved for 1 PDH credit. Continued discussion of our new Boston Chapter website was reviewed, refined, tested and is scheduled to be up by January 2016. Strategy changes agreed for 2016 Boston Chapter Golf Tournament. A new tour of Jack's Abby Brewery is being organized for April 21 2016, limited to 40 attendees.

### Additional Miscellaneous Items Discussed

The following topics were briefly discussed:

**Boston Chapter Hall of Fame** - Bill Garvey was officially inducted into the 2015 Boston Hall of Fame.

**2015/2016 Budget** - The budget for the 2015/2016 ASHRAE Boston Chapter was discussed in detailed by treasury to attendees. Discussion of setting up a Scholarship Foundation as a 501(c)(3) organization for the Chapter.

**Committee Chair Responsibilities** - Chapter President, Stacie Suh, suggested that all Committee Chairs update their Presidential Award of Excellence points accordingly.

**Membership Promotion Committee updates** - Member Promotion (MP) chair Dan Carington noted we are at 1046 members and our objective is to retain and recruit members due to members number dropped.

**Other New Business** - Dan Diorio last year as Student Committee Chair. Jeff Schultz suggests we need to get more engineers to Product Show, contact other organization, owners and facilities personals to get involved.



## MEMBERSHIP PROMOTION

*By: Dan Carington*

Happy New Year Members! Welcome to 2016! I hope everyone had a great holiday break. As so, it is a good opportunity for members to update their profiles on the ASHRAE Society website at [www.ashrae.org](http://www.ashrae.org). Members can verify their personal information such as preferred mailing address, e-mail contact info, etc. as well as pay yearly membership dues through the website. There are areas on the website for applying for membership grade advancement. If you have the equivalent of 12 Society-approved years of experience composed of an approved combination of:

- Completed education beyond high school;
- Work experience (including research, teaching, design, contracting, engineering sales, or engineering management); and
- Professional engineering or related registration or license issued by a legally authorized body.

And you are designated as an Associate Member; you may be eligible for advancement to full Member grade. To advance from Associate to Member, you must update your ASHRAE bio online, and notify [membership@ashrae.org](mailto:membership@ashrae.org) that you have an updated bio and wish to be considered for grade advancement. Please take a minute to make sure that your membership dues are up to date. Keep in mind ASHRAE Bylaws now require that members who are more than 6 months delinquent on their Society Dues will be cancelled. Please take a moment to make sure that your membership dues are up to date.

Members can now pay for up to three years of membership or associate membership in one transaction and receive a 10% discount on the second or third year of payment. Please note that multi-year payments must be made via telephone or online when you renew your membership.

If you have any questions about your ASHRAE membership, renewing your membership or you are looking to become more involved with the Boston Chapter please feel free to contact me at [dpc@brplusa.com](mailto:dpc@brplusa.com). If you are interested in helping out with the Membership Promotion Committee please let me know, we can always use additional help in every committee.



## STUDENT ACTIVITIES

*By: Dan Diorio*

We're now into the unofficial second half of the ASHRAE season. All of the students are starting their spring semester. The Student Activities Committee is planning an exciting season of activities! Be on the lookout for invitations.

Registration is now open for the 2016 Student Design Competition. This year's competition focuses on a new 2-story municipal government building in Beijing, China. The final HVAC System Selection and Design for the proposed building shall address the following major design goals; Low Life Cycle Cost, Low Environmental Impact, Comfort and Health, Creative High Performance Green Design, and Synergy with architecture. Submission instructions are also available on the website.

As I have been mentioning, this will be my last year as the Student Activities Committee Chair. I'm actively looking for my replacement and would like to start training them for the position as soon as possible. If you or someone you know would be interested in running this fun and rewarding committee, please contact me at any time via email at [dan.diorio@bc.edu](mailto:dan.diorio@bc.edu) or say hello at one of the monthly meetings.



## RESEARCH PROMOTION

*By: Dan Diorio*

**T**hank you to all of the most recent contributors. We received several new to ASHRAE Research in December! Also, special thanks go to our newest Boston Chapter Sponsors. As you know, a portion of the sponsorship goes toward RP.

As of the end of December, we have raised nearly \$5,000 - plugging away toward our goal of \$22,800. There is a lot more work to do, so expect to hear from me directly now that the New Year is here!

Over the last few months in my Research article in NortheastAire, I mentioned some of the places that the raised money ends up and some facts about ASHRAE Research. Below are a few more items to consider when making your donation:

- ASHRAE is a 503c3 US organization
- Donors should check with their own tax professionals to be clear on your exact tax rules
- Official tax receipts and thank-you notes are mailed from ASHRAE Headquarters every other week – confirming that your gift was received.

You can find more information about ASHRAE Research at the Society level or about a specific research project at [www.ashrae.org/research](http://www.ashrae.org/research).

Please contact Boston Chapter President Stacie Suh about our Corporate Sponsorship opportunities. Several companies have already come on-board as sponsors, so don't miss out! Become a chapter sponsor. Provide exposure for your company. Lend a hand to me with my fundraising campaign!

Donations to ASHRAE Research can be made in two other ways. You can donate online at [ashraeboston.org](http://ashraeboston.org) or [ashrae.org/contribute](http://ashrae.org/contribute). You can also do it by mailing a check directly to me at:

Dan Diorio

Boston College – St. Clements Hall

140 Commonwealth Ave

Chestnut Hill, MA 02467

Feel free to contact me with any questions about ASHRAE Research, my fundraising campaign, or donations in general at [dan.diorio@bc.edu](mailto:dan.diorio@bc.edu).



## The New Product & Energy Show 2016 Date: April 12, 2016

The Officers and Board of Directors of the Boston Chapter of ASHRAE are pleased to extend an invitation to your organization to participate / exhibit at the 15th Biennial Product Show to be held at Lantana's in Randolph, MA on April 12, 2016.

This show has always been well attended in the past, not only by the general ASHRAE membership, but also by others who work in this field, including Facility Engineers, Hospital Engineers, Building Owners and Mechanical Contractors. The local New Product & Energy Show targets a specific audience where you can talk to the customers who matter to you. Admission is free to all attendees.

Below are the specific details of the New Product & Energy Show. Please email Jeff Schultz if you are interested in participating at this event. Also if you are interested in trailer spot opportunity, please contact Bill Garvey at [wgarv@aol.com](mailto:wgarv@aol.com).

**D A T E :** TUESDAY, APRIL 12, 2016 ; 1:00 P.M. TO 8:30 P.M.

Seminars 1:00 p.m. to 5:00 p.m.

Product Show 3:00 p.m. to 8:15 p.m.

Dinner 6:00 p.m. to 8:00 p.m.

**L O C A T I O N :** LANTANA'S

Routes 28 and 128  
Randolph, MA

**E X H I B I T O R R E G I S T R A T I O N :**

**Price \$900.00 per single booth; Multiple adjoining booths are available.**

Reservations are on a first come- first serve basis.

Registration forms will be mailed to vendors in early January.

If you have not exhibited at our show before, but would like to this year, please contact the show chairpersons to be placed on our permanent mailing list and have a blank reservation form sent to you.

Registration forms will be stamped in order of receipt. Booths are limited. **Checks registration (completed) must be received by March 25, 2016. Please pay through Paypal: [Ashraeboston@gmail.com](mailto:Ashraeboston@gmail.com) with additional \$25 processing fee for each booth.**

**B O O T H S :** Single – 8 feet wide x 6 feet deep

Double – 16 feet wide x 6 feet deep

A pre-printed sign will be attached to the backdrop with your company name.

- Draped booths will be set up labeled prior to your arrival.
- Tables 72" x 30" will be available upon your advanced request.
- Electricity is available only upon your advanced request. No heavy electrical loads will be permitted. **Please bring your own extension cords.**
- Water and drains are **not** available.
- Internet connections available at an additional charge through Lantana's.

**F O O D :** A complimentary buffet dinner will be available to all attendees of the show.

**S E M I N A R S :** ASHRAE has reserved the facility for the entire day. Rooms are available for seminars from 3:00 p.m. to 6:30 p.m. Please contact Jeff Schultz at [Jeffrey.Schultz@dpsgroupglobal.com](mailto:Jeffrey.Schultz@dpsgroupglobal.com) if you are interested in providing a seminar. An outline of the seminar material will need to be submitted prior to approval. The seminars are intended to be educational and not commercial in nature.

Thank you for your interest and participation in the Boston Chapter – ASHRAE Product Show. You will receive a confirmation letter with additional information, plus some invitations for you to distribute to your customers who may not have received one. Please visit [www.ashraeboston.org](http://www.ashraeboston.org) for more information and also for updated booth layout of exhibits.

Please contact me at [Jeffrey.Schultz@dpsgroupglobal.com](mailto:Jeffrey.Schultz@dpsgroupglobal.com) should you have any questions.

Sincerely,  
Jeffrey H. Schultz

## Seminar Schedule

ROOM	3 - 4 <sup>30</sup> PM	4 <sup>45</sup> - 6 <sup>15</sup> PM
TBD	<b>Remarkable Long Term Performance in an Open Water Cooling System</b> [ 1.0 P D H TBD] Ed Block (MIT)	<b>Applying VRF</b> [ 1.0 P D H TBD] Rob Powell (Daikin)
TBD	<b>Ground Source</b> [1.0 P D H TBD] George Hu (AWE)	<b>CO2 is not the enemy! How to improve IAQ by not reducing CO2</b> [ 1.0 P D H TBD] Charles Waddell (GPS-Global Plasma Solutions)
TBD	<b>ASHRAE 62.1 Ventilation Strategies for improving indoor air quality and meeting, or exceeding, the standard.</b> [ 1.0 P D H TBD] Nishant Kanapilly (Renewaire)	<b>Emergency Standby Generator Sets and CHP- Combined heat and Power using Gas power systems</b> [ 1.0 P D H TBD] Nick Paolo (MTU Onsite Energy Corporation)
TBD	<b>Electrically Commutated Permanent Magnet Motors (ECPM) Technology</b> [ 1.0 P D H TBD] Steve Bistak (NovaTorque)	

ROOM	9AM- 6 <sup>15</sup> PM
TBD	<b>WHAT HAPPENS WHEN YOU DON'T??? Wind, Seismic, Flood &amp; Snow, Requirements of the International Building Code &amp; Related Codes for Non Structural Components IBC 2009 &amp; 2012 , IMC, IPC, NEC, NFPA, IFGC &amp; ASCE 7-10</b> [ 6.0 P D H TBD] Richard Berger (VMC Group)

Unless noted above, the chapter is currently awaiting approval to grant CEU/PDH by The Practicing Institute of Engineering, Inc. (N.Y State)



## REFRIGERATION

*By: Steve Tafone*

January 2016

### Society News

#### **Addition of Subclass 2L Refrigerants Proposed for ASHRAE Refrigerant Safety Standard**

ATLANTA – Industry input is being sought into a proposal to modify portions of ASHRAE’s refrigeration safety standard to incorporate subclass 2L flammability classifications.

Addendum d to ANSI/ASHRAE Standard 15-2013, Safety Standard for Refrigeration Systems, is open for public comment until Jan. 18, 2016. To comment or learn more, visit [www.ashrae.org/publicreviews](http://www.ashrae.org/publicreviews).

Standard 15 specifies safe design, construction, installation, and operation of refrigeration systems.

The 2010 edition of ANSI/ASHRAE Standard 34-2013, Designation and Safety Classification of Refrigerants, added an optional Subclass 2L to the existing Class 2 flammability classification of refrigerants. This change was intended to separate single component and blended refrigerants that are difficult to ignite and sustain a flame, from other Class 2 (and Class 3) flammable refrigerants.

“The expectation was that some of the Class 2L refrigerants would be commercialized and used as substitutes for Class A1 refrigerants that are in use today,” Dennis Dorman, chair of the Standard 15 committee, said. “Refrigerants in use today may come under regulatory pressure due to their relatively higher global warming potential (GWP). But to do this without major economic impact, Class 2L would have to be safely applied without the stringent application limitations imposed by Standard 15 on other flammable refrigerants. In other words, in order to be broadly applied, Class 2L refrigerants would need to be treated more like Class 1 than Class 2 or Class 3.”

At the start of its deliberations, the committee discovered that there was almost no science to support rules changes, let alone relaxation, of Class 2 requirements, according to Dorman. In July 2011, a first public review of the proposed addendum was made available with numerous comments received. Since that time, the committee has been addressing the technical issues identified from that review.

Dorman noted that Standard 15 covers the full range of applications from residential to commercial to industrial applications. As such, there is an unusual degree of complexity in considering appropriate rules for each.

Now, after almost four years of research and other supporting activities conducted by industry partners, the committee has much of the technical information to support proposed rules changes to Standard 15.

“With this public review, we are seeking suggestions for new, unusual or potentially controversial elements of the proposed addendum, which the committee believes would benefit from increased public input prior to finalizing the draft for its first formal public review,” he said. “Additionally we want to make sure that we do not overlook important safety aspects that may come from various users of the standard, both domestic and international.”

ASHRAE, founded in 1894, is a global society advancing human well-being through sustainable technology for the built environment. The Society and its more than 54,000 members worldwide focus on building systems, energy efficiency, indoor air quality, refrigeration and sustainability. Through research, standards writing, publishing, certification and continuing education, ASHRAE shapes tomorrow’s built environment today. More information can be found at [www.ashrae.org/news](http://www.ashrae.org/news).

# ASHRAE Learning Institute

## Seminars & Courses at ASHRAE's Winter Conference in Orlando, FL

### 2 WAYS TO REGISTER

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

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

### Full-Day Professional Development Seminars

\$485/\$395 ASHRAE Member -- Earn 6 PDHs/AIA LUs or .6 CEUs

**Commercial Building Energy Audits**

Saturday, January 23, 2016 – 8:00 a.m. to 3:00 p.m.

**Energy Modeling Best Practices and Applications**

Tuesday, January 26, 2016 – 9:00 a.m. to 4:00 p.m.

**Commissioning Process in New & Existing Buildings**

Saturday, January 23, 2016 – 8:00 a.m. to 3:00 p.m.

**Operations & Maintenance of High-Performance Buildings**

Tuesday, January 26, 2016 – 9:00 a.m. to 4:00 p.m.

**Designing HVAC Systems to Control Noise & Vibrations**

Saturday, January 23, 2016 – 8:00 a.m. to 3:00 p.m.

### Half-Day Short Courses

\$159/\$119 ASHRAE Member -- Earn 3 PDHs/AIA LUs or .3 CEUs

**Laboratory Design: The Basics and Beyond**

Sunday, January 24, 2016 – 3:30 p.m. to 6:30 p.m.

**Advoining IAQ Problems**

Monday, January 25, 2016 – 2:45 p.m. to 5:45 p.m.

**Troubleshooting Humidity Control Problems**

Sunday, January 24, 2016 – 3:30 p.m. to 6:30 p.m.

**Commissioning Process & ASHRAE Standard 202**

Monday, January 25, 2016 – 2:45 p.m. to 5:45 p.m.

**Understanding & Designing Dedicated Outdoor Air Systems**

Sunday, January 24, 2016 – 3:30 p.m. to 6:30 p.m.

**Complying with Standard 90.1-2013: HVAC/Mechanical**

Monday, January 25, 2016 – 2:45 p.m. to 5:45 p.m.

**Variable Refrigerant Flow System Design & Applications **NEW!****

Sunday, January 24, 2016 – 3:30 p.m. to 6:30 p.m.

**Evaluation and Control of Legionella in Building Water Systems **NEW!****

Monday, January 25, 2016 – 2:45 p.m. to 5:45 p.m.

**Air-to-Air Energy Recovery Applications: Best Practices**

Monday, January 25, 2016 – 8:30 a.m. to 11:30 a.m.

**Exceeding Standard 90.1-2013 to Meet LEED Requirements**

Monday, January 26, 2016 – 9:00 a.m. to 12:00 p.m.

**Applications of Standard 62.1-2013**

Monday, January 25, 2016 – 8:30 a.m. to 11:30 a.m.

**IT Equipment Design Evolution & Data Center Operation Optimization**

Monday, January 26, 2016 – 9:00 a.m. to 12:00 p.m.

**Building Demand Response & the Coming Smart Grid**

Monday, January 25, 2016 – 8:30 a.m. to 11:30 a.m.

**Designing High-Performance Healthcare HVAC**

Monday, January 26, 2016 – 1:00 p.m. to 4:00 p.m.

**Energy Management Best Practices**

Monday, January 25, 2016 – 8:30 a.m. to 11:30 a.m.

## ASHRAE HVAC Design Training

### 2 Courses, 5 Days of Intense Instruction

Atlanta • Halifax • Hong Kong • Houston

Kuala Lumpur • Miami • Minneapolis • Vancouver

### **HVAC Design: Level I – Essentials** - Registration is \$1,264 (\$1,009 ASHRAE Member)

Gain practical skills and knowledge in designing and maintaining HVAC systems that can be put to immediate use. The training provides real-world examples of HVAC systems, including calculations of heating and cooling loads, ventilation and diffuser selection using the newly renovated ASHRAE Headquarters building as a living lab.

### **HVAC Design: Level II – Applications** - Registration is \$854 (\$699 ASHRAE Member)

*HVAC Design: Level II — Applications* provides instruction on HVAC system design for experienced HVAC designers and those who complete the HVAC Design: Level I – Essentials training. The training provides information that allows practicing engineers and designers an opportunity to expand their exposure to HVAC systems design procedures for a better understanding of system options to save energy.

Visit [www.ashrae.org/hvactraining](http://www.ashrae.org/hvactraining) to register.

## 2015-2016 Meeting Schedule

Date	Main Meeting/ Tech Session	Speaker	PDH Credits	Meeting Manager	Location/ Special Night
<b>September</b>  Wednesday September 9, 2015	TD Garden Dehumidification System Tour	Chris Trent- Siemens Pat McDonald- Eversource Andrew or Jason- DNC David Trumble – Cannon Design Enis Pacavar – Sylvania Lighting		Mark Leonard  <a href="mailto:MCL@BRPLUSA.COM">MCL@BRPLUSA.COM</a>	TD Garden Boston, MA
<b>October</b>  Tuesday October 13, 2015	Towards ZEB (Zero energy buildings) in Europe and Application of Radiant Heating and Cooling Systems  <b>Tech Session:</b> Passive Cooling with Increased Night Ventilation in Low Energy Buildings	Per Heiselberg Bjarne W. Olesen  Guilherme Carrilho da Graça , Annamaria Belleri & Per Heiselberg	1.0	Mark Leonard  <a href="mailto:MCL@BRPLUSA.COM">MCL@BRPLUSA.COM</a>	Metro Meeting Centers, Boston—101 Federal St.  Membership and Student Promotion Night
<b>November</b>  Tuesday November 10, 2015	Net zero commercial buildings – how to design and maintain indoor air quality  <b>Tech Session:</b> Changing Refrigerant	Bill Turner HLTURNER Group  Steve Tafone		Mark Leonard  <a href="mailto:MCL@BRPLUSA.COM">MCL@BRPLUSA.COM</a>	Embassy Suites, Waltham  Research Promotion & Donor Recognition Night Joint Meeting with IAQA
<b>December</b>  Tuesday December 8, 2015	ASHRAE SPC-188 Legionellosis: Risk Management for Building Water Systems  <b>Tech Session:</b> Remarkable Long Term Performance in an Open Water Cooling System	Tom Watson  Ed Block		Mark Leonard  <a href="mailto:MCL@BRPLUSA.COM">MCL@BRPLUSA.COM</a>	Embassy Suites,  Joint Meeting with ASPE
<b>January</b>  Thursday January 14, 2016	Electrically Commutated Permanent Magnet Motors (ECPM) Technology  <b>Tech Session:</b> Special Gas Venting Systems	Steve Bistak  Warren E Creamer III (Skip) / Atlantic Air Products	1.0  1.0	Mark Leonard  <a href="mailto:MCL@BRPLUSA.COM">MCL@BRPLUSA.COM</a>	Embassy Suites, Waltham  Past President's & History Night
<b>February</b>  Tuesday February 9, 2016	Infrastructure Resiliency Design in Healthcare. Post Superstorm Sandy  <b>Tech Session:</b> TBD	Steven Friedman  TBD		Mark Leonard  <a href="mailto:MCL@BRPLUSA.COM">MCL@BRPLUSA.COM</a>	Metro Meeting Centers, Boston—101 Federal St.  Membership Promotion, Research Promotion & YEA Night
<b>March</b>  Tuesday March 8, 2016	Case Histories of Both Productive and Problematic Interactions Between Architectural Designs and HVAC  <b>Tech Session:</b> GroundSource Case Study	Lew Harriman  George HU		Mark Leonard  <a href="mailto:MCL@BRPLUSA.COM">MCL@BRPLUSA.COM</a>	Metro Meeting Centers, Boston—101 Federal St.  Joint Meeting with AEE
<b>April</b>  Tuesday April 12, 2016	Product Show  <b>Tech Session:</b> TBD	Jeff Schultz  N/A		Bill Garvey  <a href="mailto:wgarv@aol.com">wgarv@aol.com</a>	The Lantana  Student & YEA Night
<b>May</b>  Tuesday May 10, 2016	Installation of Officers	William Tang	N/A	Event Committee/WT	TBD  Sponsors Recognition Night
<b>June</b>  Monday June 6, 2016	Golf Outing	William Garvey	N/A	Golf Committee	Halifax Country Club, Halifax, MA

**OFFICERS**

**President**  
Stacie Suh,  
Stebbins Duffy,  
Inc.  
781-258-1002  
[Stacie@stebbinsduffy.com](mailto:Stacie@stebbinsduffy.com)

**Secretary**  
Mike Gilroy,  
BR+A  
617-925-9255  
[mpg@brplusa.com](mailto:mpg@brplusa.com)

**President-Elect**  
William Tang,  
BR+A  
617-254-0016  
[wkt@brplusa.com](mailto:wkt@brplusa.com)

**Treasurer**  
William Garvey,  
RDK Engineers  
781-910-9576  
[wgarv@aol.com](mailto:wgarv@aol.com)

**Vice President**  
Mike Gilroy,  
BR+A  
617-925-9255  
[mpg@brplusa.com](mailto:mpg@brplusa.com)

**BOARD OF GOVERNORS**

2015-2018	2014-2017	2013-2016
Daniel Diorio Boston College 617-552-8772 <a href="mailto:daniel.diorio.2@bc.edu">daniel.diorio.2@bc.edu</a>	Dan Carington BR+A 617-925-8236 <a href="mailto:dpc@brplusa.com">dpc@brplusa.com</a>	Siobhan Carr MIT 617-324-7268 <a href="mailto:siobhanc@mit.edu">siobhanc@mit.edu</a>
Jim Liston BuroHappold Engineering 617-606-9120 <a href="mailto:James.liston@burohappold.com">James.liston@burohappold.com</a>	William Garvey RDK Engineers 781-910-9576 <a href="mailto:wgarv@aol.com">wgarv@aol.com</a>	Mike Gilroy BR+A 617-925-9255 <a href="mailto:mpg@brplusa.com">mpg@brplusa.com</a>
Justin Mole Cannon Design <a href="mailto:jmole@cannondesign.com">jmole@cannondesign.com</a>	Mark Leonard BR+A 617-925-8322 <a href="mailto:mcl@brplusa.com">mcl@brplusa.com</a>	Stephen Nicholas Air Industries 978-682-9993 <a href="mailto:snicholas@airinds.com">snicholas@airinds.com</a>
Erin Popa BR+A 617-925-8205 <a href="mailto:epopa@brplusa.com">epopa@brplusa.com</a>	Teri Shannon DAC Sales 207-985-0873 <a href="mailto:tshannon@dac-hvac.com">tshannon@dac-hvac.com</a>	

**COMMITTEES**

<b>Attendance</b> Erin Popa BR+A 617-925-8205 <a href="mailto:epopa@brplusa.com">epopa@brplusa.com</a>	<b>Grassroots Government Activities</b> Steven Rosen AHA Consulting Engineers <a href="mailto:Steven.Rosen@aha-engineers.com">Steven.Rosen@aha-engineers.com</a>	<b>Nominating</b> Bob Persechini RDK Engineers 617-345-9885 <a href="mailto:rpersechini@rdkengineers.com">rpersechini@rdkengineers.com</a>	<b>Publicity</b> Andrew Krenning Siemens Industry, Inc 781-589-4097 <a href="mailto:andrew.krenning@siemens.com">andrew.krenning@siemens.com</a>	<b>Website</b> Steven Rosen AHA Consulting Engineers <a href="mailto:Steven.Rosen@aha-engineers.com">Steven.Rosen@aha-engineers.com</a>
<b>Chapter Program</b> Mark Leonard BR+A 617-925-8322 <a href="mailto:MCL@BRPLUSA.COM">MCL@BRPLUSA.COM</a>	Christine Reinders Cannon Design <a href="mailto:Creinders@cannondesign.com">Creinders@cannondesign.com</a>	<b>Research Promotion</b> Daniel Diorio Boston College 617-552-8772 <a href="mailto:dan.diorio@bc.edu">dan.diorio@bc.edu</a>	<b>Refrigeration</b> Steven Tafone Suffolk Construction 978-774-1057 <a href="mailto:stafone@suffolkconstruction.com">stafone@suffolkconstruction.com</a>	<b>Women in Engineering</b> Stacie Suh Stebbins Duffy, Inc. 781-258-1002 <a href="mailto:Stacie@stebbinsduffy.com">Stacie@stebbinsduffy.com</a>
<b>Chapter Technology Transfer</b> Mike Gilroy BR+A 617-925-9255 <a href="mailto:mpg@brplusa.com">mpg@brplusa.com</a>	Stacie Suh Stebbins Duffy, Inc. 781-258-1002 <a href="mailto:Stacie@stebbinsduffy.com">Stacie@stebbinsduffy.com</a>	<b>NorthEastAire</b> Deanna Adkison AKF Group 617-535-8236 <a href="mailto:dadkison@akfgroup.com">dadkison@akfgroup.com</a>	Joseph Dussault <a href="mailto:JDussault@engsolutions.com">JDussault@engsolutions.com</a>	Deanna Adkison AKF Group 617-535-8236 <a href="mailto:dadkison@akfgroup.com">dadkison@akfgroup.com</a>
<b>CRC Alternate</b> William Tang, BR+A 617-254-0016 <a href="mailto:wkt@brplusa.com">wkt@brplusa.com</a>	<b>Historian</b> Eric Edman BR+A 617-925-8325 <a href="mailto:eme@brplusa.com">eme@brplusa.com</a>	<b>The New Product Show &amp; Energy Show 2016</b> Jeffrey Schultz DPS Engineering 508-861-3741 <a href="mailto:jeffrey.schultz@dpseng.com">jeffrey.schultz@dpseng.com</a>	<b>Student Activities</b> Daniel Diorio Boston College 617-552-8772 <a href="mailto:dan.diorio@bc.edu">dan.diorio@bc.edu</a>	<b>YEA</b> Christine Reinders Cannon Design <a href="mailto:Creinders@cannondesign.com">Creinders@cannondesign.com</a>
<b>CRC Delegate</b> Daniel Diorio Boston College 617-552-8772 <a href="mailto:dan.diorio@bc.edu">dan.diorio@bc.edu</a>	<b>Honors &amp; Awards</b> Darcy Carbone Stebbins Duffy, Inc. 617-957-2567 <a href="mailto:dcarbone@stebbinsduffy.com">dcarbone@stebbinsduffy.com</a>	<b>Professional Development</b> Steve Bosland EYP Architecture & Engineering 617-305-9831 <a href="mailto:sbosland@eypae.com">sbosland@eypae.com</a>	<b>Sustainability</b> Siobhan Carr MIT 617-324-7268 <a href="mailto:siobhanc@mit.edu">siobhanc@mit.edu</a>	Justin Mole Cannon Design <a href="mailto:jmole@cannondesign.com">jmole@cannondesign.com</a>
<b>Golf Outing</b> William Garvey RDK Engineers 781-910-9576 <a href="mailto:wgarv@aol.com">wgarv@aol.com</a>	<b>Membership Promotion</b> Dan Carington BR+A 617-925-8236 <a href="mailto:dpc@brplusa.com">dpc@brplusa.com</a>		Lance Brown <a href="mailto:lance@andelmanlelek.com">lance@andelmanlelek.com</a>	
			Joseph Dussault <a href="mailto:JDussault@engsolutions.com">JDussault@engsolutions.com</a>	

Investors Who  
Care About  
Tomorrow

# ASHRAE RESEARCH

## ASHRAE Boston Chapter Contributors

- |                               |                              |                          |
|-------------------------------|------------------------------|--------------------------|
| Mr Robert J Persechini        | Mr Jeffrey Zajac             | Mr. William J Garvey     |
| Mr David A DeMoura, PE        | Ms Darcy A Carbone           | Mr. Daniel P Diorio      |
| Mr Allan E Ames               | RDK                          | Mr. Brian E Austin       |
| Mr Brian Abbott               | Renewaire                    | Mr. Michael J Daigneault |
| Mr Bruce Luchner              | RG Vanderweil                | Mr. John Celona          |
| Mr Warren E Hudson            | Stebbins Duffy               | Equipment Direct Sales   |
| Mr David Goodman              | Victaulic                    | Mr. Kenneth W Crooks     |
| Mr Seshappa Chandrashekar, PE | Daikin                       | Mr. Gary M Elovitz       |
| Mr Michael P Gilroy           | Filter Sales & Service, Inc. |                          |
| Mr Daniel P J Carington       | RST Thermal                  |                          |
| Mr Albert J Santoro           | R.T. Forbes Company          |                          |
| Mr John A Iacopucci           | Mr. David H Blum             |                          |
| Ms Stacie Suh                 |                              |                          |
| Mr William K Tang             |                              |                          |

**CONTACT DAN DIORIO NOW!** at 617-552-8772 or [daniel.diorio.2@bc.edu](mailto:daniel.diorio.2@bc.edu)

Mail Check (Payable to "ASHRAE Research") to:

ASHRAE RESEARCH

Daniel Diorio

Boston College—St. Clements Hall

140 Commonwealth Ave.

Chestnut Hill, MA 02467

Name: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

TEL: \_\_\_\_\_

**Your contribution puts us closer to achieving our goal. Please send what you can today!**

Individual contributions of \$100 or more and Corporate contributions of \$150 or more receive this year's

Commemorative Coin and Honor Roll Contribution status.

INDIVIDUAL

\$25.00

\$50.00

\$100.00

\$200.00

Other: \_\_\_\_\_

CORPORATE

\$250.00

\$500.00

\$1,000.00

\$2,000.00

Other: \_\_\_\_\_



NorthEastAire

ASHRAE - BOSTON CHAPTER [www.ashraeboston.org](http://www.ashraeboston.org)

Deanna Adkison  
AKF Group  
99 Bedford St., 2nd FL  
Boston, MA 02111