



2016-2017 Officers



William Tang
President



Mike Gilroy
President-Elect



Dan Carington
Vice President



Mark Leonard
Secretary



Deanna Adkison
Treasurer

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November Meeting

Tuesday November 8, 2016

Main Meeting:

**Tour of the Warrior Ice Arena
(Bruins' Practice Rink)**

Student Activities/YEA/WiA Night

Please see **page 3** for more information.

Where:

Warriors Ice Arena
80 Guest St. Boston

Meal:

- Stationary Buffet (Small Plates)
- Passed Hor D'Oeuvres
- Sponsored Bar

Time:

- | | |
|------------------|--|
| 5:30 – 6:00 p.m. | Check-in /Social Hour |
| 6:00 – 6:30 p.m. | Announcements & Short presentation of the arena by A/E design team |
| 6:30 – 8:30 p.m. | Tour of the facility, including ice rink mechanical room |
| 5:30 – 8:30 p.m. | Bar service |
| 6:30 – 8:00 p.m. | Food service |

Parking is complimentary, garage entrance is at the rear of the building (mass pike side), access road is to the left of the arena. [CLICK HERE FOR DIRECTIONS](#)

Cost:

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

Special thanks to our Sponsors:

- | | |
|------------------|------------------------|
| Platinum: | Gold: |
| | RST Thermal |
| | RDK Engineers |
| Silver: | Event Sponsors: |
| Daikin | Cooney Coil & Energy |
| R.T. Forbes | Siemens |
| Trane | TRO |
| HTS New England | WSP |



Please register online at www.ashraeboston.org.

RSVP by 12:00 PM on Friday, November 4th.

If you have any questions, you may contact Christopher Pietrocarlo, Attendance Chair, at ashraebostonattendance@outlook.com.

Thank You



PRESIDENT'S MESSAGE

By: William Tang

Last month we had our second ASHRAE meeting at the 100 High Street Amenity Center. The weather was cooperative that evening and we enjoyed the roof deck during social hour. The meeting was jam packed. We recognized our 2015 – 2016 Supportive Employers, past Presidents, and Life Members. Our Chapter Historian also gave a short history on the father of modern air conditioning. The meeting was well attended; we were limited only by the venue's maximum occupancy of 100.

I want to thank TRO for donating the venue to host our meeting and Bob Cooney of Cooney Coil & Energy for taking his time to present a technical session and sponsor our social hour that evening. I also want to thank Conor McGuire, Director of Sustainability at Columbia Construction Company, for taking his time to clarify the required approach to design, build and operate Net Zero Energy Buildings.

Our next event will be a tour of the brand new Warrior Ice Arena, also known as the Bruins' Practice Rink at the Boston Landing. WSP | Parsons Brinckerhoff, design engineer of the ice arena, will give a 30 minute presentation prior to the tour by facility engineers. Parking at the venue will be complimentary. Please refer to our newsletter, NortheastAire, or our Chapter website for additional event information. This event falls on election day, November 8. I encourage our members to make plans to fulfill their civic duties in the morning and attend our event in the evening. I also encourage all members to RSVP early and to use this opportunity to bring a non-member as an introduction to ASHRAE

As always, we appreciate your feedback. Please email me at c001@ashrae.net or any of the volunteers with questions, concerns, or suggestions to help improve our Chapter.



EDITOR'S NOTE

By: Deanna Adkison

Materials for the December newsletter are due by **November 18, 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.

For more information, please e-mail northeastaire@gmail.com

Project team bio:

Nancy Gould is an Associate of the WSP | Parsons Brinckerhoff Boston Buildings office, and has over 12 years of experience in the engineering, design and drafting for various types of plumbing and fire protection systems. Nancy graduated with a degree in Civil Engineering and her Master's in Fire Protection Engineering from Worcester Polytechnic Institute. She is a registered Professional Engineer in Massachusetts, a LEED accredited professional, and a member of the American Society of Plumbing Engineers (ASPE) and Society of Fire Protection Engineers (SFPE).

Nicholas Chiarelli is a Mechanical Engineer at the WSP | Parsons Brinckerhoff Boston Buildings office, and has over 6 years of experience in the HVAC design of new and renovation projects across all market sectors. Nick graduated with a dress in Mechanical Engineering from Northeastern University. He is a registered Professional Engineer in Massachusetts, a LEED accredited professional, and a member of the American Society of Mechanical Engineers.

Peter Comeau, CEO and Co-Owner of Recco, has experience spans more than 35 years in the refrigeration industry. His expertise includes the design and installation of equipment as well as estimating, project management, sales, management and consulting. Peter is a degreed Mechanical Engineer and holds licenses for Refrigeration Contractor and Master Pipefitter, and is an Accredited LEED Professional. He is currently a Director for Mechanical Contractors Association of America (MCAA), the immediate past President of the New England Mechanical Contractors Association (NEMCA) and serves as a Trustee of the Educational Trust and Joint Apprenticeship Committee for the Pipefitter and Plumbers Local Union #537. In addition, his other current memberships include the American Society of Heating, Refrigeration and Conditioning Engineers (ASHRAE); the United States Green Building Council (USGBC); the North East Ice Skating Association (NEISMA) and the International Institute of Ammonia Refrigeration (IIAR).



RESEARCH PROMOTION

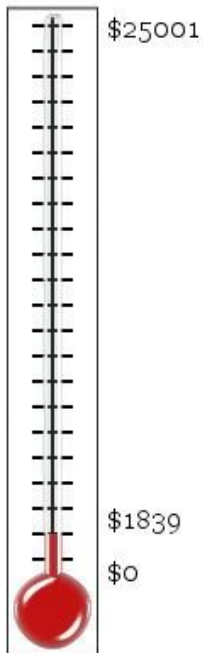
By: Stacie Suh

Dear ASHRAE Members,

As always, I would like to extend my sincerest thanks to you for your support of ASHRAE Research last year. It is because of your support that we were able to fund more than \$14 Million worth of research. More than 80 research projects worldwide received support from ASHRAE because of your investment. We have begun the 2016-2017 Campaign already and I hope we can once again count on your support of ASHRAE Research this year. The Boston Chapter goal for 2016-2017 is \$26,180, Region I goal \$188,000 and society goal is \$2.6 million.

We have raised \$1839.00 so far, we need your help to get to half of our goal by the end of December 2016.

Thank you to following Donors:



Benjamin Weil
 Bob Persechini
 Robert Barstow
 Warren Hudson
 Kirschner Associates
 Stacie Suh
 Will Tang
 Deanna Adkison
 Mike Gilroy
 Mark Leonard
 Darcy Carbone
 Lance Brown
 Jeff Zajac
 Boston ASHRAE Chapter
 John Swift Jr
 Dan Carington

As always, you may also make your investment online at www.ashrae.org/donate. If you are interested in donating in a method other than online, please let me know.

Your contribution will automatically go toward helping the Boston Chapter reach our RP goal for 2016-2017.

If you'd like a list of research projects being conducted in the region or about specific topics, please let me know.

Here are few links that you might find useful.

- Also you can find more information on resource promotion, please go to <https://www.ashrae.org/standards-research-technology/ashrae-rp>.
- If you are interested in important dates and deadlines for research projects please click on <https://www.ashrae.org/standards-research-technology/research>.
- These Research Project Final Reports document the results of the research project, and are approved by the sponsoring Technical Committee. ASHRAE members have free access through the [Members-Only Research Projects Final Reports site](#).
- If you are interested in submitting solicited research project, go to <https://www.ashrae.org/standards-research-technology/research>.
- If you are interested in donating to ASHRAE Resource, go to www.ashrae.org/donate

Again, Thank You for your continued support of these vital projects – it's greatly appreciated.

Please contact me with any questions at stacie@stebbinsduffy.com.

Gold Sponsors :

RST Thermal
 RDK Engineers

Silver:

Daikin
 R.T. Forbes
 Trane
 HTS New England

Stacie Suh /RP Chair 2016-2017

[Email](#)



STUDENT ACTIVITIES

By: Yuka Narisako

I'm very excited for the month of November, as we will be hosting our first of two Student Nights. I anticipate a good volume of student members in attendance, as the Warriors Ice Arena should be an exciting tour for all attendees. I look forward to meeting as many student members as possible, as well as our devoted Student Branch Advisors.

My goals for this year's Student Activities Committee have been submitted to Region I. My goals include: hosting two Student Night events, increase student membership by 1%, and reactivating a student branch.

Once again, I'd like to draw attention to the generous scholarships offered to student members through ASHRAE, both at a society level and a Boston Chapter level. Please refer to the Student Activities page on the ASHRAE Boston Chapter website for application information regarding the Cheryl Rossini Future Engineers Scholarship Application. The Society also has 33 scholarships available for the 2017-2018 academic year, and are encouraged to apply at www.ashrae.org/scholarships.

I look forward to seeing many student members at our November Student Night Meeting on November 8th, and hope to see some of those same faces at the YEA tour of the Lahey Hospital on November 16th! In the meantime, please feel free to reach out to me at ynarisako@brplusa.com!

Presidential Award of Excellence

Boston Chapter - 2016-2017

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
1107	745	150	0	440	520	125	50	2030

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. 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 December Newsletter: November 18th, 2016

Any questions, please contact Deanna Adkison, Newsletter Editor at 617-535-8236 or northeastaire@gmail.com

RDK ENGINEERS

Proud to be a sponsor of the ASHRAE Boston Chapter

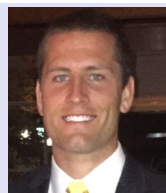
Mechanical
Electrical
Plumbing
Fire Protection
Technology Design
Commissioning
Sustainability



All images © Peter Brentlinger



Andover | Amherst | Boston | Charlotte | Durham
RDK understands how engineering affects people
www.rdkengineers.com



Webmaster's Notes

By: Kevin Doty

We are constantly updating the website with the latest information. This includes registration information for monthly meetings, corporate sponsorships, newsletters, past presentation content, pictures from past events, and committee pages (YEA, CTTC, RP, GGAC, Historian, Sustainability, Membership, WiA, Refrigeration, Student Activities, and others). We are always looking for help. If you'd like to get involved with the website, please reach out!

Please make sure to add admin@ashraeboston.org to your "safe sender" list to prevent emails from going to your spam folder.

Please feel free to send comments and suggestions to coo1web@ashrae.net



MEMBERSHIP PROMOTION

By: Dan Carington

Hello Members, It's November already? That means Thanksgiving is right around the corner along with all the other holidays that following! Let us review our membership statue and see if we are eligible to upgrade from Associate to Member, it does not cost anything to do so just a few minute of your time. If you are a current member interested in advancing your membership grade, simply login and update your bio online, or visit My Membership for more information. If you are a student member who would like to transfer to associate grade membership visit the SmartStart.

As an ASHRAE Member you have so many benefits. Don't let any of them go to waste! Be sure to keep up with your Chapter, Regional, and Society news to stay involved, connected, and in the know. Take a minute to learn how your membership can work for you. Click [here](https://www.ashrae.org/membership--conferences/join-now/membership-grades) to view the Membership Grades, Benefits, And Qualifications page to help you get a glance of the Member grades and benefits: <https://www.ashrae.org/membership--conferences/join-now/membership-grades>.

Please help me welcome our new members since October by giving them a warm welcome;

Mr PJ Qvarnstrom

Ms Gilmara

B Amado

Mr Richard Weathers

Mr Michael Vecchione

Gerard D Walraven

Miss Ge Zu

Mr Kevin William Mawe

Welcome, we are so looking forward to seeing you at our next Boston ASHRAE event. Any comments or questions, please feel free to contact me at dcarington@brplusa.com

ASHRAE BOSTON UPCOMING EVENTS

Visit <https://ashraeboston30.wildapricot.org/resources/Documents/Save%20the%20Date%205.pdf> for more information.

November Meeting

When: November 8, 2016

Where: Warrior Ice Arena, Boston

December Meeting

When: December 13, 2016

Where: Lantana, Boston

January Meeting

When: January 10, 2017

Where: Embassy Suites, Waltham

February Meeting

When: February 15, 2017

Where: Metro Meeting Centers

BOSTON AREA UPCOMING EVENTS

AFE Boston Chapter 33

www.afechapter33.org

IFMA Boston Chapter

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

AEE New England Chapter

www.aeenewengland.org/

IBPSA Boston Chapter

<http://ibpsa-boston.com/>



ASHRAE Commends Montreal Protocol Amendment To Phase Down HFCs Oct 19, 2016

ATLANTA – ASHRAE commends the governments involved in the adoption of the HFC amendment to the Montreal Protocol, which will result in a global phase down of production and consumption of hydrofluorocarbons (HFCs). The agreement was signed earlier this week.

The move comes as ASHRAE and leading U.S. government agencies, built environment associations and companies launch a multi-million dollar research program that will establish a more robust fact base about the properties and the use of flammable refrigerants.

The research is part of a \$5.8 million program funded by ASHRAE, the Air-Conditioning, Heating, and Refrigeration Institute (AHRI), the U.S. Department of Energy (DOE), the Association of Home Appliance Manufacturers (AHAM), the California Air Resources Board (CARB), and Johnson Controls. This program is part of an ongoing global effort to phase down the use of high global warming potential (GWP) refrigerants and identify appropriate climate-friendly alternatives.

“Flammable refrigerants hold great promise for reducing the use of HFCs in refrigerants and thereby lowering the environmental impact of air-conditioning and refrigeration systems,” ASHRAE President Tim Wentz, said. “ASHRAE applauds the Kigali Amendment and is pleased to be a partner in cutting edge research effort to better understand how to safely deploy flammable refrigerants.”

The agreement calls for reduction of HFCs equivalent to 80b metric tons of carbon dioxide through 2047 and will thereby avoid almost a half degree C of global warming. Several ASHRAE members were among those attending the Protocol meetings. Among them were ASHRAE Presidential Member Jim Wolf and ASHRAE Director-at-Large Bill McQuade.

“The update of product safety standards and building codes to include A2L refrigerants is essential to the success of this agreement,” McQuade said. “The interest in our A2L research program by the parties was very high. In fact, several indicated to me interest in becoming a partner and funding additional research in the future.”



HISTORICAL NEWS

By: Eric Edman



We look back and believe all of you enjoyed the historical presentation made in October. It was quite interesting to research and discuss the father of air conditioning.

We could use some assistance, and recommendations, on anything that has historical significance. If you would please send us an email with the topic/item/person.

We are quite fortunate to have so many historically significant items in our area, along with many "firsts"- that we need to document some of this within our industry. We would like your suggestions and we will do the legwork. All we need is a moment of your thoughts, and suggestions.

One such item that comes to mind was the development of the "Phoenix" valve. Some of you know the product for control of critical airflow in labs. Well, it did not start out this way. We recently interviewed the founder and will share the story in a future edition of this newsletter.

In other news, we are working towards another historic document of an interview with one of our Boston Chapter Fellows. We receive special recognition of our efforts in documentation of history with some of our chapter ASHRAE Fellows. We have four such people in our local chapter and it is an honor to get a chance to spend some time with them-even thru email. We will continue these efforts, and look forward to sharing these with you.

As always, we look forward to your attendance at future meetings.

Eric



Lifetime Members (from left to right) Front: Fred Livingston, Seshappa Chandrashekar, Warren Hudson, Tim O'Leary, Alfred Muccini. Back: Eric Edman, Bruce MacRitchie, Greg Tocci



Past Presidents (from left to right): Eric Edman, Enrique De Los Reyes, Jim Magarian, Teri Shannon, Bob Persechini, Darcy Carbone, Bud Anderson, Steve Tafone



BOG Meeting Minutes

By: Mark Leonard

Meeting started at 4:30 PM

General Business

- September BOG meeting minutes were approved
- Boston Chapter currently has 1097 active members
- Boston Chapter is aiming to surpass last year's golf tournament fund raising total to benefit the Chapter. The Chapter is exploring ways to reduce tournament costs.
- Additional details for the joint December meeting with ASPE will be available soon
- Chapter Opportunity Fund PAOE points to be tracked under Chapter Operations
- Corporate Gold Sponsors to receive free meeting registration
- The next YEA event to be held on November 16th at a Boston-area hospital with hopes to invite students from Chelmsford High School (more information to follow)
- The next Women in ASHRAE event to be held on November 17th at a TBD location (more information to follow)

October Meeting

- October technical and main presentations were each approved for 1.0 PDH
- October meeting to recognize Past Presidents and Chapter History
- Chapter Historian to give short speech on Chapter History prior to main presentation
- Corporate Sponsorship sign to be displayed at registration table
- Social hour sponsorship sign to be displayed at beverage table
- Certificates of Appreciate to be presented to company recipients during the meeting announcements
- Current Chapter account balances were discussed
- October meeting costs were discussed

November Meeting

- November BOG meeting to be held at BR+A office prior to tour of Warrior Ice Arena
- November meeting costs were discussed
- Chapter anticipating approximately 120 attendees at the November meeting requiring multiple tour groups. In spite of the additional cost, the BOG deemed a technical tour more suiting over a general building tour. The design engineer from WSP will be present to speak to attendees. The Chapter also hopes to have the chiller plant manufacturer's representative present to speak to attendees as well.
- The Chapter will induct the 2015-2016 Boston ASHRAE Chapter Hall of Fame recipient at the November meeting
- Parking will be free for the November meeting and advertised on the Chapter website

Meeting adjourned at 5:09 PM



By: Joseph Dussault

YEA Members!

Below is a proposed schedule of events for YEA this year, if you have suggestions or ideas please let me know! There is also a lot going on with YEA at the national level, please feel free to ask questions about these events

November 16 at 6 PM – Lahey Technical Tour

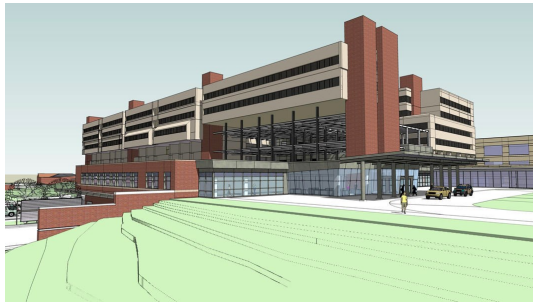
January – Networking Event at Good Life

March – Annual Cornhole Tournament

April – ASHRAE YEA Night

Lahey Technical Tour

Our next YEA technical tour will be held at Lahey Hospital and Medical Center on November 16, 2016 at 6:00 PM. This tour will focus on the new “Stilts” Emergency Department Addition Project, lessons learned along the way, and an overview of the systems and equipment.



Located on the academic medical center’s Burlington campus, the \$60 million project will consist of a 190,000sf addition featuring a new emergency department, shell space, and mechanical areas to infill Lahey’s existing Stilts structure and tie in to its occupied clinical facility.

The Suffolk project team will host the tour, and YEA members will learn about the Lean Construction processes and Model-Based Estimating techniques used to enhance team-wide collaboration, eliminate waste, and ensure efficient project delivery. The project is scheduled to be completed spring 2017 and has been designed to achieve LEED Silver certification.

The tour will also include an overview and tour of the 3 MW reciprocating engine cogeneration plant. The Lahey chief engineer will explain how the 3 MW engine provides

electricity, hot water and steam to the Lahey campus. Social hour will follow at Tavern in the Square after the tour. Please come out and join us! It’s a great way to get more involved in ASHRAE, learn more about the industry, and make new friends.



Getting Involved

We are always looking for ASHRAE YEA members to get more involved in the Boston chapter. Please let me know if you would like to learn more about how you can get involved.

ASHRAE Leadership U is another program offered through ASHRAE. Have you ever wondered what ASHRAE Officers do at the ASHRAE Winter & Annual Conferences? Here is your chance to find out! Through Leadership U (offered by the YEA Institute), a handful of YEA members are selected for each conference to be matched up with Society Officers and participate in all of their events and board meetings, including social activities. Leadership U not only allows you to experience a conference like an Officer, but it is also a great opportunity to network and form connections with those active in ASHRAE. More information can be found here:

<https://www.ashrae.org/membership--conferences/leadership-u>

I am looking forward to being a part of YEA this year. Please feel free to reach out to me anytime if you have any questions at co01yea@ashrae.net.



By: Steve Rosen

Grassroots Government Advocacy Committee.

Federal Activities

DOE Launches the Better Communities Alliance to Ignite Clean Energy Action in Cities and Countries Nationwide

On September 26, DOE launched the Better Communities Alliance (BCA), a new collaborative effort to accelerate local clean energy progress across the country. The BCA was announced by the White House during Smart Cities Week, with over 60 inaugural partners of local governments, philanthropies, nonprofit organizations, and leading private companies to accelerate local clean energy progress across the country. The BCA will deliver new clean energy resources, technical assistance, and facilitate collaboration between public and private partners by making it easier for participants to connect and exchange ideas.

Charter partners included 34 local governments serving 40 million Americans that are committed to the BCA and working with DOE to accelerate local clean energy progress and bolster leadership. Local government partners will receive streamlined access to DOE clean energy resources, opportunities to apply for resources, access to forums for peer networking and expert dialogue, and Federal recognition of clean energy achievements.

The BCA also announced inaugural partnerships with 26 public and private organizations. The BCA affiliates will help identify specific opportunities for collaboration with DOE and local governments. Read the press release to see the full scope of this effort or visit the BCA website to join the alliance and strengthen your community.

GGAC Regional and Chapter Activities

EWeek 2017

Engineers Week (EWeek) 2017 will be held February 19-25, 2017. This year as in past years, GGAC is encouraging our Chapters to obtain proclamations from elected officials (Mayors, Legislatures, Governors, Provincial officials, etc.). Information, draft proclamations and cover letters will be posted soon on the GGAC website. Mark your calendars now and watch for more details soon.

Massachusetts in tie as Most Energy-Efficient State

California and **Massachusetts** tied for the top spot in the 2016 State Energy Efficiency Scorecard, published by the American Council for an Energy-Efficient Economy (ACEEE). This is Massachusetts' sixth consecutive year in first place. The

Commonwealth shares the spot with California, which last held the title in 2010. The remainder of the top 10 are **Vermont, Rhode Island, Connecticut** and **New York** (tied for fifth place), Oregon, Washington, Maryland and Minnesota.

The annual scorecard awards points to each State and the District of Columbia for policies, regulations and government-led initiatives they have put in place in six different categories. Maine, Michigan and Missouri were recognized as the three most improved States in energy efficiency.

Connecticut Adopts New State Codes

On September 27, the Connecticut Legislature's Regulations Review Committee unanimously approved with technical corrections both the proposed 2016 State Building Code and 2016 Fire Safety Code.

These approved updated State codes will be effective for all permit applications as of October 1, and incorporate the following:

- 2012 ICC International Building Code
- 2012 ICC International Residential Code
- 2012 ICC International Existing Buildings Code
- 2012 ICC International Mechanical Code
- 2012 International Plumbing Code
- 2012 ICC International Energy Conservation Code
- 2014 NFPA 70 - National Electric Code; 2009 ICC / ANSI A117.1 - Accessible and Usable Building and Facilities
- 2012 ICC International Fire Code
- 2012 NFPA Standard 101 - Life Safety Code

Your Boston GGAC committee welcomes your articles and event suggestions!

Please contact Christine Reinders, Stacie Suh or Steve Rosen.

stacie@stebbinsduffy.com creinders@CANNONDESIGN.COM
srosen@RDKEngineers.com

Online Thermal Comfort Compliance Tool Included in New ASHRAE User's Manual

ATLANTA – A new User's Manual for ASHRAE's thermal comfort standard provides an overview for new users while also including more detailed information for those more familiar with its requirements.

The User's Manual, based on ANSI/ASHRAE Standard 55-2013, *Thermal Environmental Conditions for Human Occupancy*, provides detailed information on the requirements of the standard. It includes tables, illustrations and examples to aid users in the design, commissioning, and measuring and rating of thermal comfort in buildings.

The manual includes a free online thermal comfort tool that can be used as the official tool for showing compliance with Standard 55-2013 along with all of the published addenda. This online tool is available only to those who purchase the User's Manual and can be accessed from any internet connected device. The web-based CBE/ASHRAE Thermal Comfort Tool was developed by the Center for the Built Environment at the University of California Berkeley.

"For a new user of Standard 55, the manual provides a great overview of what it takes to make a space thermally comfortable for the occupants," Abhijeet Pande, chair of the Standard 55 committee, said. "This includes descriptions of how to account for the environmental, occupant and local factors that impact comfort. For an experienced user of Standard 55, the manual provides insights into requirements that are sometimes hard to understand in the standard. The User's Manual provides examples of calculations that will help even the most experienced user who may struggle with figuring out where and how to get an input needed for thermal comfort calculations."

The manual also includes:

- Information on the intent and application of Standard 55
- Guidance on applying the principles of acceptable thermal comfort and effective thermal control
- Useful reference material to assist designers, owners and users in efficiently completing a successful and compliant design
- Guidance to building operation and maintenance personnel
- Descriptions of compliance options and tools

The cost of the ANSI/ASHRAE Standard 55 User's Manual is \$99, ASHRAE members (\$115, non-members). To order, visit www.ashrae.org/bookstore or contact ASHRAE Customer Contact Center at 1-800-527-4723 (United States and Canada) or 404-636-8400 (worldwide) or fax 678-539-2129.

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 56,000 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.

ASHRAE's HVAC Design Training

HVAC Design: Level I – Essentials

ASHRAE's *HVAC Design: Level I – Essentials* provides intensive, practical training for HVAC designers and others involved in the delivery of HVAC services. In three days, gain practical skills and knowledge in designing and maintaining HVAC systems that can be put to immediate use.

- Fundamentals
- Heating/Cooling Load Calculation
- System Selections
- HVAC System and Components
- Cooling System
- Basic Design of Hydronic Systems
- Basic Design of Air Systems
- Control/BAS

HVAC Design: Level I—Essentials

When: October 3-5, 2016 | Baltimore, MD

Cost: \$1,264 (ASHRAE Member: \$1,009)

Company Discount: Enroll 3 or more participants from the same company at the same time and SAVE!

REGISTER



BONUS!

Get a FREE copy of *Standard 189.1-2014* and *User's Manual*.

A \$200 Value!



Register for **BOTH training sessions** to save money and fast track your experience level!

HVAC Design: Level II – Applications

ASHRAE's *HVAC Design: Level II – Applications* provides instruction on HVAC system designs for experienced HVAC designers and those who complete the HVAC Design: Level I – Essentials training. In two days, gain an in-depth look into *Standards 55, 62.1, 90.1, 189.1* and the *Advanced Energy Design Guides*. Training will focus on a range of topics including: HVAC equipment and systems, energy modeling, designing a chiller plant, and BAS controls.

- Sustainability / Green/LEED / HPB / NZEB
- Standard 55
- Standard 62.1
- Building Systems: Education Facility
- System Applications: Chiller/Boiler, Air Handlers, VAV Terminals
- Life Cycle Cost
- Building Systems: Multi-story Office Building
- Water-to-Water GSHP Option 1 Chilled Beam with DOAS
- Water-to-Water GSHP Option 2 UFAD

HVAC Design: Level II—Applications

When: October 6-7, 2016 | Baltimore, MD

Cost: \$854 (ASHRAE Member: \$699)

Company Discount: Enroll 3 or more participants from the same company at the same time and SAVE!

REGISTER



BONUS!

Get a FREE copy of *ASHRAE GreenGuide: Design, Construction, and Operation of Sustainable Buildings, 4th. ed.*

A \$100 Value!

YOUR INSTRUCTORS



Joel Primeau, P.Eng.,
Member ASHRAE, HBDP,
LEED® AP

[view bio](#)



Dennis Wessel, P.E.,
Fellow/Life Member
ASHRAE, LEED® AP

[view bio](#)

2016-2017 Meeting Schedule

Date	Main Meeting/ Tech Session	Speaker	PDH Credits	Location/ Special Night
September	Lessons Learned	Steve Tafone	1.0	Embassy Suites 550 Winter St. Waltham
Wednesday September 21, 2016	N/A		N/A	Research Promotion/Membership Promotion
October	Net Zero Energy Building	Conor McGuire	1.0	CBRE Amenity Center 100 High St. Boston
Tuesday October 18, 2016	Tech Session: Coil Freeze Protection	Cooney Coil	TBD	Past Presidents & History
November	Tour of Bruins' Training Facility		-	Warriors Ice Arena 80 Guest St. Boston
Tuesday November 8, 2016	N/A	N/A	N/A	Student Activities/ Young Engineers in ASHRAE/Women in ASHRAE
December	Solar Heating - Hosted by ASPE	TBD	TBD	Lantana 43 Scanlon Dr. Randolph
Tuesday December 13, 2016	Tech Session: TBD	TBD	TBD	Joint Meeting with ASPE
January	Steam Design	Kevin Foley	TBD	Embassy Suites 550 Winter St. Waltham
Tuesday January 10, 2017	Tech Session: Montreal Protocol Refrigerant Updates	Trane	TBD	Research Promotion/Membership Promotion
February	Space Pressurization	Jim Coogan	TBD	Metro Meeting Centers 101 Federal St. Boston
Wednesday February 15, 2017	Tech Session: Proper Venting of Fuel Fired Appliances	Frank I Rounds	TBD	Joint Meeting with I2SL
March	Demand Reduction - Hosted by AEE	TBD	TBD	TBD
Wednesday March 1, 2017	Tech Session: TBD	TBD	TBD	Joint Meeting with AEE
April	Attract, Retain & Promote Women in the HVAC Industry	Ginger Scoggins	TBD	Metro Meeting Centers 101 Federal St. Boston
Tuesday April 11, 2017	Tech Session: Back to Basics - Psychometrics	Ginger Scoggins	TBD	Student Activities/Young Engineers in ASHRA/Women in ASHRAE
May	Installation of Officers		N/A	TBD
Tuesday May 9, 2017				
June	Golf Outing	Jim Liston	N/A	Halifax Country Club, Halifax, MA
Monday June 5, 2017				Research Promotion

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