

December 2012  
Volume 48, Issue 4

**INSIDE THIS ISSUE:**

President's Message	2
Internship Opportunity	2
November Speaker Bio	3
Presentation Summary	3
Research Promo Update	3
November Mtg Photos	4
2012-2013 Programs	5
CTTC Article	6
Future City Philadelphia	7
ASHRAE Courses	8
Multi-Society Dinner	9
New Member List	10
2012-2013 Directory	10

**COSTS**

Fees are based on online  
reservations and prepayment.

Philadelphia Chapter Members:  
**\$30**

ASHRAE Members -  
Non-Chapter Members:  
**\$40**

Non- ASHRAE Member:  
**\$40**

Young Engineers (35 & under):  
**\$25**

Students:  
**\$10**



## **QUAKER CITY CLIMATE**

**Thursday, December 13, 2012**

**Breakfast Meeting**

**“Variable Frequency Drive Application for HVAC”**

*presented by*

**Michael McGovern**

**Schneider Electric**

**Global Product Design Team**

Registration Begins: 7:00 AM

Breakfast Served: 7:30 AM

Presentation: 8:00 AM to 9:00 AM

[Click here](#) to Register

See [page 3](#) for more information.

---

**LOCATION**

**The Union League**  
140 South Broad Street  
Philadelphia, PA 19102  
215-563-6500  
[www.unionleague.com](http://www.unionleague.com)

For directions and parking information, check The Union League's web site at  
[www.unionleague.org](http://www.unionleague.org).

---

**The Union League Dress Code**

Business casual attire is required for ladies and gentlemen. Gentlemen may wear a collared shirt and pressed slacks; turtleneck and mock turtleneck shirts may be worn when accompanied by a suit jacket or sport coat. Comparable attire is required for women. The Union League reserves the right to refuse admittance to anyone not adhering to the dress code.

2012- 2013

President

James Piscopo, PE, LEED AP

President-Elect

Jared Johnson, PE

Vice President

Mike Witkowski, PE

Treasurer

Ashley Lester, PE, LEED AP

Secretary

Erik App

Senior Governor

Bob Finkboner

**Governors**

Michael Calabrese, PE, CEM, LEED AP

Casey Younkins

Eric Zanolini

Web Site Editor

Gary Debes

Chapter Technology

Transfer Committee Chair

Eric Zanolini

Research Promotion Chair

Gary Debes

**School Coordinators**

James Lill, PE

Jeff Crozier, PE

Refrigeration

Brian Dail

Student Activities

Committee Chair

Casey Younkins

Membership Promotion Chair

Michael Calabrese, PE, CEM,  
LEED AP

Education Chair

Casey Younkins

Programs Committee Chair

Jared Johnson, PE

Chapter Historian

Justin Mazur, PE

Young Engineers in ASHRAE

Jeffrey Pisarek, PE

## PRESIDENT'S MESSAGE

I am glad to see that many of you have already signed up for our annual December breakfast meeting featuring Michael McGovern of Schneider Electric, who will be discussing VFD applications for HVAC systems. If you have not received the meeting announcement, please follow the link in this newsletter to register. I look forward to seeing everyone at the Union League on December 13.

Unfortunately, the ongoing NHL lockout has forced us to reschedule our annual Night at the Flyers event. We have worked with the ticketing staff on a few options and have decided on the Penn State Hockey game vs Vermont on Saturday, January 19. Stay tuned for more information regarding this event as well as other special events outside of our regular dinner meetings that your board members are hard at work planning for 2013.

I'd like to remind everyone about the upcoming ASHRAE Winter Conference scheduled for January 26 through 30 in Dallas, Texas. This annual event is held in conjunction with the AHR Expo (January 28 through 30) and is a great opportunity for members to socialize with other professionals from around the globe as well as gain valuable continuing education credits and take part in the operation of Society. Head over to [www.ashrae.org](http://www.ashrae.org) for more information.

Have a safe and happy holiday.

Jim Piscopo  
Philadelphia Chapter President  
[c021@ashrae.net](mailto:c021@ashrae.net)

### 2013 Washington Internship for Students of Engineering (WISE)

Founded in 1980 through the collaborative efforts of several professional engineering societies, the Washington Internships for Students of Engineering (WISE) has become one of the premier Washington internship programs. The program's goal is to groom future leaders of the engineering profession in the United States who are aware of and who can contribute to the increasingly important issues at intersection of science, technology and public policy.

Each year, the WISE societies select outstanding 3rd year or 4th year engineering/ computer science students, or students in engineering/computer science graduate programs, from a nation-wide pool of applicants. The students spend nine (9) weeks in the summer in Washington, DC during which they learn how government officials make decisions on complex technological issues, and how engineers can contribute to legislative and regulatory public policy decisions. ASHRAE's Government Affairs Office hosts an outstanding engineering student every summer through this program.

For more information please contact Mark Ames, ASHRAE's Manager for Federal Government Affairs at [mames@ashrae.org](mailto:mames@ashrae.org) or head over to the WISE website (<http://www.wise-intern.org/application/index.html>).

## December Presentation Summary

### **“Variable Frequency Drive Application for HVAC”**

Join Mike McGovern as he discusses the application of VFDs for motor control in HVAC applications. He will demonstrate Mitigation techniques for Harmonics and RFI caused by the deployment of VFDs. He will show Best Practices when selecting Motor Type, Specifying Motor Construction and the Wiring of VFDs. He will discuss the effects on Bearing Life and the relationship of Speed / Torque. Specifying the correct VFD Enclosure package to meet NEMA, Seismic and safe/ efficient servicing requirements will be discussed. We will review the requirements and capabilities of today's VFDs for integrating to Building Automation Systems and the Improvements to the Graphic Terminal Displays that reduce set-up and commissioning time.

### December Speaker Bio

**Michael McGovern**  
**Schneider Electric Global Product Design Team**

Michael McGovern is a graduate of Drexel University and lives in Bensalem Pennsylvania. He has spent 20 plus years supporting VFD and Soft Start Motor Controls for HVAC and Industrial Applications. He is currently responsible for the Schneider Electric's North East Region.

### Research Promotion

**Gary C. Debes, Philadelphia Chapter RP Chair**

I would like to thank the following contributors for their support of ASHRAE Research Promotion campaign:

**Robert Finkboner**  
Wayne Holms  
Clifford Woodbury, III  
Kevin Collins  
**Michael Witkowski**  
**Casey Younkins**  
Michael Beck  
**Gary Debes**  
Brian Kenneth Dail  
Daranee Jareemit  
Geza Fozo

Robert Seeler  
Stephen Piccolo  
**James Piscopo**  
**Erik App**  
**Jared Johnson**  
**Ashley Lester**  
**Michael Calabrese**  
**Eric Zanolini**  
Daniel J. Ebbert  
Robin Martin

These contributors have donated \$14,305 toward our Chapter goal of \$32,500. Those individuals in **bold** are Board of Governors members that have fulfilled the Full Circle requirement of and Honor Roll level contribution of at least \$100 from the BOG and RP Chair to show support from the Chapter leadership. As you can see by the thermometer, we have a long way to go, please be generous when you are contacted by a committee member.



### **November Meeting Photos**



Jim Piscopo (right), Philadelphia Chapter President, presents the November meeting speaker, Todd Rindlisbaker, with a Liberty Bell as a thank you for his presentations at an afternoon seminar and dinner meeting.



(left to right) Gary Debes, Chapter Research Promotion Chair) and Sherry Abbott-Adkins (RVC Research Promotion) with the Philadelphia Chapter corporate sponsors Scott Waetjen (Weil Mclain), Larry Snyder (Clapp Associates), and Bill Reardon and Matt Sano (SMCA Philadelphia).

---

### **YEA Update – December 2012**

The Fall YEA Social took place at Lucky Strike Lanes in Center City Philadelphia on November 15, 2012. Professionals from several firms were in attendance. The event was a success, and all attendees enjoyed themselves. Stay tuned for details for upcoming social events in the winter and spring.

Jeff Pisarek  
YEA Chair  
[c021yea@ashrae.net](mailto:c021yea@ashrae.net)

## PHILADELPHIA CHAPTER PROGRAMS CALENDAR 2012-2013

Date	Location	Topic	Theme
<a href="#">12/13/12</a>	Union League	Variable Frequency Drive Application for HVAC Presented by Michael McGovern of Schneider Electric Global Product Design Team	Breakfast Meeting
1/19/13	Wells Fargo Center	Penn State University vs. University of Vermont Ice Hockey Game - 7:30 PM	
2/13/13	Dave & Buster's	Afternoon Seminar: Benchmarking presented by Energy Efficient Buildings Hub	
		Dinner Meeting: Future of Refrigerants	Student/ YEA Night
March	Fisher's Tudor House	Methods of Effective Room Air Distribution Presented by Dan Int-Hout of Krueger	Trade Show
4/11/13	Holiday Inn Historic District	Afternoon Seminar: Moisture Problems in Buildings	
		Dinner Meeting: Geothermal Heating and Cooling Systems Fail on Two Commercial Projects	Membership Promotion Night
April 29	Northampton Valley Country Club	Golf Outing	
May	Holiday Inn	Fire & Life Safety	Past Presidents' Night

Program calendar is subject to change. Please refer to [ASHRAE Philadelphia Website](#) for up to date information.



This article was a white paper from Aerofin Corporation ([www.aerofin.com](http://www.aerofin.com)).

Please submit articles highlighting novel HVAC technologies to Chapter Technology Transfer Committee Chair Eric Zanolini ([c021cttc@ashrae.net](mailto:c021cttc@ashrae.net)) for consideration in future newsletters.

### **PROTECTION OF WATER COILS TO PREVENT FREEZING DAMAGE**

This bulletin describes the method for removing the water from the coils or the method for supplying glycol to the coils to prevent freeze damage.

Installations that do not use permanent brine or do not have heating protection require that some measures be implemented for winter shutdown to prevent water coils from freezing. EVEN THOUGH COILS ARE DRAINED, ENOUGH WATER MAY REMAIN IN THEM TO CAUSE FREEZE DAMAGE. It should be remembered that the measure of any heating protection depends upon the continuity of heat supply and the reliability of automatic control. Where outside air is tempered by mixing with warm return air, stratification might occur and some of the air may be cold enough to freeze the water in the coils. If there is doubt as to whether a coil is safely protected, it is usually advisable to provide additional freeze protection measures.

This bulletin assumes that the coil piping connections include plugged tees. If some other arrangement is used, the serviceman may have to establish his own procedure, following in general the guidelines of this bulletin.

#### **EQUIPMENT REQUIRED FOR BLOWING OUT COILS WITH AIR:**

The blower recommended for this operation is a portable electric type of blower that should be selected to supply 150 cfm at a static pressure of around 45.0 inch of water.

An adapter is required to connect the blower outlet to the coil connection. This can be done by using a flexible rubber tube. If the blower has a rubber nozzle, connection can be made by cutting off this nozzle and pinning a pipe nipple to the outlet; this nipple may then be connected to the coil using a pipe union or threaded flange, as applicable.

Using air from a compressed air tank is not recommended, as more volume and more air pressure is required than can be supplied by compressed air tanks.

#### **PROCEDURE USING AIR TO BLOW OUT COILS**

1. Shut off the water supply.
2. Drain the coil, using vent and drain valves when provided. In Figures 1 and 2, this step requires opening of the header vent or removing the plug from the header tee, and opening all drains.
3. Connect the blower to the coil supply or return header (upper coil connection) at a point where there will be no reduction in pipe size from the blower to the coil. In Figure 1, the blower is shown connected to the header with top connection (return connection in most applications). Figure 2 shows the blower connected to the header at the top of the coil. Do not attempt to supply air to the coil by connecting the blower to the air vent or drain connection. They are too small and therefore sufficient air cannot be supplied to the coil.
4. Close all outlets on the header to which the blower is connected and remove the plug from the other header. See Figure 1 and 2 for plug location.

[\(click here to read the entire article\)](#)

## Future City December Update

Wow! It's December already. Our 51 participating schools are hard at work on their cities of the future, but there are 3 schools that need our help more than the others. These schools still do not have mentors.

Easton Area Middle School	Easton, PA
Education is the Key Learning Center	Philadelphia, PA (North Philadelphia)
Kutztown Middle School	Kutztown, PA

There are only a few weeks left for these teams to work on the design of their cities, build their models, and write and practice their presentations. A willing mentor can still be a great help to any of these teams, and you can concentrate your efforts over the next 7 weeks. Please let me know if you are interested in working with any of the schools above and I will get you in touch with the team's teacher. For Easton and Kutztown the distance from Philadelphia to these schools has contributed to the difficulty in finding them mentors. If you know any engineers in those areas, or if your company has offices there, please feel free to send this request their way.

We are also looking ahead to our competition in January and still need volunteers for the following positions:

ESSAY JUDGE: read and critique essays written by student teams. Essays will be e-mailed to you so you can read at your own pace over 1 week in mid-January. This is a great option for those who aren't available on January 26.

PRELIMINARY JUDGE: be a member of a judging team that listens so, asks questions of, and judges the preliminary teams. Time commitment – Saturday, January 26, 8:00AM – 1:00PM. Location: Sheet Metal Workers Union Hall, 1301 South Columbus Blvd, Phila. Preliminary Judges are required to attend a training session if you have not judged before. This year's training session has not yet been scheduled but will be a teleconference at 12pm likely on 1/22 or 1/23.

SPECIAL AWARDS EVALUATOR: talk with teach team's members to determine which team best meets the criteria of your organization's special award. Time commitment – Saturday, January 26, 8:00AM – 1:00PM. Location: Sheet Metal Workers Union Hall, 1301 South Columbus Blvd, Phila.

GENERAL VOLUNTEER: help run the competition by volunteering to help with registration, act as a team escort, take photos, update our website, etc. Time commitment – Saturday, January 26, 8:00AM – 1:00PM. Location: Sheet Metal Workers Union Hall, 1301 South Columbus Blvd, Phila. A few volunteers are needed starting at 7:00AM and a few more to help during the afternoon.

Please visit our website at [www.futurecityphilly.org](http://www.futurecityphilly.org) and click on On-Line Volunteer Form. If you sign up to be a Special Awards Evaluator please indicate the name of your organization.

\*\*\*\*\*For those who are motivated and available, the Future City program is in need of a Publicity Chair. Interested? Let me know!\*\*\*\*\*

If you've already signed up this year, thank you. You will receive more detailed competition information as the competition gets closer. Any questions please contact me via e-mail or phone. Please feel free to forward this e-mail to your friends, co-workers, and technical society members.

Thanks.

Jennifer  
Philadelphia Regional Volunteer Coordinator  
Director, Design & Construction  
University of Pennsylvania  
Facilities and Real Estate Services  
Office: 215-573-3935  
Mobile: 215-768-6164  
[jwetzels@upenn.edu](mailto:jwetzels@upenn.edu)

For all chapter member planning to attend the winter meeting in Dallas,  
see the listing of seminars and courses available.  
Registration can be done on the internet or by calling the numbers listed.

## ASHRAE Learning Institute

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

### 2 WAYS TO REGISTER

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

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

### Full Day Professional Development Seminar

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



**The Commissioning Process in New & Existing Buildings**  
Saturday, Jan 26 – 8:00 a.m. to 3:00 p.m.

**Complying with Standard 90.1-2010**  
Tuesday, Jan 29 – 9:00 a.m. to 4:00 p.m.

**Data Center Energy Efficiency**  
Saturday, Jan 26 – 8:00 a.m. to 3:00 p.m.

**Energy Modeling Best Practices and Applications:  
HVAC/Thermal**  
Tuesday, Jan 29 – 9:00 a.m. to 4:00 p.m.

**Healthcare Facilities: Best Practice Design & Applications**  
Saturday, Jan 26 – 8:00 a.m. to 3:00 p.m.

### Half Day Short Courses


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


**Air-to-Air Energy Recovery Fundamentals**  
Sunday, Jan 27 – 2:00 p.m. to 5:00 p.m.

**Commissioning Process & Guideline 0**  
Monday, Jan 28 – 2:45 p.m. to 5:45 p.m.

**Humidity Control: Applications, Control Levels  
and Mold Avoidance**  
Sunday, Jan 27 – 2:00 p.m. to 5:00 p.m.


**Evaluating the Performance of LEED®-Certified Buildings**  
Monday, Jan 28 – 2:45 p.m. to 5:45 p.m.

**Air-to-Air Energy Recovery Applications: Best Practices**   
Monday, Jan 28 – 8:30 a.m. to 11:30 a.m.

**Optimization of HVAC Systems & Components:  
Techniques & Real-World Examples**   
Tuesday, Jan 29 – 9:00 a.m. to 12:00 p.m.

**Application of Standard 62.1-2010:  
Multiple Spaces Equations & Spreadsheet**  
Monday, Jan 28 – 8:30 a.m. to 11:30 a.m.


**Energy Management in New and Existing Buildings**  
Tuesday, Jan 29 – 9:00 a.m. to 12:00 p.m.

**Combined Heat & Power: Design through Operations**   
Monday, Jan 28 – 8:30 a.m. to 11:30 a.m.


**Avoiding IAQ Problems**  
Tuesday, Jan 29 – 9:00 a.m. to 12:00 p.m.

**Understanding Standard 189.1-2011 for  
High-Performance Green Buildings**  
Monday, Jan 28 – 2:45 p.m. to 5:45 p.m.

**Designing Toward Net Zero Energy Commercial Buildings**  
Tuesday, Jan 29 – 1:00 p.m. to 4:00 p.m.

**Introduction to Ultraviolet Germicidal  
Irradiation (UVGI) Systems**   
Monday, Jan 28 – 2:45 p.m. to 5:45 p.m.

**Understanding & Designing Dedicated Outdoor Air Systems**  
Tuesday, Jan 29 – 1:00 p.m. to 4:00 p.m.

**Laboratory Design: The Basics and Beyond**   
Tuesday, Jan 29 – 1:00 p.m. to 4:00 p.m.





**Annual Multi-Society Dinner Meeting**  
**SAVE THE DATE**  
**December 13, 2012**  
**Loews Hotel, 12<sup>th</sup> and Market St, Philadelphia, PA**

Please join the Engineers' Club, Society of American Military Engineers (Philadelphia Post), American Society of Civil Engineers (Philadelphia Section), and the Construction Management Association of America (Mid-Atlantic Chapter) in the annual Multi-Society Dinner Meeting.

This is a good opportunity to kick off the holiday season by networking with engineers that you might not normally see at your society meetings.

**Philadelphia Flower Show Planning and Logistics**

presented by

**Sam Lemheney, Chief Designer and Coordinator, Philadelphia Flower Show**  
Pennsylvania Horticultural Society

The Philadelphia Flower Show, presented annually by the Pennsylvania Horticultural Society for over 100 years, is a nationally-recognized nine-day event. However, the coordination of hundreds of displays, vendors and suppliers requires careful planning and scheduling, particularly as the setup and breakdown periods are very short to work within the windows of availability of the Pennsylvania Convention Center, the Show's venue for the past 15 years. Mr. Lemheney will outline in detail the numerous meetings, planning sessions, and scheduling reviews necessary to make the Show happen successfully.

5:30 Networking

6:30 Dinner

7:30 Program

Once again, CMAA will be coordinating a Toys for Tots collection with the Marine Toys for Tots Foundation.



**Sponsorships Available**

**Technical societies** are encouraged to co-sponsor this meeting as their December meeting, at no charge.

**Financial sponsorships** are available to help reduce the meeting cost to encourage additional attendance.

All sponsors will be listed in the meeting announcements and recognized that night. Contact Susan Best at [sbest@engrclub.org](mailto:sbest@engrclub.org) for more information



The Philadelphia Chapter  
of the  
American Society of Heating,  
Refrigerating and Air  
Conditioning Engineers, Inc.

994 Old Eagle School Road  
Suite 1019  
Wayne, PA 19087-1866  
P 610-971-2169  
F 610-971-4859

Click [here](http://phila.ashraechapters.org) to visit  
our web site at:

<http://phila.ashraechapters.org>

Republication of material  
contained herein is expressly  
forbidden without official  
Chapter authorization. The  
Chapter does not speak or act  
for the Society. Any member  
with material to submit for  
inclusion in the *Climate* can  
send the information to:

Hope Silverman  
P 610-971-2169  
[hope@mmco1.com](mailto:hope@mmco1.com)

Material can include letters to  
the editor, member news,  
upcoming events, comments  
on chapter programs or issues,  
etc.

### **Ideas for Seminars?**

The Chapter Technology Transfer Committee is responsible for providing educational programming in the form of several seminars per year. Last year, the committee presented three half-day seminars on timely HVAC topics: data center cooling, lab design and energy modeling. The committee is planning similar events for the 2012-13 Chapter year, and we want to hear from you about content you would find relevant for a half-day seminar. Please send ideas to the Chapter Technology Transfer Committee at [c021cttc@ashrae.net](mailto:c021cttc@ashrae.net).

---

### **NEW MEMBERS**

#### **Regular**

Frank Durso  
Scott Lawrence Ebling  
John Ware

#### **Associate**

Chad Kellett  
Dawn Muccigrosso  
Vlad Andrei Ciobanu  
Richard Dennis  
Michael Harbove

#### **Affiliate**

Kathryn Sheehan

---

### **The New 2012-2013 Directory is here!**

The latest edition of the Directory of Associations, Consulting Firms, and Manufacturers' Representatives in the Philadelphia Area is now available. It sells for \$23 each. Please contact Hope Silverman at [hope@mmco1.com](mailto:hope@mmco1.com) or 610-971-2169 to order yours today!