ASHRAE Philadelphia Chapter



Quaker City Climate

December 2015
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COSTS

Fees are based on online reservations and prepayment.

Philadelphia Chapter Members:
$30

ASHRAE Society Members - Non-Chapter Members:
$40

ASHRAE Life Members:
No Charge

Non- ASHRAE Member:
$40

Young Engineers (35 & under):
$25

Students:
$10

Thursday, December 17, 2015

Breakfast Meeting

"City of Philadelphia Energy Programs and Procedures"

presented by

Adam Agalloco
Energy Manager
City of Philadelphia

Click here to Register

Registration Begins:	7:00 AM
Breakfast Served:	7:30 AM
Presentation:	8:00 AM to 9:00 AM

See page 8 for more information on the presentation and speaker.

LOCATION

The Union League
140 South Broad Street
Philadelphia, PA 19102
215-563-6500

For directions and parking information, check The Union League's web site at www.unionleague.org.

The Union League Dress Code

It is the intention of the Dress Code to provide a set of guidelines within which it is expected that guests will demonstrate discretion and good judgment. The Union League reserves the right to refuse admittance to anyone not adhering to the dress code. Jackets are not required at breakfast. Business casual dress is permitted in the private meeting rooms.

Men:	Business casual attire is defined as a collared shirt and slacks.
Women:	Pants should be tailored and are acceptable when worn with a jacket or other garments which would be appropriate if worn with a skirt.
Unacceptable Attire:	The following attire is never acceptable on the first or second floors of the League: jeans, denim wear, tee shirts, athletic wear, tank, halter, or jogging tops, shorts, baseball caps, sneakers, casual or beach footwear.

2015-2016

President
Ashley Lester, PE, LEED AP

President-Elect
Casey Younkins, PE

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Mike Radio, PE, CEM, BEMP, LEED AP

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Mike Witkowski, PE

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Eric Feinschil
Sean Hughes, PE
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James Piscopo, PE, LEED AP

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Research Promotion Chair
Gary Debes

Basic School Coordinator
James Lill, PE

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Justin Barta

Membership Promotion Chair
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Student Activities Chair
Erik App

Program Committee Chair
Casey Younkins, PE

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Young Engineers in ASHRAE
Jeffrey Pisarek, PE

Public Relations
Mike Witkowski, PE

Grassroot Government Activities
Edward Decker

Golf Outing Director
Tim Reinking

Honors and Awards Committee
Dan Brown

President's Message

I don't believe 2015 is almost over! It has been a great year and we're finally into December with all the craziness and excitement that it normally brings! I hope everyone had a great Thanksgiving and thanks to everyone who came to our November meeting at Dave and Buster's. I really enjoyed hearing both presentations by Dr. Jin Win and Bradford Crowley about the advanced technologies they are implementing in their work. Their presentations were interesting and informative. I look forward to having other local engineers speak at a future meeting!

Our December meeting will be our traditional holiday breakfast meeting at the Union League, featuring a presentation by Adam Agalloco on the "City of Philadelphia Energy Programs and Procedures". Adam is the Energy Manager for the City of Philadelphia and will be discussing energy management in Philadelphia, including work that the City has completed on energy and information on what future initiatives might be. I hope everyone can make it!

I hope everyone has a safe and happy holiday season! Hope to see you at the breakfast meeting or in 2016!

Ashley Lester, PE, LEED AP
Philadelphia Chapter President
c021@ashrae.net

Canstruction® Update

The Philadelphia Chapter is looking to build on last year's success and is looking for volunteers to help with the design and planning.

Please contact Chris Gale or Mike Witkowski if you are interested.

This year's theme is *Redemption*.



Grassroots Government Advocacy Committee Announcements

Hearings are currently taking place in Harrisburg on **HB 635**, which will change the Uniform Building Code review cycle from 3 years to 6 years. Please read the Bill by clicking here and let the Board members know your opinions one way or another.

Please remember government advocacy is a grassroots committee.
You as members need to take action to shape your industry / career.

The State of New Jersey just adopted their new State building codes. Below is a link to a list of their codes.
http://www.nj.gov/dca/divisions/codes/codreg/

Also, the Committee is looking for buildings that have earned a rating in the ASHRAE Building Energy Quotient (bEQ) Building Energy Labeling Program. If anyone is currently utilizing, or plans to utilize, this program to evaluate a building's potential energy, please contact Edward Decker (edward.a.decker@gmail.com).

YEA Scholarship

We are asking that working professionals nominate young engineers at your firms for a YEA scholarship. These individuals should have shown outstanding performance in the HVAC&R industry and show an active involvement and interest in ASHRAE. The nomination form may be downloaded here. The winner will be announced at a future ASHRAE meeting. Nominations should be sent to Jeffrey Pisarek at c021yea@ashrae.net.

YEA Social

Our last YEA Social was held at Lucky Strike Bowling Alley in Center City in November. The event was a success. There were 13 people in attendance, and everyone had a good time. We look forward to another social event next year!

Future City Philadelphia

Hello from Future City Philadelphia!

The program is going strong with 52 schools registered and is getting down to the wire. The first submission, the Virtual City, were due on December 14th. The next submission, the City Description, is due December 21st. We are still looking for volunteers to judge these two submissions. This is something you can do on your own time. The information will be emailed to you within the next or so. Judging is to be completed by mid January. For more information, please click here: http://www.futurecityphilly.org/fcvolops.html

There are still some schools that need a mentor. Even with only a little more than a month to go, it is always helpful to have a mentor to make that final push. The following schools can use a mentor:

Beverly Hills Middle School	Upper Darby, PA
Birney Charter School	Philadelphia, PA
Holy Family Regional Catholic	Levittown, PA
St Elizabeth Parish School	Uwchlan, PA

If you are interested in working with any of the schools listed above, please let me know as soon as possible. We will get you in touch with the team's teacher.

We are also still in need of more preliminary judges, special awards evaluators and general volunteers for the day of the competition, which is Saturday, January 23th at Archbishop Carroll High School in Wayne, PA. Preliminary judges and special awards evaluators are needed for the morning session of the competition. General volunteers are needed throughout the day to help organize the schools, get the schools to the judging rooms, collect scorecards, etc.

Please visit our website at www.futurecityphilly.org and "Click here to sign up as a Volunteer" on the top left of the page. There you can register to be a mentor, judge, or general volunteer.

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.

Thank you for your support!

Karen R. McManuels, PE
Philadelphia Regional Volunteer Coordinator

Manager, Operations
Associated Engineering Consultants, Inc.
485 Devon Park Drive, Suite 113
Wayne, PA 19087
610-688-3980 x132
610-688-4566 fax
610-389-5692 cell

ACE MENTOR PROGRAM
ARCHITECTURE • CONSTRUCTION • ENGINEERING

CALL FOR VOLUNTEERS & SAVE THE DATE

ACE NEEDS YOU!

Did you resolve to get more involved in 2015?

What's ACE?

The **ACE Mentor Program of Eastern Pennsylvania** is the local affiliate of a national non-profit organization. ACE (Architecture – Construction – Engineering) engages, excites, and enlightens high school students to consider or pursue careers in the integrated construction industry through mentoring, scholarships, and grants. Students are recruited from public and private high schools in Philadelphia and the suburbs, with special effort made to reach traditionally underrepresented women and minorities. ACE is the design and construction industry's fastest-growing high school mentoring program, reaching over 8,000 students annually.

How Do I Become a Mentor?

ACE follows a group-mentoring model: 8-10 mentors per team of 20-30 students meet biweekly during the school year (approx. 10 meetings). Teams meet at volunteers' offices and on jobsites, then present their final designs at a year-end event.

Mentors can sign up as individuals or with a group of colleagues. The process is simple:

- Complete an online application: www.acementor.org
- Pass a background check
- Complete a training program
- Attend biweekly meetings through the school year (mentors are encouraged but not required to attend every meeting)

ACE Job Shadowing Opportunities

ACE is seeking local firms to offer job shadowing opportunities for students in the ACE program. Just a single day can provide excellent exposure to your field. If you would like to have a student shadow one of your architects, contractors, or engineers, please contact: **Timothy Reinking** | TReinking@hvac.mea.com

Want to Learn More?

Tiffany Millner, AIA, NOMA
Affiliate Director
ACE Mentor Program
36 South 18th Street
Philadelphia, PA 19103
T: 215-820-8929
easternpa@acementor.org
www.acementor.org

Learn the latest on twitter:
Follow **@ACEmentorEPA**







PHILADELPHIA CHAPTER PROGRAMS CALENDAR 2015-2016

Date	Location	Topic	Theme
12/17/2015	Union League	City of Philadelphia Energy Programs and Procedures by Adam Agalloco	Breakfast Meeting
1/13/2016	Wells Fargo Center	Flyers vs. Bruins	Social
2/11/2016	Dave & Buster's	Student Night with SMCA	Student Night and YEA
3/10/2016	TBD	Trade Show	
4/14/2016	Dave and Buster's	LEED by Jim Newman, Newman Consulting Group	Students and Membership
5/16/2016	DuPont Country Club	Golf Outing	
5/12/2016	Dave and Buster's	TBD	Past President's Night

Program calendar is tentative and subject to change. Please refer to ASHRAE Philadelphia Website for up to date information. Advance registration and pre-payment are required before the meetings.

We need your attendance!
If we are below our guaranteed level for attendees at our meetings, our treasury could be negatively effected. Our programs are designed around the membership's input and we all need to support these meetings to maintain a strong/informed association. We hope to see you at our next meeting. Please come out and support our Chapter!

ASHRAE Philadelphia Corporate Sponsorships Available

The Philadelphia Chapter invites your company to join as a Corporate Sponsor for the 2015-2016 year. Your firm's participation in this program would enable us to make a wonderful donation to ASHRAE Research Promotion which includes over $ 1.5 million in local research funding.

Corporate Sponsors are listed on our web site, in our newsletter, and in our annual directory. They receive free copies of our directory and recognition at all of our events. With the ease of one payment, you may get all this, as well as free dinner tickets good for our monthly meetings, and make a valuable contribution to ASHRAE Research at the same time.

If you are interested, please email us at philachapter@mail.ashrae.org. The Board of Governors thanks you for your continued support of ASHRAE.

ASHRAE Philadelphia Chapter
Celebrating One Hundred Years
1916-2016

The Philadelphia Chapter ASHRAE
Cordially invites you and your family
to ASHRAE Region III CRC 2016
August 18, 19 & 20, 2016

The Sonesta Hotel Philadelphia
1800 Market Street
Philadelphia, PA 19103



****
Thursday August 18, 2016
All Day Technical Sessions
****
Friday August 19, 2016
7:00 – 10:00 PM
Welcome Party at the Reading Terminal Market

Oysters from Pearl's
Sushi Bar
Pulled Pork Sandwiches from DiNic's
Mini Cheese Steaks from Spataro's
Salad Bar from Tootsie's Salad Express
Hoagies from Salumeria
Chick Peas, Spinach & Cheese over Rice
Assorted mini pastries from Termini Bros.
Coffee and Tea
****
Each Adult gets two tokens worth well drinks or beer from Molly Malloy's
****
$10 parking voucher for 11th & Arch Street Garage

For more information, go to:

http://region3.ashraeregions.org/reg_3cd.htm



Save the Date !!

Philadelphia Chapter ASHRAE
Golf Outing

Monday, May 16, 2016
DuPont Country Club
Wilmington, DE

Shotgun start will be at 12:30 pm.
Online registration and full outing details to follow.

December Meeting Presentation

Energy Management at the City of Philadelphia

presented by

Adam Agalloco

Energy Manager
City of Philadelphia

The municipal government is the largest user of energy in the City of Philadelphia, with an annual spend of nearly $100 million on energy. The presentation will review the role of the City's Energy Office, the entity responsible for managing this portfolio, highlights of work that the City has completed on energy and information on what future initiatives might be.

Speaker Bio

Adam Agalloco is the Energy Manager for the City of Philadelphia. In his role, he manage a team of individuals responsible for developing and implementing energy conservation and energy efficiency projects within municipal facilities and leads the strategic procurement of City government's energy supply. The City, through its sustainability plan, *Greenworks Philadelphia*, has a broad range of initiatives focused on reducing the City's environmental impact and greenhouse gases. Prior to joining the City of Philadelphia, Adam worked for a large wind energy company and a design engineering firm. Adam has a bachelor's degree from Villanova University in Mechanical Engineering and a Master's degree in Sustainable Design from Philadelphia University.

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

Did you know there are free design guides available on the ASHRAE web site? The regular technical article is not the only place to get great free information each month. Take a few minutes to log on and see the variety of design guides available to download at no cost. The design guides can be located by using the link below.
https://www.ashrae.org/standards-research--technology/advanced-energy-design-guides

Conversion From Constant Flow System to Variable Flow

By Tony Egan

HOW TO SAVE PUMPING ENERGY IN HYDRONIC HVAC SYSTEMS

Hydronic HVAC equipment is typically oversized; even for design day conditions. Design day conditions are the design flow and head losses necessary to meet system heat loss calculations based on the listed highest design and lowest temperature periods for the geography. Many times equipment is oversized by design to lessen the risk of an equipment redesign being necessary due to system calculation errors and/or building changes during construction.

CONSTANT FLOW SYSTEM TO VARIABLE FLOW SYSTEM

To reduce power costs, it may be decided to change the system from a Constant Flow type to Variable Flow. With 3-way valves installed there is no opportunity to reduce the pump flow, as the valve bypass port is design to open as the load is reduced; resulting in constant pump flow. Should the bypass line valve be closed, the 3-way valves would effectively become a 2-way valves. As the valve then modulates closed to reduce a load coil flow on mild days, the excess flow would no longer be bypassed; thus the loop differential head would increase as the control valve throttles the flow. As this throttling reduces the system flow, pumping power needs are reduced.

THE VALUE OF VARIABLE SPEED PUMPS IN VARIABLE FLOW SYSTEMS

There are two major decisions to be made to derive full benefits from variable flow systems. The first is whether to make the system design suitable for variable flow and the second is to understand the value of investing in variable speed pumps. Converting the system to variable flow alone while retaining constant speed pumps will save pumping energy; typically 20% to 30%. This energy saving does not come easily however. As the flow from constant speed pumps is throttled by 2-way valves the pressure across the pumps and the control valves increases. This leads to some reduction in the pump life due to higher bearing loads and, perhaps more importantly, makes the conditioned spaces temperature harder to maintain. As the pressure across control valves increases the valves must close to a greater extent to allow a given amount of water to pass through the load. With higher differential pressures a small change in the valve lift results in a large change in the flow; this can cause 'hunting' of the valve stem position resulting in loss of effective control with fluctuating conditioned space temperatures.

Variable speed pumps, combined with a control system that recognizes current system conditions, will reduce pump speed during part-load periods, reducing pressure in the system to a value that satisfies the current load flow requirements with minimum over-pumping. This will reduce pumping energy use to a minimum, extends the life of the pumps and motors and increase the effectiveness of the control valves by reducing the differential pressure across them.

(click here to read the entire article)

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

Visit
our web site at:

www.ashraephilly.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

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

New Philadelphia Chapter Associates and Members

Dennis Johnsen
Alexander Quercetti
John Romano
Michael Catalano
Jason Trefz
Christine Smith
Tijo Joseph
Joel Smith
Stephanie Fletcher
David Lemons
Jorgo Rexho

Membership Advancement

If you are currently an ASHRAE Associate Member, becoming a full Member is easier than you think! The following count toward the required **12 points** to advance to full membership status. You must update your ASHRAE online biography and send an email to membership@ashrae.org to advance.

Non-accredited degree = 4 points
Accredited degree = 6 points
PE = 4 points
Industry experience = 1 point/year

ASHRAE Winter Conference

January 23-27, 2016
Orlando, Florida
Click here for more information.

The New 2015-2016 Directory is Available!

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.

Send your check to Emily Albert, ASHRAE, 994 Old Eagle School Road, Suite 1019, Wayne, PA 19087.

If you prefer to pay by credit card, please call Emily at 610-971-2169 or email her at Emily@mmco1.com.