December ASHRAE Meeting

**Topic:** Overview of Refrigeration

**Presenter:** Michael Collins, Eagle Bay Refrigeration

**When:** Monday December 11th, 2017 at 12pm

**Where:** City Grill
384 East Ave, Rochester

**Cost:** $25.00

Please RSVP by noon Friday, December 8th to Bret Fryover fryoverb@erdmananthony.com
Or
ASHRAERochester@gmail.com

PDH Approved!

See page 5 for more details

Statements made in this publication are not expressions of the Society or of the chapter and may not be reproduced without special permission of the chapter.
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Jeff.close@pres-services.com

**Buyer’s Guide**
TBD
Mission Statement

ASHRAE will advance the arts and sciences of heating, ventilation, air conditioning, refrigeration and related human factors to serve the evolving needs of the public and ASHRAE members.

Vision Statement

- will be the global leader in the arts and sciences of heating, ventilation, air conditioning and refrigeration.
- will be the foremost, authoritative, timely and responsive source of technical and educational information, standards and guidelines.
- will be the primary provider of opportunity for professional growth, recognizing and adapting to changing demographics, and embracing diversity.
President’s December Message

December Newsletter 2017
President’s Message

Our meeting in November was on “Advancements in Variable Speed Control of Centrifugal Pumps” presented by Michael Licastro from Armstrong Fluid Technology. We appreciate Michael taking the time to share his expertise with our chapter. Thank you to everyone that attended.

Our December meeting will be a Resource Promotion meeting. We are very thankful to all who donate to ASHRAE Resource Promotion. Resource Promotion helps support scholarships and ASHRAE research that has a great impact on our industry. If you are not currently a donor and would like to be please contact our Resource Promotion chair Matt Develin for details on how you can help support ASHRAE Resource Promotion at mdevlin@bergmannpc.com.

Please continue to check out our website at www.rochester.ashraechapters.org for information on upcoming chapter meetings, current officer list and contact information, chapter newsletters, and more! Also take a minute and like us on Facebook at www.facebook.com/#!/ashraerochester.

Bill Clark, P.E., CEM
2017-2018 President
Rochester Chapter

Bill Clark, 2017-2018 President
December Meeting Info

Please consider joining us for this upcoming monthly meeting and/or please forward this e-mail to anyone you may think would be interested in attending or benefit from this presentation.

October ASHRAE Meeting << PDH APPROVED!>>

Date: Monday, December 11th, 2017
Location: City Grill
Time: 12:00 PM Lunch Buffet ... Presentation to start approx. 12:30pm
Cost: $25.00
Speaker: Michael Collins, Eagle Bay Refrigeration
Topic: Refrigeration Compressors
Note: (1) PDH—Approved!

Remember, as an option, we have on-line payments available via PayPal. (no PayPal account required)

<< Pay for Meeting Registration online via PayPal >>
Use the following link: http://rochester.ashraechapters.org/meetings.html

Cash or check payment is still accepted at the door with your reservation.

Please RSVP no later than noon Friday December 8th to Bret Fryover
Phone: 585.563.5152 or e-Mail ... ASHRAERochester@gmail.com or fryoverb@erdmananthony.com

Refrigeration Compressors 101

Don’t settle for standard solutions without understanding the options and potential trade-offs.

A review of the basic refrigeration system and the three main positive displacement compressor types used in our industry: Reciprocating, Screw and Scroll. The basic operation of each type will be discussed, as well capacity control for each. Optimization for efficiency will be discussed, with an emphasis on low condensing temperatures for energy savings in chiller applications. A sample energy savings calculation using a BIN hour analysis will be presented. Lastly, a brief discussion will be presented on refrigerant changes in the marketplace in general, as well as those most commonly used in commercial applications as they relate to the current phase-out schedule.

Presented By:
Michael Collins
Eagle Bay Refrigeration, President

Michael has over 25 years of experience in HVAC and Refrigeration industry. Twelve years as an application engineer with Carlyle Compressor, a Division of Carrier Corporation, four years as an Account Manager and Application Engineer with BITZER US and four years as the Application Engineering Manager for Carlyle Compressor.

Education
BS Mechanical Engineering, University at Buffalo

Michael now owns and operates Eagle Bay Refrigeration, which provides custom HVAC/R equipment and engineering consulting services.
Highlights from November ASHRAE Meeting

Michael Licastro from Armstrong Fluid Technology discusses the advancements in variable speed control of centrifugal pumps.
Job Postings & Help Wanted

This section of the newsletter is reserved for those firms wishing to advertise their desires to hire from the Chapters Membership.

If you are interested in utilizing this FREE service provided by the Rochester Chapter, please contact our Chapter President, Bill Clark at (585) 303-0729 or by email william.clark@DayAutomation.com.

This service is available to ASHRAE members for any local firm in our industry looking for knowledgeable persons in the HVAC&R industry.

Presidential Award Of Excellence

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Fiscal Year: 2017-2018

Like us on Facebook!

Visit our new Facebook page by searching for “ASHARE Rochester” on Facebook. Any ideas for additions or improvements email to Mark Kukla at mark@airsystemsbalancing.com. Keep up to date with current events and photos from recent meetings.
Committee Updates

ASHRAE Technology Awards

It’s not too early to start thinking about your submission!

Awards are presented in six categories for new and existing facilities. Judging based on Energy Efficiency, IAQ and Thermal Comfort, Innovation, Operation and Maintenance, Cost Effectiveness, Environmental Impact and Quality of Presentation.

Only a one-page application, schematic and short narrative.

Be recognized by your peers and move on to the Regional Competition.

Submissions will be due in April, 2018.

The following link includes additional details about the awards program:
https://www.ashrae.org/membership--conferences/honors--awards/technology-awards-program-overview

Email jwiedrick@bergmannpc.com with any questions.

Student Activities

Opportunities for ASHRAE Student Members

One of the fundamental goals of ASHRAE is to provide opportunities for young Student Members to learn and grow.

Among these opportunities is an Undergraduate Grant, available to college students to use for funding various projects. This allows students to find new solutions to problems while significantly contributing to the ASHRAE Society as a whole.

Locally, this funding is being pursued by Rochester Institute of Technology to support their project studying a senior design project looking into a design that will heat and ventilate a baby stroller for use in cold weather climates. The undergrad design team includes six RIT students from the Mechanical Engineering, Electrical Engineering and Industrial Engineering Departments. This is part of their Senior Design Project and will be displayed at various campus events when completed.

A link to the ASHRAE Undergraduate Grant website is listed below:

https://www.ashrae.org/membership--conferences/student-zone/scholarships-and-grants/about-undergraduate-program-equipment-grants

Want to learn more about Student Membership and Opportunities to reach out to the future engineers in our community? Please reach out to me directly at rhudson@ibceng.com.

- Rob Hudson, PE, BEMP, CEM
  Student Activities Chair
Committee Updates

YEA

YEA Leadership Weekend will be held in Seattle, WA from March 23-25 2018. The Rochester ASHRAE Chapter can host limited ASHRAE YEA members at no cost to the participants. Contact Matt Kremers at mkremers@mcsmms.com for more information.

Are you interested in expanding your knowledge, meeting fellow engineers and having some fun along the way? Look no further than YEA Leadership Weekend! YEA Leadership Weekend is an opportunity for you—the future leaders of ASHRAE—to learn more about Society, develop soft skills and network with other young professionals. Over 600 YEA members have already taken advantage of this great opportunity...will you be next?

This event will include segments on understanding your own personality as well as other types, leadership development for young professionals, communication techniques and ASHRAE leadership opportunities.
MEMBERSHIP

WHO ARE ASHRAE MEMBERS?
Members are represented by consulting engineers, mechanical contractors, building owners, employees of manufacturing companies, educational institutions, research organizations, government, architects, students or anyone concerned with HVAC&R for the built environment.

WHAT MEMBER TYPE IS RIGHT FOR YOU?
ASHRAE has three grades of membership awarded to applicants based on their experience and participation in the industry. Before you apply and select a member grade, we encourage you to visit the ASHRAE website to see the member grades and their corresponding member benefits. Prices shown are in US currency.

Member ($206)
Available to anyone with 12 years or more ASHRAE approved experience in the HVAC&R industry.

Associate Member ($206)
Available to anyone with less than 12 years of ASHRAE approved experience in the HVAC&R industry.

Affiliate Member
($52 first year, $78 second, $103 third)
Affiliate grade is for individuals who are new to ASHRAE (no previous membership in ASHRAE) and are age 30 or younger. It provides a great beginning for young professionals who wish to become involved in ASHRAE. (Does not include the annual member benefit of the ASHRAE Handbook).

Privacy Policy: By supplying your email address you are agreeing to receive electronic communications from ASHRAE, with the knowledge that you may opt-out of certain electronic communication once you become a member. Please visit ashrae.org/privacypolicy for additional information.

MEMBER BENEFITS AND RESOURCES

PUBLICATIONS & RESOURCES
- ASHRAE Handbook (Available to Members and Associates) in print or PDF, as well as a 12 month complimentary subscription to the Handbook Online, which provides online access to the most recent 4 volumes of the Handbook series.
- Monthly ASHRAE Journal in print and online
- Quarterly High Performing Buildings magazine in print and online
- e-Industry and eSociety electronic newsletters
- Access to members-only resources through ASHRAE.org, including the ASHRAE Journal and ASHRAE Research archives
- Discounts on over 300 of the industry’s leading technical publications

PROFESSIONAL EDUCATION AND CAREER DEVELOPMENT
- Discounted registration for education courses through the ASHRAE Learning Institute, as well as ASHRAE certification programs
- Earn PDHs/CEUs/AIA LUs to maintain your professional designation/license with courses, seminars, and webcasts
- Gain industry knowledge, communication, and management skills by participating in ASHRAE technical programs or committees
- Post jobs or seek employment utilizing www.ASHRAEjobs.com

NETWORKING
- Connect locally, regionally and internationally with over 57,000 members in over 180 chapters worldwide
- Learn, share, and grow at the Annual and Winter Conferences, on ASHRAE technical committees, and ASHRAE xChange.org
- Participate in your local chapter or regional meetings and events

Code of ethics: By submitting this application you are agreeing to abide by the ASHRAE Code of Ethics, found at ashrae.org/codeofethics.

Completed applications or questions can be sent to ASHRAE via email: membership@ashrae.org | fax: 678-539-2129 | phone: 1-800-527-4723 or 404-636-8400 mail: 1791 Tullie Circle, NE, Atlanta, GA 30329
ASHRAE MEMBERSHIP APPLICATION. Please complete each applicable section. Prices valid from 7/01/2017 - 6/30/2018.

1. Contact Information.  □ Mr. □ Ms. □ Dr.  *Birthday (required) ________ / ________ / ________
   Name ____________________________________________________________________________
   (First) (Middle) (Last) (Designation)
   Primary Address      This is a □ Home □ Business
   Alternate Address    This is a □ Home □ Business
   Company Name__________________________
   Company Name__________________________
   Address_____________________________________________
   Address_____________________________________________
   City ________________________ State/Province____________
   City ________________________ State/Province____________
   Zip/Postal_____________ Country_______________________
   Zip/Postal_____________ Country_______________________
   E-mail ______________________________________________
   Alternate E-Mail______________________________________
   Telephone________________________ Cell________________________
   Telephone________________________ Cell________________________
   Name/Chapter of referring member (if applicable):__________

2. Member Grade.
   For additional information on member grades and benefits see reverse or visit ashrae.org.
   □ Member — $206 (must complete section 2a)
   □ Associate Member — $206
   □ Affiliate Member — $52 first year/$78 second/$103 third
   (new members, under 30)
   □ Reinstall my previous membership. Previous member number:__________

2a. Biographical Information. ONLY Member Grade applicants must complete this section.
   Use additional sheets or attach resume if necessary. Associate and Affiliate grade applicants do not complete this section.

   School Location Dates of Attendance Degree/Course of Study
   ____________________________________________________________________________
   ____________________________________________________________________________
   ____________________________________________________________________________

   Employer Location Dates of Employment Position/Title
   ____________________________________________________________________________
   ____________________________________________________________________________
   ____________________________________________________________________________

   Professional Engineering Registration Information License Number Date Issued Field of Registration
   ____________________________________________________________________________
   ____________________________________________________________________________
   ____________________________________________________________________________

3. Demographics. Please answer the questions by entering the codes in the space provided.

Which best describes your title? __________
   B- President  S- Purchasing
   C- Partner   T- Drafts-person
   D- Associate U- Estimator
   E- Owner     W- Technician
   F- Vice President X- Instructor
   G- VP Eng./Chief Engineer Professor
   K- Design Eng./Designer
   L- Proj/Application Eng.  Y- Student
   O- Facility Eng./Mngr.  Z- Librarian
   P- R&D Eng. ZZ- Other
   R- Sales Engineer ______

Which best describes your firm? __________
   11- Consulting Eng.  51- Manufacturer
   15- Design/Build  62- Sales Engineering
   21- Contractor  71- Wholesaler/Dist.
   26- Property Mgmt & Dev.  83- Library
   31- Industrial Facility  84- Tech/Prof Assoc.
   41- Commercial Facility  85- Trade Assoc.
   42- Gov’t, Health, Education  86- Student
   43- Utility  91- Other/Misc.

Which best describes your function? __________
   1- Design/Application  5- Sales
   2- Manufacturing  6- Research
   3- Maintenance  7- Teaching
   Operations  8- Other
   4- Management

4. Areas of HVAC&R Interest. Enter the code for your area of interest from the list below:
   Code:____________
   Heating
   A- Hydronic  Refrigration
   B- Forced Air  S- Unitary Refrigeration
   C- Steam  T- Commercial Refrig.
   D- Process  U- Industrial Refrig.
   E- Service Water  V- Process Refrig.
   F- Solar  W- Low Temp (<60F)
   G- Radiant  X- Refg. Components
   Ventilating & AC
   H- Air Cleaning
   J- Industrial
   K- Clean/Computer Room
   L- AC Equip. <20 tons
   M- AC Equip. 20-200 tons
   N- AC Equip. > 200 tons
   P- Air Handling Systems
   Q- Evaporative Coolers
   R- IEQ
   Refrigeration
   S- Unitary Refrigeration
   T- Commercial Refrig.
   U- Industrial Refrig.
   V- Process Refrig.
   W- Low Temp (<60F)
   X- Refg. Components
   General Areas
   1- Controls/Instrumentation
   2- Heat Transfer Fluid Flow
   3- Pipes, valves, fittings
   4- Refg. & Lubrications
   5- Sound & Vibration
   6- Insulation
   7- Energy Recovery
   8- Food Application
   9- Health, Safety
   10- Commissioning
   Preferred Chapter □ Home □ Business □ Other__________

5. Handbook Preference. New Members and Associate Members receive a 12 month complimentary subscription to the Handbook Online, which includes access to the most recent 4 volumes of the Handbook. If you would like a print copy of the ASHRAE Handbook in addition to this subscription, please chose either IP or SI version below. Handbooks are printed and mailed to members annually in June.
   □ IP (inch/pound units), print with PDF
   □ SI (metric units), print with PDF
   □ PDF only (IP & SI)

6. Privacy Notice If you DO NOT wish to receive 3rd party physical mailings, please check here. □

7. Include chapter membership dues: □ Dues Amount:__________ Paying chapter dues is encouraged but not mandatory, and can be paid separately to the Chapter at anytime. Contact chapter officers for amount. Add this amount to your Society dues in the 'Total Amount' of the payment section below.

8. Payment. □ Visa □ Mastercard □ Amex □ Diner’s Club □ Check/money order**
   Card # ___________________________ Expiration Date ________ / ________
   (Month) (Year)
   Total Amount:__________ Signature__________

CHECKS WILL BE ACCEPTED IN US AND CANADIAN FUNDS. CREDIT CARD PAYMENTS ACCEPTED IN US FUNDS ONLY.
Why ASHRAE?

• Discounts on publications, conferences, and continuing education opportunities
• Society and chapter-level scholarships for both undergraduate and graduate engineering students
• Discounts for student members on select publications
• Digital access to the monthly ASHRAE Journal and the quarterly High Performing Building Magazine
• Participate in events with your local ASHRAE Chapter
• Find internships and jobs at jobs.ashrae.org
• Senior Undergraduate Project Grant Program
• Discounted ASHRAE Annual and Winter Conference registration (AHR Expo, Student Program, Technical Sessions)
• Gain essential skills not taught in class
• Make great new friends!

Join online at www.ashrae.org/students

At the student branch level, you'll enjoy meeting other students with similar interests – if your school hasn't yet started a student branch, take charge and contact a faculty member and ask for help on getting started!

Developing Economies Program for Students

Students who reside in countries categorized as "Low Income" and "Lower Middle Income" developing economies by the World Bank List of Economies statistics are eligible to participate in this program. Students in this program receive all the benefits of regular student membership, including online access to the ASHRAE Journal (digital access only - participants will not receive a monthly printed copy of the ASHRAE Journal).

Visit www.worldbank.org for a listing of qualified countries: Low Income and Low Middle Income only. If you currently reside in one of the countries listed in those categories, simply check the box marked ‘Developing Economies Program’ in the ‘Purchases’ section of this application.
ASHRAE Student Membership Application valid July 1, 2017 through June 30, 2018

### 1. Contact Information

<table>
<thead>
<tr>
<th>Option</th>
<th>Selection</th>
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<tbody>
<tr>
<td>Mr.</td>
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*Birthday (required) __________ / __________ / __________

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Primary Address (where all correspondence will be mailed)

<table>
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Alternate Address

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E-mail ____________________________  E-mail ____________________________

Phone: ____________________________  Phone: ____________________________

☐ I would like to receive occasional student updates via email. | ☐ I would like to participate in the ________________ASHRAE Chapter.

### 2. Student Branch Information

School Name: ____________________________

Address: ___________________________________________________________

City: ____________________________ State/Province: ____________________________ Postal Code: ____________

### 3. Education

Classification:  

- [ ] Freshman
- [ ] Sophomore
- [ ] Junior
- [ ] Senior
- [ ] Masters/PhD.

Full time [ ]  Part time [ ]

Degree: ____________________________  Expected Graduation Date: ____________

(MM/DD/YYYY)

### 4. Sponsor Information

All student applicants must have the name and member number of an ASHRAE member serving as their student sponsor. If your Student Branch Advisor is an active Associate or Member of ASHRAE, he/she can serve as your sponsor. If you need assistance locating a sponsor, please email students@ashrae.org or call 678-539-1212. Also, you must list the name, phone and email address of your faculty advisor or course instructor.

<table>
<thead>
<tr>
<th>Field</th>
<th>Information</th>
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<tbody>
<tr>
<td>Sponsor Name</td>
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</tr>
<tr>
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Advisor/Instructor: ____________________________  Email ____________________________

### 5. Purchases

- [ ] Student Membership- Regular: $21
- [ ] Student Membership- Developing Economies Program (see reverse for qualifications) $11
- [ ] Printed Edition of the current ASHRAE Handbook: [ ] I-P  [ ] SI  Student Member Price: $49.00
- [ ] PDF Version of the ASHRAE Handbook (Includes both I-P and SI Units) Student Member Price: $39.00
- [ ] ASHRAE Handbook Online - One Year Subscription to all four volumes of the Handbook series: $33.00

*Additional publications are available at student member discounts at ashrae.org/studentbookstore

### 6. Payment

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<td>Check/money order**</td>
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Card # ____________________________  Expiration Date ____________/__________

(Month)  (Year)

Total Amount: ____________________________  Signature ____________________________

CHECKS WILL BE ACCEPTED IN US AND CANADIAN FUNDS. CREDIT CARD PAYMENTS ACCEPTED IN US FUNDS ONLY
## Meeting Minutes

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<th></th>
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<tr>
<td>X</td>
<td>Bill Clark</td>
<td>President / CRC Alternate</td>
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<td>X</td>
<td>Paul Kenna</td>
<td>President Elect / Program</td>
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<td>X</td>
<td>Tom Streber</td>
<td>Treasurer</td>
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<td>Mike Benedict</td>
<td>Secretary</td>
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<tr>
<td>X</td>
<td>Jeff Close</td>
<td>Immediate Past President &amp; Nominating / CRC Delegate</td>
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<td></td>
<td>Sam Scorsone</td>
<td>Board of Gov. (3) &amp; Refrigeration Co-Chair</td>
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<td>Steve Dear</td>
<td>Board of Gov. (3) &amp; Website Chair</td>
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<td>George Herman</td>
<td>Board of Gov. (2) &amp; Membership Promotion Chair (MP)</td>
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<td>X</td>
<td>Marjani Wilson</td>
<td>Board of Gov. (1) &amp; Grassroots Government Advocacy Co-Chair</td>
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<td></td>
<td>Jeff Wiedrick</td>
<td>Board of Gov. (1) &amp; Chapter Technology Transfer Chair (CTTC)</td>
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<td>Matt Kremers</td>
<td>Board of Gov. (1) &amp; Young Engineers in ASHRAE Chair (YEA)</td>
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<td>X</td>
<td>Brett Fryover</td>
<td>Attendance Co-Chair</td>
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<td>Tim Duprey</td>
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<td>X</td>
<td>Jake Hall</td>
<td>Historian Chair</td>
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<td>Scott Edwards</td>
<td>Newsletter Editor</td>
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<td>Matt Devlin</td>
<td>Resource Promotion Chair (RP)</td>
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<td>Rob Hudson</td>
<td>Student Activities Chair (SA)</td>
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<td>Al Rodgers</td>
<td>Awards &amp; Recognition Chair</td>
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<td></td>
<td>Bill Murray</td>
<td>Education</td>
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<td>X</td>
<td>Mark Kukla</td>
<td>Publicity</td>
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<td></td>
<td>Jim Browe</td>
<td>Picnic/Golf Chair</td>
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<td>Buyers Guide</td>
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<td>Jody McGarry</td>
<td>Valentine’s Dinner Dance</td>
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<td>Mike Nohle</td>
<td>Refrigeration Co-Chair</td>
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<td>Tom Burke</td>
<td>Grassroots Government Advocacy Co-Chair</td>
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<td>Jaimee Wilson</td>
<td>Women in ASHRAE</td>
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<td></td>
<td>Michelle Sommerman</td>
<td>Women in ASHRAE</td>
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</table>
1. Call to Order
   Bill Clark

2. Roll Call
   • Motion-Mark, Second-Tom
   Mark Kukla

3. Review and Approval of Previous Meeting Minutes
   All

4. Treasurer
   • Current Statement Balances
     i. Deposit sent for Valentine’s Dinner
   • PayPal Account Updates
     i. Bill working to streamline annual changeover
   Tom Streber

5. President Elect/Program
   • Schedule
     i. A speaker still needed for one lunch meeting and RES Symposium in April
   • PDHs have not been received by meeting attendees
   Paul Kenna

6. Attendance
   • Current reservations (72) for Monday
   • Should we broaden our distribution list?
   Bret Fryover

7. CTTC Report
   • Project submission by April 1, 2018
   • Time will be set aside for CTTC awareness and flyers will be placed on tables at November meeting.
   Jeff Wiedrick

8. Membership Report
   • Current members
   George Herman

9. Student Activities Report
   • Student chapter - Trying to coordinate schedule with RIT
   • We need volunteers for February Engineer’s week
   • Ed Burns is working on setting up a meeting between ASHRAE members and MCC staff.
   Rob Hudson

10. Education Report
    • Scholarship - MCC too?
    • Can RES keep the original award guidelines and manage the scholarship?
    Bill Murray

11. YEA Report
    • 2017-18 Events
    Matt Kremers

12. Awards & Recognition Report
    Al Rodgers

13. Resource Promotion Report
    • Current vs. Goal
    • Full Circle Contributions
    • Donor Recognition Boards
    Matt Devlin

14. Refrigeration Report
    • Refrigeration Meeting planned for December
    Mike Nohle/Sam Scorsone
15. Grassroots Government Advocacy Report  Marjani Wilson/Tom Burke
   • Planned activity - conference call w/ regional chair about Albany trip

   • Committee submissions
   • Newsletter deadline
   • RES deadline

17. Buyers Guide  TBD
   • Some chapters have links to vendor sites on their sponsorship pages.
   • Ed Burns and Bill Murray offered to help out with this.

18. Historian Report  Jake Hall
   • Planned activity
   • History presentation (table display) planned for November meeting

19. Publicity Report  Mark Kukla
   • Facebook, thank you notes to speakers, photos

20. Website Report  Steve Dear/Kevin Wind
   • Coordinate updates with Kevin

21. Nominating Report - committee to be formed  Jeff Close

22. Valentines Dinner Dance Report  Jody McGarry
   • Schedule & Venue - Strathallan rooftop & band is booked, special room rate

23. Golf/Picnic Report  Jim Browe

24. Women in ASHRAE  Jaimee Wilson/Michelle Sommerman
   • Planned Activities -Book club

25. Presidential Award of Excellence (PAOE)- Chairs please update online

26. New Business: None

27. Old Business:
   • 2016-17 Audit and Audit Committee
   • Lynn Bellenger Hall of Fame Award- Can Region 1 reimburse family for Chicago ceremony?

28. Set next BOG Meeting date / time / place.
   • Friday, December 8th @ 7:30 AM, Day Automation Office

29. Adjourn
2018 ASHRAE Winter Conference
Chicago, Illinois ★★★★★ January 20–24
AHR Expo ★ McCormick Place ★ January 22–24

www.ashrae.org/chicago
ASHRAE Winter Conference & AHR Expo is where passionate people come together to share knowledge, learn new things and meet new people. This conference is a great way to immerse yourself in a growing community of incredibly smart, dedicated people. The 2018 Winter Conference will be at the Palmer House in Chicago, January 20-24, and the AHR Expo is at McCormick Place, January 22-24. And yes it will be cold in Chicago in January, but the cold never bothered us anyway.

The 2018 Show will be held in Chicago, hosting more than 2,000 exhibitors and attracting crowds of 65,000 industry professionals from every state in America and 165 countries worldwide. The Show provides a unique forum for the entire HVAC&R industry to come together and share new products, technologies, and ideas. The AHR Expo is co-sponsored by ASHRAE and AHRI, and is held concurrently with ASHRAE’s Winter Conference. Your ASHRAE Conference Badge will give you access to the AHR Expo.

Technical Program

“Engineers and designers continue to advance designs to reduce the ecological impact of our built environment on the world around us. It has practically become second nature,” Michael Collamar, chair of the 2018 ASHRAE: Winter Conference, said. “However, and seemingly more so in recent years, the industry has needed to take steps to mitigate the impact of the world around us on our built environment. This is especially the case in our transportation, government and mission critical areas, where the loss of critical infrastructure can have severe consequences, including the loss of life. The tracks and programs for the ASHRAE: Winter Conference will focus on resources to design, build, control, commission and operate facilities and infrastructure that need to not only be efficient, but resilient.” In addition to the tracks below, a DataCenter mini-track and a Residential mini-track will be presented at the 2018 AHR Expo, Jan. 22-24.

Plenary Session Keynote Speaker
Saturday, January 20 at 9:15 a.m.

Debbie Sterling
Founder & CEO of GoldieBlax

Debbie Sterling is the Founder and CEO of GoldieBlax, an award winning company on a mission to "disrupt the pink aisle" with toys, games, and media for girls. Debbie is an engineer, entrepreneur, and one of the leaders in the movement toward getting girls interested in science, technology, engineering, and math. She was named TIME’s “Person of the Moment,” Business Insider’s “30 Women Who Are Changing the World,” and was recently added to Fortune Magazine’s prestigious “40 Under 40” list. In early 2015, Debbie was inducted as a Presidential Ambassador for Global Entrepreneurship and honored by the National Women’s History Museum with a “Living Legacy” Award for her work to empower girls around the world. Debbie received her degree in Engineering at Stanford University in 2006.

Technical Tours

Gas Technology Institute (GTI) Lab
Monday, January 22, 2:30 – 5:30 p.m.
$30

GTI’s work includes ongoing development of technologies to improve the efficiency of residential and commercial HVAC and water heating products.

Method Home Soap Manufacturing Plant
Monday, January 22, 2:30 – 5:30 p.m.
$30

The new state-of-the-art facility showcases the company’s dedication to sustainability with the first LEED® Platinum manufacturing facility in its industry.

340 On the Park
Tuesday, January 23, 1:00 – 4:00 p.m.
$30

340 On The Park is a 62-story, luxury multi-family high rise constructed in 2007 and managed by Lieberman Management Services, which utilizes a district chilled water service for the building’s cooling needs.

The Plant
Tuesday January 23, 1:00 p.m. – 4:00 p.m.
$30

This facility will eventually divert over 10,000 tons of food waste from landfills each year, while providing enough electricity to power over 250 homes.

General Tours

Chicago Neighborhoods
Sunday, January 21, 9:00 – 11:00 a.m.
$65

Chicago Highlights 101
Sunday, January 21, 1:00 – 2:00 p.m.
$65

Chicago's Southside Hidden Highlights Tour
Monday, January 22, 2:30 – 4:20 p.m.
$65

Moody Tongue Brewery Tour
Tuesday, January 23, 1:00 – 4:00 p.m.
$95

Gold Coast Tour
Tuesday, January 23, 1:00 – 2:30 p.m.
$65
**ASHRAE Learning Institute Courses**

**Full-Day Professional Development Seminars**  
By January 2, 2018:  
$510 ($415 ASHRAE Member)  
After January 2, 2018:  
$540 ($445 ASHRAE Member)  

**Saturday, January 20, 2018, 8am-3pm**  
The Commissioning Process in New & Existing Buildings  
Complying with Requirements of ASHRAE Standard 62.1-2016

**Tuesday, January 23, 2018, 9am-4pm**  
Humidity Control I and II: Principles & Applications Updated!  
Optimizing Indoor Environment: Increasing Building Value NEW!

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**Half-Day Short Courses**  
By January 2, 2018:  
$184 ($130 ASHRAE Member)  
After January 2, 2018:  
$214 ($160 ASHRAE Member)

**Sunday, January 21, 2018, 3:30-6:30pm**  
Air-to-Air Energy Recovery Applications: Best Practices  
Laboratory Design: The Basics and Beyond  
New ASHRAE: Classified Refrigerants to Meet Society's Changing Needs  
Understanding and Designing Chilled Beam Systems NEW!

**Monday, January 22, 2018, 8:30-11:30am**  
Designing High-Performance Healthcare HVAC Systems  
Energy Management Best Practices  
High-Performance Building Design: Applications & Future Trends

**Monday, January 22, 2018, 2:45-5:45pm**  
ASHRAE Guideline 0 – The Commissioning Process  
Design of Affordable and Efficient Ground Source Heat Pump Systems  

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**Tuesday, January 23, 2018, 9am-12pm**  
Variable Refrigerant Flow Systems: Design & Application  
Fundamental and Application of Standard 55  
Complying with Standard 90.1-2016: HVAC/Mechanical NEW!

**Tuesday, June 23, 2018, 1-4pm**  
Complying with Standard 90.1-2016: Appendix G  
Designing Toward Net-Zero Energy Commercial Buildings  
IT Equipment Design Evolution & Data Center Operation Optimization

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**Certification Exams**  
Saturday, Jan. 20 and Wednesday, Jan. 24  
Apply by Dec. 20 to sit for an ASHRAE Certification exam in one of these key fields:  

Conference Registrants can include the Certification application fee when registering, and apply by December 20 to sit for the exam. Applications are available at [www.ashrae.org/certification](http://www.ashrae.org/certification).

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**SOCIAL EVENTS**

**Welcome Party**  
Saturday, January 20  
6:30 – 8:30 p.m.  
Cost: $55  
Catch up with old friends and make new ones as the Conference kicks off with the traditional Welcome Party. The event takes place at the Chicago Cultural Center, a few walkable blocks from the Palmer House Hilton.

**President’s Luncheon**  
Monday, January 22  
12 – 2 p.m.  
Cost: $45  
Palmer House  
2017-18 ASHRAE President Bjørne Olesen provides an update on his presidential theme, “Extend.” Major contributors to the ASHRAE RP Campaign also are recognized.

**Members’ Night Out**  
Tuesday, January 23  
Reception 6:15 – 7:15 p.m.  
Dinner 7:15 – 10 p.m.  
Cost: $55  
Palmer House  
Feeling lucky? Take a chance and join us for an evening of fun with another Chicago “back room” action casino party. Here’s the deal, come and test your skills or enjoy being serenaded by a local jazz band.

**Young Engineers in ASHRAE (YEA) Hospitality Suite**  
Sunday, January 21  
4 – 6 p.m.  
Palmer House  
Young professional members age 35 and younger are invited to visit the YEA Hospitality Suite. The suite offers social and networking opportunities, and light refreshments are served.
REGISTRATION

Early Bird fees from September 1 through November 2
- $550 member/$745 non-member
- $510 first-time member attendee/$720 first-time non-member attendee
- $135 Life Member

Onsite registration fees from January 3 through 24
- $655 member/$900 non-member
- $670 first-time member attendee/$875 first-time non-member attendee
- $270 member one-day fee/$320 non-member one-day fee
- $155 Life Member

Advance fees from November 3 through January 2
- $550 member/$770 non-member
- $535 first-time member attendee/$745 first-time non-member attendee
- $145 Life Member

Registration fees for speakers, student branch advisors and students
- $135 speaker
- $35 student branch advisor
- $20 student member/$55 full-time student non-member
- $55 spouse/guest
Devin Abellon, P.E. is the Business Development Manager for Engineering Services at Uponor North America. He has 23 years of experience in the HVAC and plumbing industries with a focus on high-performance and sustainable building design and construction. He holds a Bachelor of Science degree in Mechanical Engineering from the University of California at Santa Barbara and is a registered professional engineer in California and Arizona. He is an active member of both ASPE and ASHRAE, and serves as an ASHRAE Membership Committee Chair, Programs Subcommittee Chair for ASHRAE TC 6.5 Radiant Heating and Cooling, Region X Nominating Member, and as an ASHRAE Distinguished Lecturer.

**Summary:**

For those who design in BIM/CAD, manufacturer-provided content is widely viewed as being superior to generic, out-of-the box content when planning and designing a project. The data embedded within manufacturer-provided content is unique to the characteristics of the product, providing engineers with the ability to visualize a system's installation or a model's performance within a building before construction begins.

When designing with PEX, it is especially important to have access to manufacturer-provided content to ensure the system takes advantage of the unique features of the product, such as its flexibility, and also takes into consideration the challenges, such as expansion and contraction of the pipe. In this session, attendees will learn about the importance of PEX manufacturer-provided content as well as the trends in BIM/CAD for commercial PEX piping systems.

**PDU/CEU certificate:** Uponor North America will issue a signed company certificate of your personal attendance after viewing the presentation. The presentation is not registered with any state, so check your state's continuing education requirements if a credit can be applied with this webinar.
Start planning your itinerary for the 2018 ASHRAE Winter Conference using the Personal Scheduler. Browse by track, presenter, program and more to create your custom itinerary. Sync your schedule with your device using the ASHRAE Events App.

Conference Tracks Include:

- Systems and Equipment
- Fundamentals and Applications
- Standards, Guidelines and Codes
- Resiliency: Withstanding Earth, Wind & Fire
- Tall Buildings
- Modeling Throughout the Building Life Cycle
- Heat Exchange Equipment
- Refrigerant mini-track at AHR Expo
- Residential mini-track at AHR Expo
ASHRAE Earns Prestigious UN Environment Award for Dedication in Advancing Montreal Protocol

ATLANTA (Nov. 27, 2017) – ASHRAE has received the prestigious Partnership Award from the United Nations Environment Programme's (UN Environment) Ozone Secretariat for its extraordinary commitment and contribution to the progress and achievements of the Montreal Protocol on Substances that Deplete the Ozone Layer, which is celebrating its 30th anniversary.

The award was presented to ASHRAE at the 2017 Ozone Awards ceremony on Nov. 23 in Montreal. The Partnership Award recognizes the work of civil society and other international organizations that have played a critical role in the development of the Kigali Amendment and/or implementation of the Montreal Protocol.

"We could not be more pleased to have earned this recognition. Receiving the Partnership Award is a great honor and acknowledgment of the tireless work ASHRAE and our members are doing to support the phase-out
activities of ozone-depleting substances around the world," said 2017-2018 ASHRAE President Bjarne W. Olesen, Ph.D. "We are proud to be a part of this initiative and look forward to continuing our partnership with UN Environment as we work toward a more sustainable built environment."

Commonly referred to as "the treaty that saved the ozone layer," the Montreal Protocol, signed in 1987, is an international agreement designed to substantially reduce emissions of substances that deplete the stratospheric ozone layer. The Protocol has led to the phase-out of more than 99 percent of nearly 100 ozone-depleting chemicals and significantly contributed to climate change mitigation, according to UN Environment.

"I congratulate ASHRAE for this well-deserved award honoring its exceptional efforts to support the advancement of technologies which help protect the ozone layer. We appreciate the organization's dedication to the Montreal Protocol and its contribution to the success of the treaty," said Tina Birmpili, head of the Ozone Secretariat.

ASHRAE's partnership with UN Environment has been highly transparent and visible since it began and has been recognized with appreciation by governments around the world as well as the HVAC&R industry. Through ASHRAE's more than 56,000 members in more than 100 countries, the Society has mobilized its resources to develop, implement and support UN Environment and Montreal Protocol projects.

Most recently, ASHRAE and UN Environment launched a work plan titled, "Working Beyond High Global Warning Potential (GWP) Refrigerants." It is the organizations' fifth joint biennial work plan and is another tangible example of ASHRAE's dedication to promote the Montreal Protocol by leading the way in research to identify effective refrigerant alternatives with low GWP.

Another way ASHRAE is leading this charge is through its collaboration with the Air-Conditioning, Heating, and Refrigeration Institute (AHRI) and the U.S. Department of Energy (DOE). Through a $5.2 million joint investment, the three organizations are funding vital research to expedite findings and establish a more robust fact base about the properties and use of flammable refrigerants, which will also help update international standards.
About the United Nations Environment Programme

The United Nations Environment Programme (UN Environment) is the leading global environmental authority that sets the global environmental agenda, promotes the coherent implementation of the environmental dimension of sustainable development within the United Nations system, and serves as an authoritative advocate for the global environment.

About ASHRAE

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.
Here's What Our Attendees Said About ASHRAE's HVAC Design & Operation Training

"This is years of experience and knowledge condensed into a priceless three-day event. It tackles most of the common issues you come across as a design engineer, and the instructors really go in-depth with practical examples from their work. I am very confident that I will have a great use for everything learned and highly recommend the course to someone just starting out as an HVAC engineer. Even if you've been in the industry for some time, this experience will be important."
Kannan S. — Syracuse, NY

You know you are in for a great training when you learn to improve your design on the first day! Great delivery from the Instructors, their experience comes through during the training."
Hugh G. (Design Engineer) — Kingston, Jamaica

"The ASHRAE HVAC Design Training provided me with the information needed in order to carry out my position responsibilities more effectively. The training aided in the design of high-performance HVAC systems that are optimized for occupant comfort and safety. I am eager to share what I have learned with my coworkers and to implement the newly attained knowledge
Expand your knowledge and understanding of the fundamentals and technical aspects to design, maintain and operate new and existing HVAC systems. ASHRAE HVAC Design & Operation Training incorporates the latest information of Standards 55, 62.1, 90.1, 100 and 189.1.

ASHRAE Offers 12 Training Dates Throughout North America

Consulting Engineering Essential Training

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<tr>
<th>City</th>
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HVAC Design Training

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<tr>
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<td>Jan 8-10, 2018</td>
<td>Jan 11-12, 2018</td>
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<tr>
<td>Las Vegas, NV</td>
<td>Feb 5-7, 2018</td>
<td>Feb 8-9, 2018</td>
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<td>Atlanta, GA</td>
<td>Feb 26-28, 2018</td>
<td>March 1-2, 2018</td>
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<td>St. Louis, MO</td>
<td>March 19-21, 2018</td>
<td>March 22-23, 2018</td>
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<td>New Orleans, LA</td>
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<td>Baltimore, MD</td>
<td>April 9-11, 2018</td>
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<tr>
<td>Atlanta, GA</td>
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<td>May 14-16, 2018</td>
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<td>Jersey City, NJ</td>
<td>June 4-6, 2018</td>
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<td>Vancouver, BC</td>
<td>June 11-13, 2018</td>
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Participate in in-depth, practice-focused training that leads to improved building performance.

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Get To Know ASHRAE

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