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ASHRAE Houston Chapter's

# THE HOT AIR RECORDER

76th Volume No. IV


## December

| Sun | Mo | Tue | We | Thu | Fri | Sat |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 29 | 30 | 31 | | | | |

12

### YEA Monthly Happy Hour

YEA's monthly Happy Hour will be held on December 12th from 5:30-7:30 PM at Top Golf in Katy!

## PAST PRESIDENT'S NIGHT

-01.09.2019-

Join us as we honor those who have served Houston ASHRAE at the highest chapter level.



Tickets are $50 for members and $75 for nonmembers. Sponsorships are also available.

Click here for more info | Click here to register







Click here for more information



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# PRESIDENT'S MESSAGE

Happy Holidays!

The holiday season brings thoughts of joy and gratitude. There's no better time to express my thanks and sincere appreciation for your incredible hard work, enthusiasm, and dedication to ASHRAE Houston.

The Fall Golf Tournament at Weston Lakes Country Club in November was an outstanding success for ASHRAE RP. Thank you to everyone who played in the tournament, volunteered, and a special thanks to our sponsors.

I want to remind you that there is no meeting in December, we will see you after the new year in January. Mark your calendar for The Past President's Night, which will be on Thursday, January 9, 2020, from 6-9 PM at the Hess Building.

Finally, Happy New Year! May you have one of your best years in 2020 filled with health, happiness, and prosperity.



Sincerely,
Kurt McCulloch
ASHRAE President 2019-2020

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# LAST MONTH'S MEETING







On November 14th, we welcomed Dean Saputa to our monthly chapter meeting at the Hess Building to discuss how UV-C can Reduce HVAC Energy, Maintenance Costs, and Improve IAQ. He provided audience members with UV basics, like what it is and what it was originally used for. He then went into detail about this non-chemical method of stripping dirt and grime from HVAC coils and pans without residue helps the system and occupants on many fronts, and provided many case studies in which this technology was used.

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# ANNUAL SPONSORS

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## SILVER

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Oslin Nation Co. 1943 Hydronics and Plumbing Solutions

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McMILLAN JAMES EQUIPMENT COMPANY HOUSTON
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# TABLETOP SPONSORS

Thank you to our tabletop sponsors for helping cover the cost of our monthly meetings!

| AUGUST | OCTOBER | DECEMBER | FEBRUARY | APRIL |
|---|---|---|---|---|
| VICON | Roessler Equipment Company, Inc. | NO MEETING! | SPOT SPIRAL PIPE OF TEXAS | TEXAS AIRSYSTEMS |

| SEPTEMBER | NOVEMBER | JANUARY | MARCH | MAY |
|---|---|---|---|---|
| Lashley & Associates, Inc. | TEXAS AIRSYSTEMS | PAST PRESIDENT'S NIGHT | STUDENT NIGHT | Lashley & Associates, Inc. |

Please contact John Walik (jwalik@hdgrant.com) for more information on how to become a tabletop sponsor for next year!

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# MEMBERSHIP

## ADVANCE YOUR MEMBERSHIP FROM ASSOCIATE TO MEMBER

### Do you qualify for member status?

Candidate must have **(12) Society-approved years of experience:**

**COMPLETED EDUCATION BEYOND HIGH SCHOOL**

- **One year** for every year of education in approved technical curricula for **non-graduates** who have completed at least **two years**
- **One year** for every year of education for **graduates** of **non-accredited** colleges or universities years
- **One-and-a-half** years for every year of education for **graduates** of approved technical curricula

**RELATED WORK EXPERIENCE**

- **One year** for every year of qualifying work experience in ASHRAE fields of interest: Research, Design, Contracting, Engineering Sales, Teaching, & Engineering Management

**PROFESSIONAL LICENSURE**

- **Three years** for professional registration/license

**4 STEPS TO ADVANCE**

1. Log into www.ashrae.org by selecting 'Join' or 'Login' in the upper right hand corner
2. Select 'My Profile' in the upper right corner of the homepage
3. Select 'Biographical Information' tab along the top tab options. Add all educational history, relevant licenses, and work history
4. Send an email to membership@ashrae.org indicating interest in advancing

**Please welcome our new members:**

Bryan Soto, Bobby Bownds, Ethan Landefield, Sam Saad, Gaby Reyes, and Levi Wildman

Joining or renewing is a simple 4-step process. Start by clicking here.

Questions about membership? Contact membership@ashraehouston.org

# TREASURER



19-20 Treasurer: Garrett Neubauer

- Chapter is in good financial standing
- 2018-2019 taxes are in the process of being filed

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# RESEARCH PROMOTION








## THANK YOU

To all our sponsors and attendees that made this event such a success. And to the stoke of luck that gave us such amazing weather! We hope to see you at the Spring Gold Tournament on March 23rd.



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# YEA



NEXT YEA HAPPY HOUR AT:

TOPGOLF

12.12.19 5:30-7:30 PM





THANK YOU TO TEXAS AIR SYSTEMS FOR SPONSORING THIS MONTH!

# WIA



WiA Happy Hour was a success!

Thank you to all who attended, and a special thank you to S&S Equipment, LLC for sponsoring!



WOMEN IN ASHRAE



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# SUSTAINABILITY

## Variable Refrigerant Systems – opportunities & challanges

**WRITTEN BY: KAPIL UPADHYAYA, BEMP, LEED AP BD&C, FITWEL AMBASSADOR DIRECTOR BUILDING PHYSICS, KIRKSEY ARCHITECTURE**



On October 19th, USGBC Texas hosted the Energy Summit for the 9th year in a row. The conference gives building industry a unique opportunity to interact with operators and maintenance engineers from across Houston and surrounding region. Two sessions focused on Variable Refrigerant Systems: the first was morning keynote by Steve Hennigan, CEO of Credit Human, and the second was a panel discussion with Aly Valiani, New Horizons Hospitality and Steve Jones, Mitsubishi Electric Trane. Both of these sessions were driven by building owners who shared their candid experience with Variable Refrigerant systems. Below is a summary of the two conversations.

Mr. Hennigan shared why water-cooled Variable Refrigerant system made financial sense for their headquarter building in San Antonio. Most building owners do not evaluate the lifecycle cost of a building. Credit Human however is commited to sustainable development and looks at their headquarter building as a 50 year investment. Variable Refrigerant technology allows for a significant reduction in cooling energy and fan energy. Water-cooled heat pumps are served by a geothermal heat exchanger, thereby reducing heat rejection energy. An additional benefit of this system is significant reduction in water consumption which would have otherwise been attributed to cooling towers. But variable refrigerant technology is just one of the many strategies that is employed at Credit Human to design a building that approaches 'near net zero carbon'. Individual floors are designed with an aggressive lighting power density and plug-load control. All of the roof is covered with photovoltaic panels to offset energy consumption with renewable energy. With building degradation and energy inflation, the combined payback for all of these measures is estimated at less than 15 years.

In the second session, Mr. Valiani and Mr. Jones acknowledged that variable refrigerant is still a relatively new technology in Houston HVAC world and trained technicians are not as easily available. Although the network for people who understand variable refrigerant systems is expanding rapidly, the opportunity for reduced maintenance costs could be easily offset by higher pricing if specialized technicians and parts are not readily available. The technology is not bullet proof, but it is reliable and while sophisticated in design, it has low component failure. A major factor in Mr. Valiani's decision to choose the system was noise reduction, and in this regard the system had performed really well. Eliminating exterior penetrations in every room was huge and their building -despite being right on the highway- is very quiet. Additionally, condenser units operate quietly without the loud compressor noises when cycling.

Another issue that was commented upon was digital controls for variable refrigerant systems. These can be proprietary and as a result may differ from many conventional low voltage control systems. The sophistication of variable refrigerant technology requires constant monitoring of indoor-unit space temperatures and fluctuations to the space load (people entering and leaving the room, opening windows and/or doors, equipment use inside the building). Every indoor unit has thermistors and a refrigerant monitoring device to measure the return air temperature and set the leaving air temperature to the user's comfort level, using PID logic (proportional, integral and differential, typical to HVAC system). The opportunity for precise measurement allows a consistent space temp and excellent humidity control especially in warmer, more humid climates. For owners, it may become an added effort to train maintenance personnel to become capable of monitoring and managing variable refrigerant system.

As with many other things in the building industry, adoption of variable refrigerant systems may be a slow and careful process, but it is surely happening across Texas. Lifecycle cost impact, noise reduction and maintenance are just some of the issues that owners are considering in switching to variable refrigerant systems.

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# CRC 2020 SPONSORS

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# BOG MINUTES

**November 14, 2019 BOG Meeting 3:00 pm**
Attendees: **See Attached roster.**
Board of Governors:
Called to order at: **Kurt McCulloch called the meeting to order at 4:15 PM. HESS Building**

I. President – Kurt McCulloch
   a. Please contact your RVC no later than the 15th every month. Copy myself.

| Position | Officer | MBOs | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| President | Kurt McCulloch | X | X | X | X | X | | | | | | |
| CTTC | Greg Tinkler | X | X | X | X | X | | | | | | |
| Membership | Jeff Hunter | X | X | X | X | X | | | | | | |
| Treasurer | Garrett Neubauer | X | X | X | X | X | | | | | | |
| Student Activities | Brooke Enochs | X | X | X | X | X | | | | | | |
| YEA | Marisa Kamstra | X | X | X | X | X | | | | | | |
| GAC | Keith Reihl | X | X | X | X | X | | | | | | |
| Research Promotions | Josh Vanlandingham | X | X | X | X | X | | | | | | |
| Newsletter | Julie Thomet | X | X | X | X | X | | | | | | |
| Historian | Bruce Flaniken | X | X | X | X | X | | | | | | |
| Refrigeration | Matthew Burris | ? | ? | ? | ? | ? | | | | | | |
| Electronic Communication | Teresa Norton | X | X | X | X | X | | | | | | |

   b. Goals:
      i. As an organization we need to grow our attendance at the chapter meetings to 10 new members. We want our members to attend local, student, YEA, and Women in ASHRAE meetings.
      ii. Increase active members by 10 new members
      iii. Raise our Research and Promotion (RP) contribution per member by $10.00
   c. Start targeting your PAOE** points for the year. Have David Williams load them or you can go online yourself

| | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chapter Operations 1200 | 390 | 419 | 645 | 735 | | | | | | | |
| Chapter Technology Transfer 1050 | 0 | 0 | 0 | 150 | | | | | | | |
| Electronic Communications 650 | 100 | 100 | 100 | 100 | | | | | | | |
| Government Affairs 650 | 0 | 0 | 0 | 0 | | | | | | | |
| Historical 300 | 325 | 375 | 475 | 475 | | | | | | | |
| Membership Promotions 800 | 410 | 435 | 485 | 740 | | | | | | | |
| Research Promotions 1050 | 0 | 0 | 0 | 247 | | | | | | | |
| Student Activities 800 | 200 | 200 | 200 | 200 | | | | | | | |
| YEA 800 | 50 | 50 | 550 | 550 | | | | | | | |
| TOTAL 7300 | **1475** | **1570** | **2455** | **3197** | | | | | | | |

   d. Photos to info@ashraehouston.org
   e. Items to discuss at general meeting?
      i. Next event – Golf outing at Weston Lakes Country Club

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# BOG MINUTES

ii. No ASHRAE meeting in December – Happy Holidays and Happy New Year
iii. Upcoming meeting – Past President Night in January **5:00 PM BOG meeting/6:00 PM meeting.**

f. CRC in Houston April 23-25, 2020 – Bruce Flaniken **Planning reportedly approximately 95% complete.**
i. When can your start registering online for the event and the hotel? **Preliminary hotel rate $169.00/night.**

II. President Elect and CTTC Chair – Greg Tinkler
a. Today's speaker. **Dean Saputa/UV-C Lights for IAQ**
b. What can we do to drive up attendance in 2020?
c. Entertainment for past President's Night? **One hour long Elvis impersonator show.**

III. Vice President and RP Chair – Josh Vanlandingham
a. Recognize the past '18-'19 donors tonight before our meeting starts.
b. Do we have enough golfers for Monday? **Full.**
c. Additional recognitions for the Corporate Sponsors that were missed at the Sporting Clay Shoot
d. Next event after the golf outing this Month. What is the fourth event this year? **Axe throwing?**
e. RP Corporate Sponsors. Have all the invoices went out? **Yes.**
f. RP minimum donation due to HQ in December? When will the check go out and for how much? **Approximately $30,000.00.**
g. RP Sponsorship on HAR need to match the banners for 2019-2020.
h. Roessler was added to the Corporate Sponsorship **Carrier also.**
i. Full Circle donations are due this month. Did everyone turn in their donations? **Yes.**

IV. Treasurer – Garrett Neubauer
a. Taxes - Completed
b. Update on balance and budget
c. Check for RP to be mailed in December

V. Secretary – Michael Green
a. Photos posted on Houston Basecamp and your best image posted on the Regional website.
b. Post meeting minutes on Houston Basecamp.
c. Star chapter non-deliverable emails- **John Walik is working on it.**

VI. Membership – Jeff Hunter, Michelle Baten, Tim Navarro
a. Grundfos is sponsoring $1500 for new member sponsorship this year.
i. Who received the free membership for this year? **Approximately $1,000.00 available.**

VII. Student Activities, K-12 – Brooke Enochs, Terry Connor
a. RO Hunton, Damon Gowan, and Richard Burr Scholarship
i. Update on scholarship awards
b. Kick off meeting for HCC and Lamar branches
i. HCC Done
c. TAMU student design competition –
d. K-12 Stem – Terry Connor

VIII. Historian – Bruce Flaniken **History article sent out.**
a. Great job writing history articles for the HAR and PAOE points YTD
b. Need help with articles from WiA and YEA

IX. YEA- Marisa Kamstra, Nick Janssen **Last event 11/13/19. Next month Top Golf. Three sponsors lined up.**
a. Volunteers to speak to student branches
b. Budget discussion **YEA/Chapter to contribute to endowment for societies use towards scholarships.**

X. Women in ASHRAE – Lauren Ramos, Catherine Tinkler

XI. PAOE – David Williams
a. D12161950@yahoo.com
b. Please email him for any activity.
c. A few of you still have zeros YTD. Please start filling these out this month. CTTC and Government Affairs.
d. Your goal should be PAR

XII. Refrigeration – Matthew Burris **919 Milam ice storage system/Hunton-Trane controls tour set for March meeting.**
a. Student Night – What day in March and location. We do not want to wait until the last minute.
b. Speaker at the event in March?

XIII. Sustainability / Energy Modeling- Kapil Upadhyaya
a. Recap of the last event sponsored by ASHRAE

XIV. Newsletter – Julie Thomet
a. Update corporate sponsors to match banner in HAR
b. We still need to send out a newsletter in December

XV. Webmaster and Home Page Editor – Teresa Norton, John Walik **Adds placed in HAR are charged approximately $150.00/month.**
a. Tabletop sponsor – 100 percent sold out – Great job.
b. Updated BOG pictures completed. Need to finish Committee Chair picture updates and move one of the pictures on BOG page to Committee Chair as well. Still missing pictures for Committee Chairs
c. Update Corporate Sponsor to match Corporate Banners on the site
d. What are we doing on social media to drive attendance to our meetings and RP events?
e. Missing HAR recorder for November on website
f. Photos need to be uploaded to the website. Missing picture downloads year YTD.

XVI. Honors and Awards – Alan Neely
a. Hall of Fame
b. If anyone has ideas for Fellows
c. Award submissions YTD

XVII. Social Media and Electronic Communications Chair – Teresa Norton, Sarah Holbrook
a. Any posts last 30 days.
b. Plans for next 30, 60, 90 days for social medial to drive attendance

XVIII. Directory Chair – Richard Rusk

XIX. Grass Roots Government Advocacy – Keith Reihl, Kenneth Shifflett

XX. Commissioning Chair – David MacLean **City of Pearland adopted 2018 IBC.**

XXI. **Kurt McCulloch closed the meeting at 5:10 PM.**

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# ROSTER

| Position | Full Name | Phone | Email |
|---|---|---|---|
| Chapter Past President | Kenneth Shifflett, II | (713)828-2329 | kshifflett@distribaire.com |
| Chapter President | Kurt McCulloch | (713)328-3775 | kmcculloch@convergentz.com |
| Chapter President Elect | Greg Tinkler | (713)658-2206 | gtinkler@yahoo.com |
| Chapter Vice President | Josh Vanlandingham | (713)515-3726 | jjvanham@gmail.com |
| Chapter Treasurer | Garrett Neubaurer | (713) 658-2219 | gneubauer@pagethink.com |
| Chapter Secretary | Michael J. Green | (713)626-7155 | mjgreen@dominioninterests.com |
| Chapter Board of Governors | Kenneth Shifflett, II | (713)828-2329 | kshifflett@distribaire.com |
| Chapter Board of Governors | Bruce L Flaniken, PE | (832)473-1989 | BLFlaniken@houstonmethodist.org |
| Chapter Board of Governors | Robert (Alan) Neely | (281)432-9864 | alan.neely@owenscorning.com |
| Chapter Board of Governors | John W Walik | (713)668-8880 | jwalik@hdgrant.com |
| Chapter Attendance Committee | Trey Green | | treyg@recohvac.com |
| Chapter Delegate | Greg Tinkler | (713)658-2206 | gtinkler@yahoo.com |
| Chapter Alternate | Josh Vanlandingham | (713)515-3726 | jjvanham@gmail.com |
| Chapter Technology Transfer Chair | Greg Tinkler | (713)658-2206 | gtinkler@yahoo.com |
| Chapter Commissioning Chair | David A MacLean | (713)857-6499 | david.maclean@mcmaccx.net |
| Chapter Government Advocacy Chair | Keith H Reihl, PE | (713)459-1044 | reihl@swbell.net |
| Chapter Government Advocacy Co-Chair | Kenneth Shifflett, II | | |
| Chapter Historian | Bruce L Flaniken, PE | (832)473-1989 | BLFlaniken@houstonmethodist.org |
| Chapter Honors and Awards | Robert (Alan) Neely | (281)432-9864 | alan.neely@owenscorning.com |
| Chapter Membership Promotion Chair | Jeffrey B Hunter | (713)939-6098 | jeffrey.hunter@carrier.utc.com |
| Chapter Refrigeration | Matthew Burris | 346-600-1917 | mburris@servref.com |
| Chapter Research Promotion Chair | Josh Vanlandingham | (713)515-3726 | jjvanham@gmail.com |
| Chapter Research Promotion Co-Chair | urt McCulloch | (713)328-3775 | kmcculloch@convergentz.com |
| Chapter Electronic Communications Chair | Mitchell Campbell | (713)782-2701 | mitchellc@recohvac.com |
| Chapter Electronic Communications Chair | Teresa H. Norton | 832-6860494 | teresa.norton@hendersonengineers.com |
| Chapter K-12 STEM | Terence P Connor | (914)563-1678 | terencepconnor@yahoo.com |
| Chapter Student Activities Chair | Brooke E Enochs | (713)869-4608 | brooke@ramseyandco.com |
| Chapter Student Activities Co-Chair | Catherine A Tinkler | (713)203-9267 | ctinkler27@gmail.com |
| Chapter Sustainability Chair | Kapil Upadhyaya | (713)426-7508 | upadhyaykapil@gmail.com |
| Chapter Women in ASHRAE Chair | Lauren Ramos | (713)783-7707 | lramos4321@hotmail.com |
| Chapter Women in ASHRAE Co-Chair | Catherine A Tinkler | (713)203-9267 | ctinkler27@gmail.com |
| Chapter YEA Co-Chair | Marisa Rae Kamstra | | marisa.kamstra@wsp.com |
| Chapter YEA Co-Chair | Nick Janssen | (361) 218-6293 | nick.janssen@texasairsystems.com |
| Chapter Newsletter Editor | Julie A Thomet | (936) 523-0556 | Juliet@mjec.com |
| Chapter Webmaster | Mr John W Walik | (713)668-8880 | jwalik@hdgrant.com |
| Chapter Webmaster | Teresa H. Norton | 832-6860494 | teresa.norton@hendersonengineers.com |