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ASHRAE Houston Chapter's

THE HOT AIR RECORDER

77th Volume No. X

May

Sun	Mo	Tue	We	Thu	Fri	Sat
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					

4

Spring Golf Tournament

The Annual Spring Golf Tournament will be held at High Meadow Ranch Golf Club on the 4th from 12:00-7:00 PM.

18

WiA/YEA Joint Happy Hour

YEA & WiA are hosting a joint Networking Happy Hour on May 20th from 5:30pm to 7:30pm at Holman Draft Hall. Check your email for a link to register or go to the ASHRAE Houston Chapter website for more details.

20

May Meeting

Our last meeting of the year will be held virtually via zoom on May 18th from 4:00-5:30 PM. We will be welcoming Doug Reindl to our meeting to discuss the latest in refrigeration technologies. Register here.

HOUSTON ASHRAE

IS THE PROUD RECIPIENT OF THIS YEAR'S



CHECK OUT OUR CHAPTER'S ACHIEVEMENTS ON THE HONORS AND AWARDS PAGE

2022 REGION VIII CRC

THE WOODLANDS

DATES HAVE BEEN FINALIZED!

April 27-30, 2022

Want to sponsor? Email BLFlaniken@houstonmethodist.org

ASHRAE NEEDS YOUR HELP

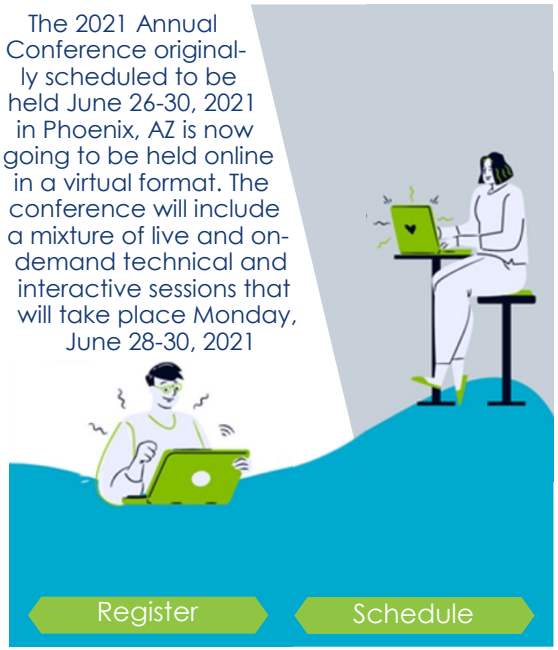
With COVID-19 simultaneously hindering fund-raising events and increasing the need for re-search on how it impacts our industry, ASHRAE needs you now more than ever. Help ASHRAE fund research projects that help meet the chal-lenges of today and tomorrow. Every donation, no matter how small, makes an impact.

Click Here to Donate

ASHRAE VIRTUAL ANNUAL CONFERENCE

June 28-30, 2021

The 2021 Annual Conference original-ly scheduled to be held June 26-30, 2021 in Phoenix, AZ is now going to be held online in a virtual format. The conference will include a mixture of live and on-demand technical and interactive sessions that will take place Monday, June 28-30, 2021



Register Schedule

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PRESIDENT'S MESSAGE

Colleagues and Friends,

As this is my final month in the ASHRAE Houston meeting year, I want to pause and THANK ALL OF YOU for a great year. An Interesting year for sure and I hope we never have to go through this again as far as a pandemic goes. We just completed our annual Chapter Regional Conference and Houston Chapter came away with top honors of the Golden Gavel Award for Region 8. This is the 3rd time in our 84 years that Houston has achieved this recognition so "Kudos" to the chapter and all that the Committees do to keep this chapter running.

I also want to extend a THANK YOU to all of our annual sponsors and event sponsors that help Houston Chapter also be one of the top Chapters in raising RP funds for ASHRAE Research. Without all of you, the chapter would not be as successful as it is. I want to also ask that you consider sponsorships for next year.

I also want to congratulate the following Chairs for all of their awards this year:

- Kurt McCulloch, Chapter President 2019-2020
  - High Honor Roll
  - Star Award
  - Special Citation
- Jeff Hunter
  - Blue Ribbon Award for Membership Growth of the Chapter
- Jiajun "Francis" Lao,
  - Outstanding Student Activities Chair
- Marisa Kamstra and Nick Janssen
  - Tied for Best YEA Chair performance
- Keith Reihl and Ken Shifflett
  - Outstanding GAC program performance
- Josh Vanlandingham- RP Chair
  - Gold Treasury Ribbon for $10,000 or more contributed by the Chapter
  - Pinnacle Winner-Largest money donated of the chapters in the world to ASHRAE Research
  - Top 5 award-Size winner: PAOE and $/Member
  - Top 5- Runner up: Goal challenge
  - Full Circle contributions
  - New Endowment established
  - Goal and Challenge Goal; (challenge is 20% over goal)
- Michael Green
  - Outstanding Chapter Treasurer
- Greg Tinkler
  - Jack Thompson Award
- HOUSTON Chapter
  - Golden Gavel Award

So THANK you all for a good and hope more of our members will consider getting involved in ASHRAE leadership or serving on one of excellent committees. As the saying goes "WE NEED YOU".

We also have an excellent speaker to round out last meeting with a presentation on all the updates to "Old Friend" Ammonia. While many of us old guys remember the challenges and we may have scared some of the younger ones from this refrigerant but it some much has changed over the years and the younger engineers need to understand why we looked at this refrigerant in the first place and some of the benefits of its use. And why with the new technologies, maybe we should look at it again.

On another note, it looks like we as an industry are looking at low pressure refrigerants again and some of the things we used to do with refrigerant lines for oil traps need to be passed down before that knowledge is lost and they have to learn some of our lessons again the hard way. So all of you "wise ones", pass down lessons learned even though it doesn't seem to be in use at the moment. The industry has come a long ways over the years and as they say "History repeats itself".

Hope you all have a good summer and hope to see you in August at live meetings again and THANK YOU for a wonderful Presidential Year.

Sincerely,



Greg Tinkler
Houston ASHRAE President
2020-2021

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MONTHLY MEETING

GET TO KNOW THE SPEAKER: DOUG REINDL



Douglas Reindl is a professor and chair with appointments in the Department of Engineering Professional Development and Mechanical Engineering at the University of Wisconsin-Madison. In addition, he is the founding director of the Industrial Refrigeration Consortium (IRC) at UW-Madison. He received his B.S. in Mechanical Engineering Technology from the Milwaukee School of Engineering and his M.S. and Ph.D. degrees from the University of Wisconsin-Madison. He is a registered professional engineer in the State of Wisconsin and actively involved in ASHRAE, IIAR, and IIR.

As faculty member at the University of Wisconsin since 1996, Reindl has taught at all levels: undergraduate, graduate, and continuing professional development. Professor Reindl has developed an internationally-recognized series of professional development courses focused on industrial refrigeration systems with an emphasis on the safe use of ammonia as a refrigerant. Through the IRC, Professor Reindl collaborates with the world's leading food companies to improve the safety, efficiency, liability and productivity of industrial refrigeration systems and technologies.

Professor Reindl is an ASHRAE Fellow and a past recipient of ASHRAE's Distinguished Service Award. HE was the first recipient of ASHRAE's George C. Briley Award for the best refrigeration article in the ASHRAE Journal. He is a past chair and currently serves as a member of ASHRAE's Standard 15 committee – Safety Standard for Refrigeration Systems. Professor Reindl has published 7 books and over 100 technical papers on topics including: industrial refrigeration, building mechanical systems, energy systems, and solar energy.

AN INTRODUCTION TO AMMONIA REFRIGERATION SYSTEMS

Industrial refrigeration systems have used anhydrous ammonia for more than a sesquicentennial. Although ammonia has a long history of use in the industrial sector, the interest in ammonia as a potential refrigerant for non-industrial applications has grown recently. This presentation will provide an overview of the ammonia refrigeration systems that have been the mainstay in the industrial sector and emphasize unique characteristics that differentiate ammonia systems from traditional halocarbon refrigeration systems.

MAY 18TH, 2021

FREE- ADVANCED REGISTRATION

FREE– LATE REGISTRATION

$35 – ALL NON-MEMBERS

CLICK HERE TO REGISTER

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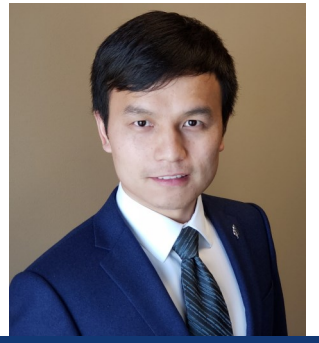
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HONORS AND AWARDS

2021 REGION VIII CRC HOUSTON CHAPTER AWARDS



KURT MCCULLOCH
'19-'20 CHAPTER PRESIDENT
HIGH HONOR ROLL
STAR AWARD
SPECIAL CITATION



FRANCIS LAO
STUDENT ACTIVITIES
OUTSTANDING STUDENT ACTIVITIES CHAIR



JEFF HUNTER
MEMBERSHIP
BLUE RIBBON AWARD FOR MEMBERSHIP GROWTH OF CHAPTER



MARISA KAMSTRA & NICK JANSSEN
YEA CO CHAIRS
BEST YEA CHAIRS



MICHAEL GREEN
'20-'21 TREASURER
OUTSTANDING CHAPTER TREASURER



JOSH VANLANDINGHAM
'19-'20 RP CHAIR
GOLD RIBBON FOR $10,000 OR MORE CONTRIBUTED BY THE CHAPTER
PINNACLE WINNER-LARGEST MONEY DONATED OF THE CHAPTERS IN THE WORLD TO ASHRAE RESEARCH
TOP 5 AWARD-SIZE WINNER: PAOE AND $/MEMBER
TOP 5- RUNNER UP: GOAL CHALLENGE
FULL CIRCLE CONTRIBUTIONS
NEW ENDOWMENT ESTABLISHED
GOAL AND CHALLENGE GOAL; (CHALLENGE IS 20% OVER GOAL)



GREG TINKLER
'20-'21 CHAPTER PRESIDENT
JACK THOMPSON AWARD



KENNETH SHIFFLETT & KEITH REIHL
GRASSROOTS GOVERNMENT CHAIR
OUTSTANDING GAC PROGRAM PERFORMANCE



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MEMBERSHIP

The Houston Chapter is paying first-year society membership dues for up to 10 new members!

SPONSORSHIP GRACIOUSLY DONATED BY:

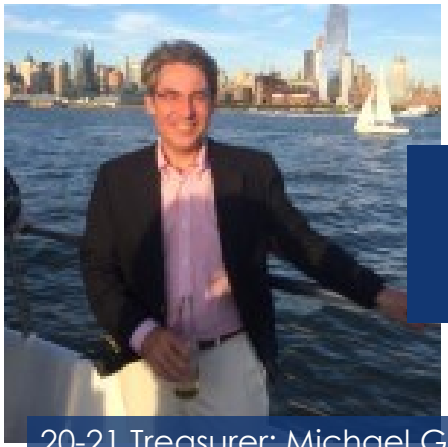
CALEFFI Hydronic Solutions

To apply to get your 1st year membership free, please email membership@ashraehouston.com

Please welcome our new members: Fred Ramdahin, Brian Kushner, Julie Surfus, Miguel Rivera, Merhawi Tekie, Jerry Littlefield, Hunter Hershey

Join or renew through www.ashrae.org/home

TREASURER



20-21 Treasurer: Michael Green

End of year books are being reviewed and the transfer to the next treasurer has begun.

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YEA



Marisa Kamstra



Nick Janssen
YEA Co-Chair







NEXT YEA HAPPY HOUR AT:

Wooster's Garden

9.19.19 5:30-7:30 PM
Register here

WIA

WRAPPING UP THIS YEAR …

YEA & WiA are hosting a joint Networking Happy Hour on May 20th from 5:30pm to 7:30pm at Holman Draft Hall. Check your email for a link to register or go to the ASHRAE Houston Chapter website for more details.

LOOKING FORWARD TO NEXT YEAR …

WiA is excited to announce that Krista Villanueva will being joining Lauren Ramos as Women in ASHRAE co-chairs for 2021-2022. Many have already met Krista at WiA events in the past. She is also an active supporter of the American Society of Plumbing Engineers as their Women in ASPE liaison, so this role for the ASHRAE Houston Chapter further highlights her desire to advocate for women in our industry. As Krista gets settled in beginning in July, she will have an opportunity to introduce herself further and work with Lauren on outlining programs for next year.

Those with program suggestions are welcome to reach out to Krista or Lauren at:

kristav@willbanksinc.com | lauren.ramos@hendersonengineers.com



KRISTA VILLANUEVA

LAUREN RAMOS

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GRASSROOTS GOVERNMENT

ASHRAE SUPPORTS USGBC IAQ SCHOOLS SURVEY AND REPORT

Only known national view of implementing air quality measures in schools during the pandemic

ATLANTA (April 29, 2021) – With technical support from ASHRAE, the Center for Green Schools at the U.S. Green Building Council (USGBS) published a new report on indoor air quality (IAQ) measures that schools have taken in response to the pandemic.

The report titled "Preparation in the Pandemic: How Schools Implemented Air Quality Measures to Protect Occupants from COVID-19," presents the survey responses of school districts representing more than 4,000 schools serving over 2.5 million students in 24 states, on the protocols and operations plans implemented to mitigate the spread of COVID-19.

"Maintaining proper ventilation and good indoor air quality are vital in keeping school buildings healthy and operating as energy efficiently as possible," said 2020-21 ASHRAE President Charles E. Gulledge III, P.E. "This report provides a wide-scale, foundational framework to school leaders and lawmakers alike towards the implementation of new building design guidelines and to advance health and sustainability goals, while instilling confidence in the places where people learn."

The report is the only known national view of air quality measures implemented in schools during the pandemic. It highlights what school districts have prioritized, which actions they have taken, how they have made decisions and what the consequences have been. The results of the survey show that schools have implemented some protective measures to improve IAQ, prioritizing ventilation and filtration to reduce the transmission of the virus. However, school districts still have unmet needs and face numerous challenges related to costs and outdated building infrastructure.

"Indoor air quality continues to be a critical concern as more teachers and students are returning to the classroom," said Anisa Heming, Director of the Center for Green Schools at USGBC. "Increasing clean air circulation for our teachers and students is vital to promoting public health and is a key green building strategy for school buildings. Our aim with this report is to inform policymakers and nonprofits that support our schools of the challenges that our education institutions face in combatting the spread of COVID-19, particularly given the deficient state of many school buildings across the country."

Additional findings from the survey include:

- The most-frequently cited challenge to implementing protective air quality measures at schools was that school buildings were not designed to support the strategies that were being recommended.
- School districts that have been able to act have leaned heavily on their mechanical systems, such as increasing air supply through HVAC systems or upgrading filters to implement protective air quality measures for students and teachers.
- Only two-thirds of respondents were regularly monitoring IAQ before the pandemic, indicating that providing time, staff, and funding for regular monitoring and data collection has not been a priority for many districts in the past.
- Respondents want to continue the measures implemented during the pandemic, citing student and teacher health. Seventy percent of school districts plan to continue some or all of the strategies they've implemented.

"As schools re-open and develop health and safety plans to mitigate airborne transmission of COVID-19, many are prioritizing and upgrading current HVAC systems to provide the highest indoor air quality for building occupants," said Corey Metzger, ASHRAE Epidemic Task Force Schools team lead. "We know that improved indoor air quality has a positive impact on student performance and general well-being and I'm hopeful that more schools will consider and implement the guidance provided by ASHRAE."

To download the full report, please visit ashrae.org/COVID19.



KENNETH SHIFFLETT



KEITH REIHL

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SUSTAINABILITY

Life Safety Dampers - Building for Sustainability & Resiliency (Part 1 of 4)

WRITTEN BY: MICHAEL J. BULZOMI

A total fire protection plan is comprised of active and passive life safety strategies and integrates compartmentation, detection and alarm systems, suppression systems, and egress. This layered approach to life safety contributes to a resilient building design and maximizes occupant and property safety.

Life Safety Dampers play a vital part of a total fire protection plan, as they reduce fire severity and spread through effective compartmentation, enable fire suppression systems to operate more effectively, and limit property damage. Most importantly, they save lives.

The International Building Code (IBC) requires life safety dampers to protect duct and air transfer openings within building separations - fire walls, fire barriers, fire partitions, horizontal assemblies, smoke barriers, and smoke partitions, as well as detail their use in engineered smoke control systems.

There are 4 essential dampers types: Fire Dampers, Smoke Dampers, Combination Fire/Smoke Dampers, and Ceiling Radiation Dampers. We will discuss Fire Dampers in detail in this edition and continue with the other dampers in future articles.

Fire Dampers

Per the 2019 edition of NFPA 80 Standard for Fire Doors and Other Opening Protectives, a Fire Damper is a device in an air distribution system, designed to close automatically upon detection of heat or interrupt the migratory airflow and to restrict the passage of flame. Essentially, a fire damper is designed to close in a fire event and maintain the integrity of the barrier in which it is installed.

Fire Dampers are tested in accordance with UL555 Standard for Safety for Fire Dampers. They are held open by a fusible link, which melts at a predetermined temperature, most commonly 165°F (also available in 212°F and less commonly, 286°F).

Fire Dampers can be static rated (tested to close under still air conditions; i.e. "fans off" in the event of a fire emergency, no airflow or pressure) or dynamic rated (tested to close under a specified airflow [2000 fpm, 3000 fpm, or 4000 fpm] and pressure [4" w.g., 6" w.g., or 8" w.g.] i.e. "fans on" like a dynamic smoke control system). Dampers are tested in their intended installation orientation and can have Vertical, Horizontal, or Vertical/Horizontal labels. Most dampers are installed "in wall/floor", but specially designed and tested "out of wall/floor" dampers are available for applications where the damper cannot be installed within the plane of the separation. Dampers

There are 2 styles of Fire Dampers:

1. Curtain style dampers feature an interlocking blade pack contained within a frame. Static rated horizontal and all Dynamic rated dampers feature torsion springs in the jamb of the damper to aid in closure.
2. Single or Multi-Blade style dampers construction is like that of a control damper, with heavier duty blades and frames than curtain style and subsequently larger UL listed sizes. Both Static and Dynamic rated dampers feature a helical spring, a jackshaft, and a knee-lock mechanism to aid in closure.

Unless the damper frame is wide enough to provide for direct attachment of retaining angles, all fire dampers shall be mounted in a sleeve fabricated per the damper manufacturer's installation instructions. Sleeves can be factory or field fabricated.

Dampers are tested with defined clearances between the damper's sleeve and the wall or floor opening, commonly referred to as the "expansion clearance". Most approved damper installation methods require the use of retaining angles to secure the damper in the wall or floor opening and installation angles can be single or double sided. Reference the damper manufacturer's installation instructions for the required clearances, material gauge of the retaining angles, the required overlap between the retaining angles and the wall or floor, and the spacing and type of fasteners to be used.

Dampers are tested and approved to use specific methods for connecting the damper sleeve to adjoining ductwork. These can be breakaway type slip joints or rigid connections using sheet metal screws. Reference the damper manufacturer's installation instructions for the allowable duct to sleeve connections.

The installation of life safety dampers should always be accomplished in accordance with the manufacturer's instructions as tested by UL or another code-compliant approval agency. Installation instructions provided by a manufacturer should never be used to install the dampers of a different manufacturer.

The use, proper installation, and maintenance of fire dampers is a vital part of a properly designed life safety system. When fire emergencies happen, Fire, Smoke, Combination Fire/Smoke Dampers, and Ceiling Radiation Dampers will help contain the fire and smoke to the compartment of origin and thus minimize life and property loss while helping the firefighters extinguish the blaze, and we will discuss the remaining damper types in articles to follow.

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BOG MINUTES

ASHRAE Houston Chapter

April 15, 2021 BOG Meeting
2:00 pm
Zoom meeting

Attendees: BoG and Chairs
Board of Governors Date: April 15, 2021
Call to order at: 2:00 PM: The meeting call to order by President Greg Tinkler at 2:07 PM.

I. President – Greg Tinkler
II. Approve the March Meeting minutes: Motion was made, seconded, and carried the March meeting minutes.
   a. Please contact your RVC no later than the 15th every month. Copy to me. Eneryone who did not reach out should do so in the next couple of days.

Position	Officer	MBOs	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
President	Greg Tinkler	X	X	X	X	X	X	X	X	X		
CTTC	Josh Vanlandingham	X	X	X	X	X	X	X	X	X		
Research Promotion	Garrett Neubauer	X	X	X	X	X	X	X		X		
Membership	Jeff Hunter	X	X	X	X	X	X	X	X	X		
Treasurer	Mike Green	X	X	X	X	X	X	X	X	X		
Student Activities	Francis Liao	X	X	X	X	X	X	X	X	X		
YEA	Marisa Kamstra	X	X	X	X	X	X	X	X	X		
GAC	Keith Reihl/Ken Shifflett	X	X	X	X	X	X	X	X	X		
Newsletter	Julie Thomet	X	X	X	X	X	X	X	X	X		
Historian	Bruce Flaniken	X	X	X	X	X	X	X	X	X		
Refrigeration	Manuchehr Mehdizadeh	X	X	X	X	X	X	X	X	X		
Electronic Communication	John Walik-Jack Kolar	X	X	X	X	X	X	X	X	X		

   b. Goals:
      i. Start a Rice Student Chapter
      ii. Increase active members by 10 new members
      iii. Exceed our Research and Promotion (RP) contribution goals
   c. Start targeting your PAOE** points for the year please. Let me know if you need assistance on the ASHRAE website with online completion: We are good on POAE points, Josh is still behind but will meet his goal with the student meeting tonight and the refrigeration next month.

	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Chapter Operations 700	375	615	665	765	765	1265	1295	1320			
Sustainability 500	200	500	500	500	500	500	500	500			
Chapter Technology Transfer 1050	0	400	400	400	400	1000	1000	1000			
Electronic Communications 700	0	0	360	400	400	400	570	730			
Government Affairs 650	0	500	500	500	500	750	850	900			
Historical 300	100	100	350	350	350	350	350	350			
Membership Promotions 800	450	485	535	310	310	535	635	1035			
Research Promotions 1050	0	218	356	787	787	789	789	1137			
Student Activities 800	450	1096	1106	1516	1516	1516	1566	1566			
YEA 800	625	750	825	825	825	825	825	825			
TOTAL 7350	**2000**	**4664**	**5597**	**6353**	**6353**	**7930**	**8380**	**9363**			

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d. Photos to info@ashraehouston.org
e. Items to discuss during the general meeting?
   i. Student Night
      1. Scholarship Award
      2. TAMU teams presentations: Two TAMU teams will present their ASHRAE projects tonight.
   ii. Golf Tournament: May 4th. Will be announced
   iii. YEA event: Later this month
   iv. WiA event; Putting together an event
   v. Membership Night: Tonight
f. CRC is April 22-24 Go to meeting. Please put it on your Calendar, https://eweb.ashrae.org/eweb/DynamicPage.aspx?WebCode=RegCRC&Reg_evt_key=956c008c-9fbc-430f-a6fb-31d3ee9f4dfa&ObjectKeyFrom=1a83491a-9853-4c87-86a4-f7d95601c2e2&ParentObject=CentralizedOrderEntry&ParentDataObject=Registrant&DoNotSave=yes&action=Add
g. April 28-30,2022 in Houston
h. Summer meeting in Phoenix is Virutal on June 29th - July 2nd
i. Everyone attend training at CRC veritual event

III. President-Elect and CTTC Chair – Josh Vanlandingham
a. Update PAOE points on website
b. Swearing in of Officers for 2021-2022 year by Greg at the May meeting
c. Any submissions for Project awards?
d. Upcoming meetings and events
e. CRC representatives, get it on your Calendars please….must attend by Josh and Garrett
   i. Any other items to take to CRC council?
f. Josh attended Pres-Elect training.
g. Josh went over the genda for tonight's students and membership night

IV. Vice President and RP Chair – Garrett Neubauer
a. ASHRAE Houston met it year end intermediate RP goal of $30k and achieved about $35k; Goal by June 1st is $80k Houston is at $59k so far and should get another $15k in April plus golf tournament: A $20,500 check was mailed to the society. Still have two outstanding checks from Oslin Nation and Cougar sales to meet our goal, Garrette will reach out to them.
b. Spring Golf and Sponsor – Update- May 4th Tuesday with Shotgun at Noon: Still many sponsorship available,13 teams are still available, 36 teams total.
c. Final donation by June 15th : Trying to schedule a Poker night before this date.

V. Treasurer – Mike Green
a. Update on balance and budget

VI. Secretary – Ayman Ashkar
a. Post-meeting minutes on Houston Basecamp and to Julie for Newsletter

VII. Membership – Jeff Hunter, Shannon Yancey, Tim Navarro and Bryan Clark
   i. Membership presentation at April meeting
   ii. Grundfos Sponsorship being used for 2 new Student Chapters
   iii. Caleffi to be the new Membership sponsor: Will donate for 10 membership
   iv. Still down on membership for this year

VIII. Student Activities, K-12 – Francis Liao, Elmer Whithead
a. RO Hunton, Damon Gowan, and Richard Burr Scholarship – Francis - Update
   i. Update on scholarship awards: Tonight will introduce the 5 student branches. TAMU design team will present and then will announce scholarships.
b. Rice University
   i. Student Chapter Update- ???????: Still working to get this going. There is not large HVAC group on Rice campus.
c. TAMU student design competition – We are sponsoring 2 teams this year
   i. Status of team meetings
   ii. Presentation at April monthly meeting
d. TX State Technical College Student Chapter to start- ??????
e. Greg to do A&M student chapter meeting in April

IX. Historian – Bruce Flaniken
a. Update
b. Need to update PAOE points

X. YEA- Marisa Kamstra, Nick Janssen

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a. Had meeting- March 25th at 5:30 PM at Bobcat Teddys Icehouse: Next event will be in the Sporting Club on April 29th at 5:30 PM.

XI. Women in ASHRAE – Lauren Ramos, Catherine Tinkler
   a. Had a meeting-March 30th at 7 PM-ABC's of women in the workforce; other Region 8 chapters invited. Will have a joint event with YEA on May 20th, 5:30-7:30 PM.

XII. PAOE – Volunteer to help?
   a. Thank you for updating your PAOE points

XIII. Refrigeration – Manuchehr Mehdizadeh
   a. Excellent Article in the HAR
   b. Refrigeration Night ? – Can we pull together for May.

XIV. Sustainability / Energy Modeling- Kapil Upadhyaya and Gus Faris
   a. Kapil relocating outside Houston-Replacement?
   b. Presentation on ASHRAE updates

XV. Newsletter – Julie Thomet
   a. Update- Newsletters- due date for articles
   b. photos in the HAR

XVI. Webmaster and Home Page Editor – Jack Kolar, backup support John Walik
   a. Photos need to be uploaded to the website. Missing picture downloads year YTD.
   b. PAOE – Update – We need to meet the minimum of PAR 700
   c. Ongoing work on updating members emails and deleting inactive emails
   d. Discussed advertising on our ASHRAE Houston group on LinkedIn

XVII. Honors and Awards – Alan, Bruce, Mike L, and Francis
   a. Update, Group had a meeting at the end of January
   b. Award submissions on projects:
      i. Status of DSA and ESA submissions as well as HoF and others: Doing well on this, have many great DSA and ESA candidates.
      ii. Any projects anyone wants to submit for 2020-2021

XVIII. Social Media and Electronic Communications Chair – Jack Kolar
   a. Any posts last 30 days.

XIX. Directory Chair – Steve Fritsche
   a. Status-to be published to members by ?

XX. Grass Roots Government Advocacy – Keith Reihl, Kenneth Shifflett
   a. Make presentation at May meeting?

XXI. Commissioning Chair – David MacLean-Provide info at May meeting?

XXII. Other business: Old timers party proposed by John Walik was approved. Motion was made, seconded, and carried.

XXIII. Meeting called to close by 3:30 PM sharp. Motion was made, seconded, and carried to end the meeting.

Quick Links

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This Month's Meeting
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Grassroots Government
Sustainability
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BOG Minutes
Roster

ROSTER

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