ASHRAE Kansas City Chapter

January 2023 Breeze

Cannabis Conundrums

Presenter: Jim Megerson

Monday, February 13th 2023

11:30 AM Check-In / Networking
11:50 AM Announcements
12:00 PM Presentation

New Meeting Location!

Grundfos Pumps Corp. - Training Center
9300 Loiret Boulevard
Lenexa, Kansas 66219

RSVP at https://www.kcashrae.org/

Deadline: Midnight February 8th
$25 = Online before deadline
$30 = after RSVP deadline
*If you haven't prepaid for a meeting, you are **required to pay cash or check at the door**. Invoicing is not an option.
No show will not be refunded
PDH Available
Boxed Lunches & Refreshments provided!

President's Message

Old Hats

As with most ASHRAE chapters, your president comes to the office having served in many positions prior to Chapter President. I'd like to reprise some of the advocacy of positions served in previously.

From my membership promotion days, I'd like to encourage all our chapter members to share the benefits of ASHRAE with their colleagues and we have a membership appreciation event coming up that current Membership Promotion committee has organized – a second annual Casino Night. Be sure to sign up as we are hopeful more people will be able to turn out this year.

From my research promotion days, I'd like to remind all our corporate donors of a shift in the research promotion schedule that occurred last year and continues this year. Rather than waiting until the end of June, we are encouraged to get company contributions collected by the end of March.

There are many more positions to serve in and we are starting the process of filling them now so that the people who fill them can prepare to attend training sessions offered over the summer. Chapter leaders are typically nominated from those who have served on chapter committees and have attended some of the board meetings in the past. If you or anyone you know would like to be nominated for a position on the Board of Governors, let me know. As I've said before, it is excellent leadership training.

Several other committees also have events for the spring in the works. Stay tuned. We have had several people reach out with offers to sponsor or host some of these events. Thank you to all our supporters.

Join us for our February lunch meeting with a presentation from Jim Megerson entitled *Cannabis Conundrums – The challenges associated with plants as occupants*. Our Board meetings continue to be open to members as well. See the events page on the website for information on how to join.

Amy Stadler
KC Chapter President 2022-23

Publication of the Kansas City Chapter of the American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.
This newsletter is a publication of the chapter and not the Society
Newsletter Editor: Alan Sparling (asparling@p1-service.com) http://www.kcashrae.org/

ASHRAE Kansas City Chapter

February Meeting

Grundfos
9300 Loiret Blvd
Lenexa, KS 66219

Monday, February 13th
11:30 Check-In/Networking
11:50 Announcements
12:00 Presentation

Register at www.kcashrae.org.
Registration includes boxed meal and dessert.
In-Person Cost: $25 if registered by Feb. 8th, $30 after.
VIRTUAL BROADCAST TEST - No Cost*

*We are testing out a virtual broadcasting platform, and if you cannot attend in person and would like to test out the system, please sign up for the virtual option - Link to be sent out later.

Cannabis Conundrums:
The challenges associated with plants as occupants

Presented by: Jim Megerson

With cannabis becoming legal in nearly every state in the US and many countries around the globe, there are more indoor grow facilities being built. It is important for engineers, contractors, commissioning agents and other facility team members to be aware of the unique requirements associated with these facilities. The heating, ventilating, air conditioning and dehumidifying (HVACD) systems do not follow the conventional wisdom experienced with typical buildings. Knowing how plants thrive and propagate and how that is related to space temperature, humidity and air flow is extremely important. The paradigm for controlled environments for indoor agriculture (CEA) is realizing that we are trying to create the perfect outdoor day for growing inside the building, every day. Issues like higher moisture removal than sensible load, vapor barriers, internal insulation compartments and 24/7 occupancy become more important. Understanding how air must move through these spaces without creating differences to vapor pressure that causes detrimental effects on the plants.

ASHRAE Kansas City Chapter

Membership Promotion

The Kansas City Chapter Membership Promotions committee and the Board of Governors would like to welcome this month's new ASHRAE members. Please do not hesitate to reach out to any one listed above in regards to maximizing your membership. Remember to invite your peers and coworkers to our monthly lunch meetings and give ASHRAE a shot, you never know!

- Mrs. JaLynn A Hill
- Ms. Lakshan Bandara
- Lucas S Reynolds
- Mrs. Maren Frances McLenon
- Mr. Sasha Stadnik
- Kaleb Rodenhausen
- Mr. Brett A Ravenscroft

WELCOME!!

ASHRAE HVAC&R Global Summit Final Report

The ASHRAE Global HVAC&R Summit – a key element of 2022–2023 ASHRAE President Farooq Mehboob's vision for his Society year theme, "Securing Our Future" – was designed to create an environment of collaboration and strategic dialogue to address the critical issues of the day, which were determined via the results of an international survey developed and distributed by the ASHRAE Associate Society Alliance (AASA). The excellent response to the survey revealed a strong consensus regardless of geographical location as well as the following six critical issues:

- Decarbonization
- IEQ/Wellness
- Climate Crisis Mitigation
- Food Security—The Cold Chain
- Energy Security
- Workforce Development

The 6 keynote speakers and 72 delegates to the Summit were selected to represent every segment of the HVAC&R industry, every geographical area of the globe, and every economic condition. This diverse assembly created a consensus-based environment allowing us to talk with one voice in a forward-thinking manner. The ultimate goal of the Summit was to develop action plans we all can endorse, thereby making our planet a better place for all. This report details the selection of the Summit speakers and delegates as well as the action plans for the major issues determined for each of the six critical issues of the day.

For more information or the article in its entirety:
https://www.ashrae.org/about/securing-our-future-addressing-the-critical-issues-of-the-day

ASHRAE MP

FEBRUARY 16TH, 2023

CASINO NIGHT

$20.00 PER PERSON

CHIPS PROVIDED FOR THE NIGHT

FOOD · RAFFLE PRIZES · DRINKS!

BEGINNERS ARE WELCOME

10915 EICHER DRIVE, LENEXA KS 66219

BCS

ASHRAE Kansas City Chapter

DOORS OPEN: 6:00PM

TABLES OPEN: 6:30-9:30PM

For over 25 years, the best trade show and networking event for commercial real estate industry professionals!

2023 EXPO

Save the Date

MAY 17 @ UNION STATION
STAY TUNED FOR DETAILS!

EXPO ORGANIZERS

The Kansas City Commercial Real Estate Expo® is produced annually by a collective of commercial real estate focused organizations.

Apartment Association of Kansas City

American Society of Heating, Refrigerating and Air-Conditioning Engineers - Kansas City Chapter

Building Owners and Managers Association- Kansas City

International Facility Management Association -Kansas City Chapter

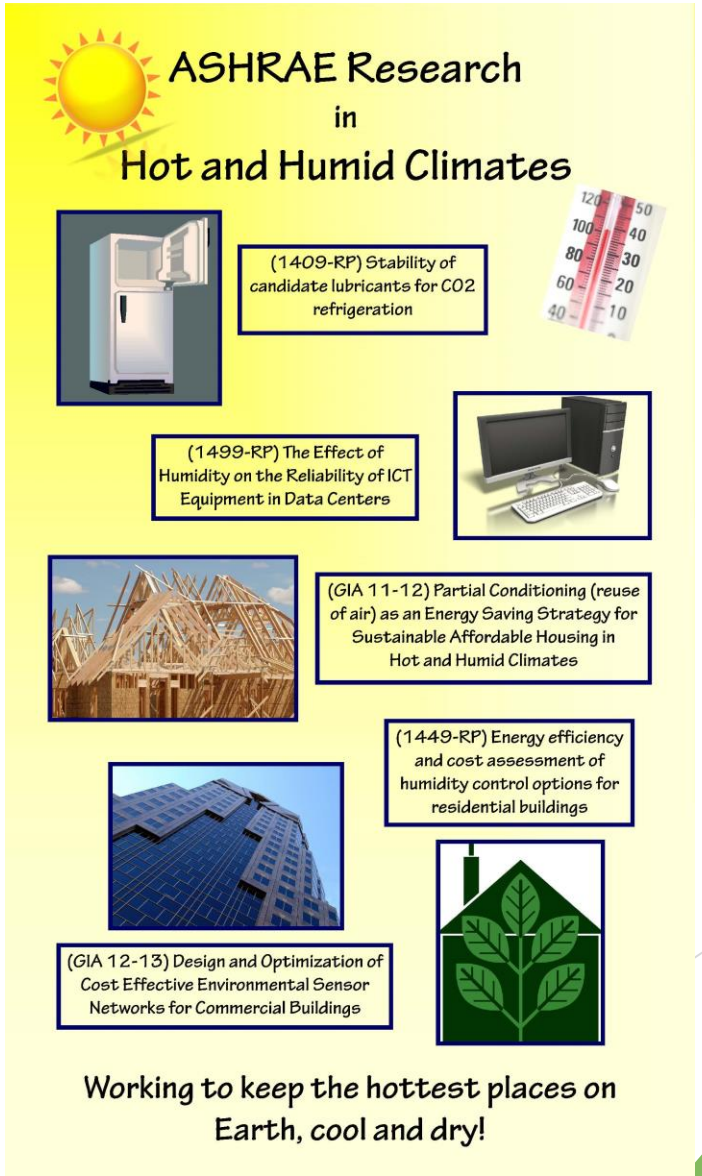
Institute of Real Estate Management- Kansas City Chapter

Kansas City Regional Association of REALTORS Commercial

2022-2023 Research Promotion Donors

- Bryan Babcock
- Larry Navran
- Prosoco Inc.
- Burns & McDonnell
- Amy Stadler
- Michelle Beck
- Mark Snyder
- Alan Sparling
- Andrea Phillips
- Jennifer Nelson
- Blake Ellis
- Donald Gray
- P1 Group
- Kelley Cramm
- Frank Schroer
- Trevor Jones
- Stuart Braden
- Jonathan Smith

Thanks for your donations!



Are you Ready… The 2021 International Energy Conservation Code (IECC)

The City of Kansas City, Missouri is set to adopt the 2021 edition of the International Energy Conservation Code (2021 IECC) this coming July. For those unfamiliar with model buildings codes, which are defined as a **code that is developed and maintained by a standards organization independent of the jurisdiction responsible for enacting the building code, with the standards organization in this case being the International Code Council (ICC).** The IECC is one of the two most cited documents related to energy conservation used in many jurisdictions throughout the United States. The other major document, which is not technically a model building code, but a standard written in code-enforceable language, is ASHRAE 90.1 *Energy Standards for Buildings Except Low-Rise Residential Buildings*. There are other State specific energy codes as well such as California Title 24. The IECC is updated triennially.

This article reviews the 2021 IECC changes related to building mechanical systems, Section C403. It should be noted that since Kansas City is a home-rule city within the State of Missouri, the City has the authority to impose additional regulations that could alter the requirements of the 2021 IECC. However, this article only addresses the IECC as issued by the ICC.

The 2021 IECC contains two separate sets of provisions – one for commercial buildings and one for residential buildings. Each set of provisions is applied separately to buildings within their scope. The IECC Commercial Provisions apply to all buildings except residential buildings three stories or less in height. The IECC Residential Provisions apply to detached one- and two-family dwellings and multiple single-family dwellings as well as Group R-2, R-3, and R-4 buildings three stories in height or less.

The following table shows how the IECC is divided, the table is applicable to both commercial (chapters denoted as CE) and residential (chapters denoted as RE). As in past revisions, changes to the 2021 edition are shown in blue font. For the 2021 edition the labeling of “Mandatory” and “Prescriptive” requirements was removed and appears to be the reason why many article titles and first few words are shown in blue without any apparent change.

Chapter Topics

Chapter	Subject
1-2	Administration and definitions
3	Climate zones and general materials requirements
4	Energy efficiency requirements
5	Existing buildings
6	Referenced standards
A	Board of appeals
B	Solar-ready zone
C	Net zero energy

Attention is called to Chapter 6 on referenced standards and Section 108 which discusses how to apply referenced standards and how the code treats conflicts between the IECC and the referenced standard, and when the code takes precedence over the standards.

According to the Department of Energy,

- Energy codes and standards set minimum efficiency requirements for new and renovated buildings, assuring reductions in energy use and emissions over the life of the building. Energy codes are a subset of building codes, which establish baseline requirements and govern building construction.
- Code buildings are more comfortable and cost effective to operate, assuring energy, economic and environmental benefits.

DOE is required by law (the Energy Conservation and Production Act, as amended (ECPA)) to issue a determination as to whether the latest edition of ASHRAE Standard 90.1 (for commercial and multi-family high-rise residential buildings) or the latest version of the International Energy Conservation Code (for low-rise residential buildings) will improve energy efficiency compared to the previous edition of the corresponding standard or code. DOE has one year to publish a determination in the Federal Register after each new edition of the standard/code is published. States are required within two years to certify that they have reviewed the provisions of their commercial and residential building codes regarding energy efficiency, and, as necessary, updated their codes to meet or exceed the updated edition.

DOE determined that the 2021 IECC would achieve 9.38% site energy savings and 8.66% carbon emissions reduction for residential buildings compared to the previous 2018 edition. DOE provides a similar determination for commercial buildings based on triennially updates to ASHRAE 90.1.

Summary of Major Changes

Equipment efficiency requirement tables were updated with the prescriptive minimum efficiency and the referenced test procedure used to determine the efficiency. The tables are also noted to be aligned with similar tables in ASHRAE 90.1.

Article	Article Title	Comment
C403.1.2	Data Centers	• Entirely new article • Data Centers exempt from heating and cooling system controls (C403.4) and economizers (C403.5)
C403.2.3	Fault Detection and Diagnostics	• FDD required for entire system where the system serves gross conditioned floor area of 100,000sf or larger
C403.4.1.1	Heat Pump Supplementary Heat	• Allows supplementary heat operation only under certain conditions
C403.4.2.3	Automatic Start and Stop	• Automatic stop required with stop occurring near end of programmed occupied period with increase/decrease in setpoint of ±2°F
C403.4.4	Part-Load Controls	• Added variable speed drive requirement for pumping chilled and heated fluids for very hot and humid (climate zone 0A) and very hot and dry (climate zone 0B)
C403.5	Economizers	• Economizer not required in both the 0A and 0B climate zones • Economizer not required for VRF system equipped with a dedicated outdoor air system
C403.6.5	Supply Air Temperature Reset Controls	• Reset based on zone humidity in many climate zones with exceptions • HVAC zones with “relatively” constant loads are required to have their maximum airflow designed to accommodate full reset of supply air temperature, not less than 25% of the delta between supply air and room temperature • Warm to hot and moist climate zones supply air temperature reset with simultaneous dehumidification is required, with economizer locked out during dehumidification
C403.7.1	Demand Control Ventilation	• Tightened up the requirement for use of DCV to greater than or equal to 15 occupants per 1,000sf from 25 occupants • Provided more clarity on where this requirement does not apply
C403.7.2	Enclosed Parking Garage Ventilation Controls	• Specifies the types of detectors required to be installed in enclosed parking garages • Significantly reduced exhaust volume where this requirement does not apply thus increasing the application of these control devices
C403.7.4	Energy Recovery Systems	• Specifies requirements for energy recovery systems and is divided into two parts: • C403.7.4.1 covers nontransient dwelling units (a term not explicitly defined in the code but appears to be a permanent independent living unit such as a multistory apartment building) • C403.7.4.2 which covers all other types of spaces • Article also introduces a new term – Enthalpy Recovery Ratio
C403.7.6	Automatic Control of	• Requirements covering hotel guestrooms was added in the 2018 edition and is reformatted in the 2021 edition for ease of application

	HVAC Systems Serving Guest Rooms	
C403.8.2	Motor Nameplate Horsepower	• Added two exceptions regarding where indication of fan brake horsepower on construction documents is not required and no limitation on maximum motor horsepower
C403.8.3	Fan Efficiency	• Switches from the use of fan efficiency grade (FEG) in the 2018 edition to fan energy index (FEI) in the 2021 edition • 2021 edition references AMCA 208 for the procedure in determining FEI and adds additional exceptions where the FEI label is not required
C403.8.5	Low-Capacity Ventilation Fans	• Entirely new article covering low-capacity ventilation fans with motors less than 1/12 horsepower
C403.9	Large-Diameter Ceiling Fans	• Entirely new article covering large-diameter ceiling fans, i.e. HVLS type fans • Code defines this type of fan as being larger than 7 feet in diameter
C403.11	Refrigeration Equipment Performance	• Revised with reformatted efficiency tables
C403.12.1	Duct and Plenum Insulation and Sealing	• Added insulation requirements for underground ductwork
C403.12.3	Piping Insulation	• Added exception to exclude insulating radiant system piping where the pipe is intended by design to radiate heat
C403.14	Operable Opening Interlocking Controls	• Entirely new article addressing control interlocks in loading dock spaces to minimize air infiltration when the dock doors are provided with sealing mechanisms to parked vehicles

As a reminder, since we are a new committee for the local Chapter, please let one of the committee's representatives know of a sustainability related topic you would like to see covered in a future Breeze article.

Thanks,

Sustainability Committee
Larry Navran, larry.navran@se.com
Rob Lippold, rlippold@aeskc.com
Ruben Salinas, ruben.salinas@spur-design.com

Reference(s)
Digital Codes (iccsafe.org)

Proper Golf Attire:
- ✓ No Jeans
- ✓ Shirt with Collar

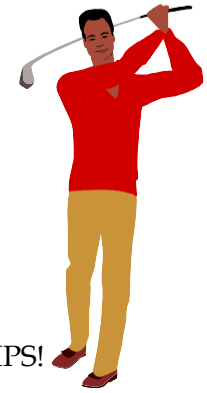
ASHRAE Kansas City Chapter

Soft Spikes Required

47th ANNUAL ASHRAE GOLF TOURNAMENT
4-PERSON SCRAMBLE FORMAT
(A & B Flights – 18 Hole Course)

FRIDAY, MAY 19, 2022

ST ANDREWS GOLF CLUB
11099 W 135th St., Overland Park, Kansas 66221



8:00am Shotgun format. Breakfast and lunch provided.

1:30pm Shotgun format. Lunch and dinner provided.

All PROCEEDS GO TO RESEARCH PROMOTION AND SCHOLARSHIPS!

Registration/Reservation

Registation Opening: Monday, February 13th
Registration Deadline: Friday, April 29th

Lunch Sponsor ($1,500) – includes logos for dinner in restaurant and dining area, team registration and hole sponsorship. (Limit to 1 Sponsor)

Golf Cart Sponsor ($1,500) – includes logos for dinner in restaurant and dining area, team registration and hole sponsorship. (Limit to 2 Sponsor)

Golf Ball Logo Sponsor ($1300) – includes logo golf balls provided to all participants.

Breakfast Sponsor ($1,000) – includes beverage cart sponsorship, team registration and hole sponsorship. (Limit to 1 Sponsor)

Dinner Sponsor ($1,000) – includes beverage cart sponsorship, team registration and hole sponsorship. (Limit to 1 Sponsor)

Hole Sponsor ($800) – includes signage at 1 hole on the course and team registration. $250 without team registration.

Team Registration ($600) – 4-person team, greens fees, cart rental, 3 x drink tickets, and dinner.

Game/Tent Hole Sponsor ($600) – allows 2 people at a hole for a game (John Daly long drive, bags, etc.), alcohol available for purchase from the course.

Registration online at www.kcashrae.org or mail check (payable to ASHRAE/KC Chapter) along with registration to Joe Maness, Hoefer Welker, 11460 Tomahawk Creek Pkwy Suite 400, Leawood, KS 66211, or email to joe.maness@hoeferwelker.com, asparling@p1-service.com, and jreed@mcqueenygroup.com.

KC ASHRAE - 2022/2023 Board of Governors

Position	Name	E-Mail Address
President	Amy Stadler	astadler@fscmep.com
President Elect	Mark Snyder	marksnyder@jorban-riscoe.com
Vice President	Michelle Beck	mbeck@dmi-kc.com
Treasurer	Jennifer Nelson	jennifer.nelson@hendersonengineers.com
Secretary / Newsletter	Alan Sparling	asparling@p1-service.com
BOG At-Large	Ian Kobler	ian.kobler@crbgroup.com
BOG At-Large	Meagan Gibbs	meagan.gibbs@hendersonengineers.com
Past President	Ann Peratt	ann.peratt@pkmreng.com

KC ASHRAE - 2022/2023 Committee Members

Position	Name	E-Mail Address
Built Environment Partners	Jim Noe	jnoe@epluses.com
CTTC/Programs	Michelle Beck	mbeck@dmi-kc.com
CTTC host	**OPEN**	
DiA/Diversity in ASHRAE	Kristin Phelps	kphelps@DLRGROUP.com
DiA Co-Chair	**OPEN**	
Golf	Joe Maness	joe.maness@hoeferwelker.com
Golf	Joe Reed	jreed@mcqueenygroup.com
Govt. Grassroots	Ian Kobler	ian.kobler@crbgroup.com
Govt. Grassroots - Incoming	**OPEN**	
Govt. Grassroots	Greg Paulsen	gpaulsen@trianglesales.com
Historian	Stuart Braden	Stuart.G.Braden@imegcorp.com
Historian - Incoming	**OPEN**	
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Membership Chair	Jake Bonkowski	jbonkowski@bldgcontrols.com
Membership Co-Chair	Dan Moresi	dmoresi@bldgcontrols.com
Membership Committee	Charlie Thomeczek	Charles@metroair.com
Product Directory	Greg Paulsen	gpaulsen@trianglesales.com
Refrigeration	Kenneth Holaday	kenneth.holaday@powereng.com
Research Promotion	Mark Snyder	marksnyder@jorban-riscoe.com
Research Promotion Event	Bailey White	Bailey@lankfordfendler.com
Social Media	Ruben Salinas	ruben.salinas@spur-design.com
Student Activities Chair	Jessica Spottek	Jessica.Spottek@hendersonengineers.com
Student Activities Co-Chair	Chris Swingle	cswingle@nscapg.com
Sustainability Co-Chair	Rob Lippold	rlippold@aeskc.com
Sustainability Co-Chair	Larry Navran	Larry.Navran@se.com
Sustainability Committee	Ruben Salinas	ruben.salinas@spur-design.com
YEA Co-Chair	Ryan Mustain	ryanm@aap-kc.com
YEA Co-Chair	Austin Miller	austin@mexicoheating.com
YEA Committee	Evan Reese	emreese@burnsmcd.com
YEA Committee	Tyler Stroud	tstroud@mechsales.com
YEA Committee	Kelsey Moss	kcmoss@burnsmcd.com
YEA Committee	Joe Reed	jreed@mcqueenygroup.com
Webmaster	Bobby Caffrey	bobby@chopair.com

ASHRAE Kansas City Chapter

Are you looking for quality Engineers, Contractors, or Sales Representatives involved in the ASHRAE community, but don't know where to advertise your job posting?

KC ASHRAE has a solution for you! **A half page job posting** can be advertised in the Breeze and on the website for a **$100 RP** donation (per posting, per month).

Please contact Alan Sparling at asparling@p1-service.com if you are interested in advertising in the Breeze and online. No charge for Universities in the chapter.