



# DAYTON CHAPTER

WWW.DAYTONASHRAE.ORG

ISSUE X | 2023

## October 9th—In Person Mtg.

### CURRENT OFFICERS

#### **PRESIDENT**

**Jennifer Eller**  
jmeller@heapy.com  
Heapy

#### **PRESIDENT-ELECT**

**Kevin Sturm**  
ksturm@uptime-inc.com  
Uptime Solutions

#### **TREASURER**

**Zak Schultz**  
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Ferguson Enterprises, Inc.

#### **SECRETARY**

**Mark Mehicic**  
mmehicic@ketchum-walton.com  
Ketchum-Walton

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### Main Presentation: Basics of Air Change Rates: Facts vs Fiction

**Presenter: Kishor Khankari, Ph. D.,**  
FASHRAE— President of AnSight, LLC

**Social Hour: 5:30-5:55 pm**

**Chapter Business: 5:55-6pm**

**Dinner & Main Presentation: 6p**

**Presentation will be at: Engineers Club: 110 E Monument Ave**  
**Theme: Research Promotion**  
**1 PDH Credit**

Air Changes per Hour (ACH) is often specified in ASHRAE standards, codes, design guidelines, and handbooks for required ventilation rate. Examples of such spaces are patient rooms, operating room, bathrooms, cleanroom, and laboratories. This presentation will systematically demonstrate the validity of popular notions regarding the ACH. The role of space volume in controlling and distributing the contaminant in the space will be discussed. This presentation will further demonstrate whether ACH can't be a sole criterion for effective ventilation of critical spaces using the examples for patient room, hospital operating room, laboratory spaces, and cleanroom. A new concept for analyzing ventilation effectiveness for these spaces will be introduced to design and optimize the HVAC layout for healthcare, laboratory, and cleanroom facilities. In addition, a role of demand control ventilation in minimizing the ACH will be discussed. This lecture will provide valuable insights to architects, design engineers, and facilities managers into the design and operation of critical facilities.

**Please Email Vincent Caudill at [vcaudill@ecomfortohio.com](mailto:vcaudill@ecomfortohio.com) to sign up by October 5th.** The meeting information will be sent out closer to the meeting date.

# FROM THE PRESIDENT

A Big Thank you to all who stopped by the ASHARE table at the Pivot conference on September 20th! It was great to see some new faces and get to listen to the interesting speakers.

Our next Mtg will be in person on Oct 9th back at the Engineers Club. Help me welcome Kishor Khankari, Ph.D. to discuss "Basics of ACH: Facts vs Fiction". He is a noted expert in his field and has been regularly published. I look forward seeing you all there and to the start of another year of great speakers and topic.

On November 9th we will have the honor of meeting with the President of ASHARE, Ginger Scoggins! She will be here for a dinner session at the Engineers club as well, so please look for more information soon.

Warm Regards,  
*Jennifer Eller*  
President, Dayton ASHRAE

## Upcoming Events

**Oct. 9th**  
ASHRAE Chapter Mtg.  
5:30 PM, Meeting

**Oct. 18th**  
Board of Governors  
8:00 AM, Virtual Meeting

**Nov. 9th**  
ASHRAE Chapter Mtg.  
5:30 PM, Meeting

**Nov. 15th**  
Board of Governors  
8:00 AM, Virtual Meeting

[See Additional  
Events & Volunteer  
Opportunities Here](#)

## CHAPTER HISTORY (1959-1960)

<b>President:</b>	<b>Norman Mitchel</b>	Honeywell
<b>Vice Pres:</b>	Thomas Lutz	Chrysler
<b>Secretary:</b>	Frank Doench	Helmig & Lienesch
<b>Treasurer:</b>	Jerry Ely	Chrysler
<b>BOD:</b>	All officers & Committee Members	

**Education:**  
**Research Pro.:**  
**Membership:**

Regional Director: Mr. Cider

Meetings were held at the Dayton Engineering Club.

## Committee Chairs

### **MEMBERSHIP**

**Vincent Caudill**

Vcaudill@ecomfortohio.com  
Environmental Comfort, LLC

### **HISTORY**

**Bryan Schenck**

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Waibel Energy Systems

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### **CTTC**

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### **GOVERNMENT AFFAIRS**

**Jennifer Butsch**

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Emerson

**YEA (Chair)**

## Board of Governors

**Rick Pavlak**

Heapy

**Lorraine Kapka**

Sinclair College

**Brian Turner**

Elitaire

# MEMBERSHIP

## New Members

The Dayton Chapter is happy to welcome its newest members. If you see them please give them a warm welcome!

**September: Noah Curtin**

**Do you know a colleague that would benefit from joining ASHRAE?**

You can go to [http://web.ashrae.org/connect\\_a\\_colleague/](http://web.ashrae.org/connect_a_colleague/) and quickly sign up for ASHRAE to send an email to ask them to sign up on your behalf.

## Membership Recognition

We would like to recognize the following members who have been with ASHRAE for the following years! Thank you for all your contributions to the field!

**No Anniversaries this month**

## **Membership Promotion Committee**

Looking for a way to get involved with your local ASHRAE chapter and meet new people? The membership promotion committee is looking for volunteers to join the committee. The committee's primary responsibility is to recruit new members and retain existing members. If you are interested in serving please contact **Vincent Caudill** at [vcaudill@ecomfortohio.com](mailto:vcaudill@ecomfortohio.com) or by calling 740-971-7795.

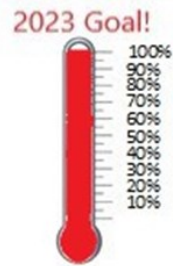
**Membership Application Here**

# ASHRAE RP

As we transition from summer to fall, it signals the kickoff for our ASHRAE RP 23-24 campaign . At this time, our 23-24 goals have not officially been set, but the RP Campaign has begun. We appreciate those who have already contributed to help us get off to a great start! Our expectation is that our goal will be close to \$20,000 again this year. For those looking to kick off the 23-24 season, please consider donating to ASHRAE RP / Education / Scholarships. See the link BELOW to donate today!

Please note again that in order to be recognized with a commemorative coin, and have your name published in the ASHRAE Journal, the minimum donation is \$150 for individuals and \$500 for Corporate Donors .

**2022 Goal = \$ 19,680**  
**YTD = \$ 450**  
**To go = \$ 19,230**



**% to 2022-23 GOAL: 100%**

## Partner Level

## Honor Roll

## Bronze Level

**Lorraine Kapka**  
**Steven Meier**  
**Brian Turner**

## Silver Level

## Honorable Mention

**Thanks for all your help and support. If you would like to donate NOW simply click this link:**

## **DONATE NOW**

And make your donation to help ASHRAE in its Research Efforts. Thank you so much!!



# Government Affairs



## 2023 THEME: SHARED VISION FOR A BETTER WORLD

ANSI is celebrating Oct 12, 2023

“United, we can achieve more through standardization, developing solutions to the complex global challenges of sustainability, safety, security and climate change—and leaving a better, more resilient, and more equitable world for the next generation.”

<https://www.ansi.org/events/standards-events/world-standards-day#:~:text=2023%20Theme%20Shared%20Vision%20for%20a%20Better%20World&text=The%20standardization%20system%20has%20the,%2C%20and%20non%2Dgovernmental%20organizations.>

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Welcome to ASHRAE's Government Affairs Update! This bi-weekly publication features information on government affairs-related activities of interest to ASHRAE members and others interested in the built environment. [Archives of previous updates](#) are available from the ASHRAE Government Affairs Updates webpage.

This information may be shared with interested colleagues who may subscribe from the ASHRAE Government Affairs Updates webpage [by clicking here](#).

- ◆ [Government Outreach](#)
- ◆ [U.S. Congressional Activities](#)
- ◆ [Federal Government Affairs](#)
- ◆ [State and Local Government Affairs](#)
- ◆ [Other News and Events](#)

# ASHRAE News

The Dayton Chapter looking for a Young adult to fill the position  
Of YEA (Young Engineers) Chair position.



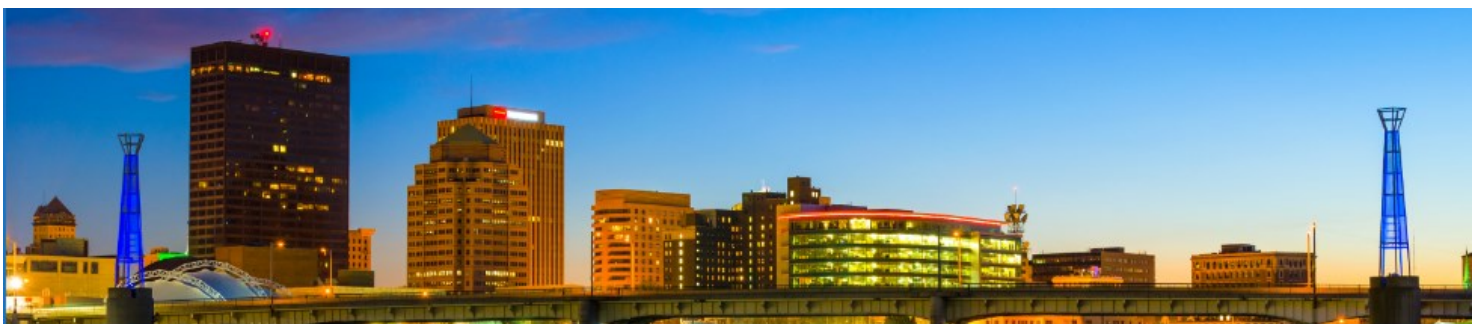
Shaping Tomorrow's  
Built Environment Today

Please make sure to let us know  
If you are willing to help our and  
Share your ideas to help  
Shape the world of HVAC-R!

You can email Jennifer Eller at  
[jmeller@heapy.com](mailto:jmeller@heapy.com)

←-----→

The Dayton ASHRAE Chapter has  
Done some upgrades to  
out Web page!!! Click below to  
go check it out.



[Home Page](#) [Newsletter](#) [Chapter Membership](#) [Membership](#) [Operations](#) [Constitution and Bylaw](#) [Archive](#) [History](#)  
[Past Presidents](#)

ASHRAE Dayton Chapter

## ASHRAE Member Gives 90.1 Presentation for DOE

On Thursday, September 21, ASHRAE member McHenry “Mack” Wallace, P.E. gave a presentation for the Department of Energy’s Office of Project Management on ASHRAE Standard 90.1, [Energy Standard for Buildings Except Low-Rise Residential Buildings](#). His remarks discussed the 2019 edition of Standard 90.1, as well as an overview of the standard’s creation and development. Mack is an ASHRAE Course Instructor and was a member of the ASHRAE 90.1 Committee that wrote the first edition of the standard that was in code-enforceable language, ASHRAE Standard 90.1-1999.

## Celebrate Energy Efficiency on October 4!

Energy Efficiency Day is October 4, 2023. It is a day dedicated to recognizing the importance of cutting energy waste, implementing energy efficiency, and other clean energy policies and programs, which can create economic opportunities and jobs while moving toward a sustainable future. The goal of Energy Efficiency Day is to share tips, tools and stories that promote the multiple benefits of energy efficiency, from lower costs to healthier homes. Link to external site for Energy Efficiency Day: <https://energyefficiencyday.org/> As an annual event, ASHRAE urges elected officials to recognize this occasion with official proclamations and resolutions. To learn more about how to engage with your elected officials and for sample proclamations and cover letters, including proclamation templates for jurisdictions outside the U.S., ASHRAE members can visit the [Proclamation Toolkit section](#) of the ASHRAE website.

## FEMA Administrator Deanne Criswell Testifies to House Subcommittee on Economic Development, Public Buildings, and Emergency Management

On September 19th Administrator Deanne Criswell, the leader of FEMA, sat with the Transportation and Infrastructure Subcommittee on Economic Development, Public Buildings, and Emergency Management to answer questions about the status of disaster readiness, response, and recovery in the United States. Subcommittee Chair Sam Graves (R-MO-06) opened the meeting by highlighting the recent flooding and tornadoes in his district. Administrator Criswell responded to questions and shared her comments, including a statement that the adoption of hazard resistant building codes are a crucial resiliency tool that has saved at least \$32 billion in losses from natural disasters since 2000. You can watch the entire hearing or read a transcript [here](#).

## House E&C Subcommittee to Hold Hearing on Grid Reliability and Energy Efficiency Standards

On September 13th, the House Subcommittee on Energy, Climate, and Grid Security held a hearing entitled, “Keeping the Lights On: Enhancing Reliability and Efficiency to Power American Homes.” The hearing reviewed legislation including the Protecting America’s Distribution Transformer Supply Chain Act (H.R. 4167) and the DOE Appliance and Equipment Standards Reform and Consumer Protection Act; both pieces of legislation seek to limit U.S. Department of Energy (DOE) authority to prescribe new energy conservation standards. The discussion featured two panels: one panel featured staff from DOE and the Federal Energy Regulatory Commission (FERC), and the other panel featured members of the private sector and non-profit organizations. More information on the hearing can be found [here](#).

## **Manufacturers and Environmental Groups Collaborate on Letter to DOE with Recommendations for Appliances**

The U.S. Department of Energy (DOE) is tasked with consistently updating the efficiency standards for most of the consumer appliances we use, directly or indirectly. Typically, there is disagreement between the appliance manufacturers and environmental groups about how to economically make appliances more efficient for both manufacturers and consumers. In a show of compromise, the Association of Home Appliance Manufacturers and the Appliance Standards Awareness Project united to assemble a joint letter of support for proposed standards for stoves, clothes washers and dryers, dishwashers, refrigerators and freezers, and refrigeration products. There is no certainty or requirement that DOE implement the recommendations of the letter, but doing so would help avoid future legal challenges on their current proposed standards. A copy of the recommendations can be found [here](#).

## **Ten States File Lawsuit Against EPA Regarding Wood Stove Pollution Control Programs**

Ten states have partnered on a lawsuit against the Environmental Protection Agency (EPA), arguing for the need to revisit wood stove pollution controls programs. The timing of the lawsuit is driven by a Clean Air Act requirement for the EPA to review emission rules for stoves every eight years. The current rules on wood stoves were established in March 2015 through the New Source Performance Standards. The states argue that the lack of a more stringent approach hinders the states' ability to meet national air quality standards for fine particles, known to have adverse respiratory and cardiovascular effects estimated to cause 10,000 to 40,000 premature deaths annually. Notably, wood stoves and wood-fired heating appliances are responsible for 8% of the total particle emissions in the United States, and wood energy is used in over 12.5 million homes. The states in the lawsuit include New York, Massachusetts, Vermont, New Jersey, Oregon, Washington, Minnesota, Maryland, Illinois, and Alaska.

## **August 2024 was the Earth's Hottest in NOAA's 174 Years of Tracking**

This past August was the hottest on record according to the National Oceanic and Atmospheric Administration. It was also the world's 534th consecutive month with temperatures above the 20th century average. This trend, combined with marine heatwaves and an El Niño weather pattern saw the average August global land and ocean surface temperature reach 1.25 degrees Celsius above the 20th century average, and also set the highest sea surface temperature ever recorded. NOAA's report, which can be found [here](#), complements from the Biden Administration which emphasize that limiting climate change to 1.5 degrees will require accelerating progress in energy efficiency, power generation, and transportation.



# ASHRAE News

## NREL Researchers Reveal How Buildings Across United States Do and Could Use Energy



Researchers at the U.S. Department of Energy's National Renewable Energy Laboratory (NREL) have created a new, meticulously researched data set, called the [End-Use Load Profiles](#), that reveals the massive climate impacts that improvements to the U.S. building stock could have. The data set provides credible answers to some of the questions and unknowns surrounding building decarbonization. [Read more](#)

## Researchers Set Out to Achieve Passive Cooling Inside Naturally Conditioned Buildings

Researchers from McGill University, UCLA and Princeton have found in a [new study](#) an inexpensive, sustainable alternative to mechanical cooling with refrigerants in hot and arid climates and a way to mitigate dangerous heat waves during electricity blackouts. The researchers set out to answer how to achieve a new benchmark in passive cooling inside naturally conditioned buildings in hot climates such as Southern California. They examined the use of roof materials that radiate heat into the cold universe, even under direct sunlight, and how to combine them with temperature-driven ventilation. But there is untapped potential for integrating cool radiator materials and coatings into architectural design more fully, so they can not only reject indoor heat to outer space in a passive way, but also drive regular and healthy air changes. [Read more](#)

## ASHRAE Wraps Up Successful 2023 Building Performance Analysis Conference

Embodied Carbon and Operational Energy were the focus of the [2023 ASHRAE Building Performance Analysis Conference](#) held recently in Austin, Texas. The theme of the conference “Holistic Building Analysis: Linking Operational Energy, Embodied Carbon and Comfort” centered on a comprehensive approach of evaluating and designing buildings. The two-and-a-half-day conference drawing 240 building industry professionals, included keynotes, paper sessions, seminars, vendor demonstrations, panel discussions and debates from more than 90 presenters. [Read more](#)

## Acidic Gas Reduction for Residential Natural Gas Furnace

*By Zhiming Gao, Ph.D., Member ASHRAE; Kashif Nawaz, Ph.D., Member ASHRAE; Kyle Gluesenkamp, Ph.D., Member ASHRAE and Steve Kowalski, Member ASHRAE* Most U.S. homes still use noncondensing units with an annual fuel utilization efficiency (AFUE) of ~80%, rather than efficient condensing furnaces. This article discusses a low-cost acidic gas reduction (AGR) catalyst technology that enables a novel condensing natural gas furnace with an ultraclean (i.e., nearly zero) flue gas and neutral condensate that is environmentally friendly. [Read more](#)

# ASHRAE News

## BECP Energy Code Webinar Series Continues

The U.S. Department of Energy (DOE) Building Energy Code Program (BECP) is hosting the BECP *Energy Code Webinar Series* on the third Thursday of every month at 1pm ET. The first webinar in the series was held on September 21 and was titled *How Building Codes Facilitate Resilient Communities*. The webinar featured Ellen Franconi from PNNL, Krystal Laymon and John Ingargiola from FEMA, and Brian Levite from ICF. The presenters spoke about how building energy codes and implementing energy efficiency measures can help enhance occupant safety and comfort while reducing energy impacts. The combination of these outcomes also contributes to the overall resilience of a community and builds passive sustainability.

Next month on October 19, the series will host a webinar titled *Strategies to Equitably Expand the Energy Codes Workforce*. The codes workforce is seeing a widening gap between retiring professionals and workers interested in joining the industry. However, there are plenty of opportunities being offered by DOE to incentivize and promote the development of the energy codes workforce. This webinar will explain the different strategies that can be used to equitably expand the energy codes workforce. To find more information and register for the event, visit [here](#).



## DOE and EPA Hosting Workshop on IAQ in K-12 Schools

The Center for Green Schools and the U.S. Department of Energy's Efficient and Healthy School's Program, in coordination with the U.S. EPA, has created two in-person training events for school district staff. These trainings will focus on K-12 IAQ improvement through enhancing or creating district IAQ management plans, and the most updated best practices for IAQ monitoring. These trainings are being provided free of charge and will be held on Wednesday October 18 from 11:00 a.m. – 4:00 p.m. and Thursday October 19 from 9:00 a.m. - 3:00 p.m., both Eastern Time, at the American University College of Law in Washington D.C. For more information or questions about the trainings, please write to Hannah Carter at the Center for Green Schools. Register for the trainings [here](#).

ASHRAE has partnered with the U.S. Department of Energy and Lawrence Berkeley National Laboratory to help bring awareness to school districts about the federal programs and available funding for facility improvements and upgrades, through efforts such as the Efficient and Healthy School's Program, and the Renew America's Schools Program.

# ASHRAE News

## ASHRAE's New Decarbonization Video Series



Be sure to let your chapter members know about ASHRAE's new decarbonization video series. New videos featuring ASHRAE members will launch every other month on ASHRAE's social media channels and will also be available on [ashrae.org](https://www.ashrae.org). The first one in the series, *What Excites You About Building Decarbonization*, was just released. It looks at the carbon problem and describes how ASHRAE is leading the way towards a solution. The first video in the series shares decarbonization strategies and technologies ASHRAE members are most excited about as they work toward a more sustainable future. Watch now and Join Us on the Journey to Zero. Check out additional resources and videos at <https://www.ashrae.org/decarb>.

A S H R A E  
J O U R N A L



Podcast

Tune into conversations between leading ASHRAE experts as they discuss what HVAC engineers need to know to design better systems and grow the HVAC&R industry. Available on all podcast platforms.

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