



DAYTON CHAPTER

WWW.DAYTONASHRAE.ORG

ISSUE XII | 2022

CURRENT OFFICERS

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SECRETARY

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Dec 12th Hybrid Meeting!!!



Social Hour: 11:30-11:55am
Chapter Business: 11:55-Noon
Main Presentation: Noon

Location: Top of the Market
32 Webster Street, Dayton, OH

**Main Presentation: The Ethics of Money:
Bidding, Payment applications and Change
Orders.**

Presenter: Tim Wentz
Presidential Member

Topic: Changed conditions on a project is one of the most common, and often most severe obstacles in establishing a mutually beneficial relationship between the engineer, the architect and the contractor. This presentation provides background on what constitutes a changed condition and how the risk of changed conditions can be mitigated for all three parties, while protecting the interests of the building owner.

Presenter Bio: Tim is an Emeritus Professor of Construction Management at the University of Nebraska – Lincoln, where he is still active serving on various faculty endeavors, such as the Chancellor’s Sustainability and Resilience Commission.

Tim has served the Society in many different capacities. He started his ASHRAE career in 1976 after graduating from the University of Nebraska and worked in a grassroots capacity for many years. He is a past president of the Nebraska Chapter, past DRC of Region IX and Society president in 2016-2017. He received an ASHRAE Technology Award in 1987, Region IX Chapter President of the Year, Region IX Hall of Honor in 2005, E. K. Campbell Award of Merit for Teaching in 2000, the Distinguished Service Award in 2013 and the Exceptional Service Award in 2015. Tim was named an ASHRAE Fellow in 2005.

Tim has also been very active in the Mechanical Contractors Association of America (MCAA), where he has served as a trustee for the Mechanical Contractors Education and Research Fund (MCERF) and is currently a member of the National Education Initiative (NEI) faculty and also on the Institute for Project Management (IPM) faculty. He was named the MCAA ‘Educator of the Year’ three times (2000, 2002 and 2004) and in 2009 was the recipient of MCAA’s highest award, the Distinguished Service Award, the first academic to receive the award. (more on invite).

Please use the Eventbrite link to sign up by December 5th. The Eventbrite link for the December meeting is LIVE. Please register, if you plan to attend. <https://www.eventbrite.com/e/dayton-ashrae-december-chapter-meeting-tickets-469111774947>

Join Zoom Meeting Information:

<https://us02web.zoom.us/j/8744943150?pwd=Y3MyYWZsUTFaenFwRERHdnRCcnQwdz09>

FROM THE PRESIDENT

Thank you to everyone that was able to attend our November meeting that was held in person and virtually. E. Mitchell Swann, P.E., gave an excellent presentation on Design Build – Executing the Project.

Next Months meeting is a joint meeting with MCA. This meeting is scheduled for Monday, December 12th, at 11:30. Tim Wentz, P.E., HBDP – Presidential Member will present “The Ethics of Money: Bidding, Payment Applications, and Change orders”. This meeting is being offered in person and virtually so please send in your RSVPs.

Please reach out to a member of the board if you are interested in getting more involved with the Dayton ASHRAE chapter.

Thank you, *Matt Dill* – President, Dayton ASHRAE

Upcoming Events

Dec. 12th
ASHRAE Chapter Mtg.
5:30 PM, Hybrid Meeting

Dec 14th
Board of Governors
8:00 AM, Virtual Meeting

Jan 18th
Board of Governors
8:00 AM, Virtual Meeting

Jan. 21th
ASHRAE Holiday
Party.
More Info to Come

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

CHAPTER HISTORY (1981-1982)

President:	Michael Nauman	Heapy Engineering
Vice Pres:	Robert Stan	Stan & Associates
Secretary:	Mark Ganser	Trane Co.
Treasurer:	Jack Putnam	Lorenz & Willams
BOD:	Jim Oost	Eaton Corp.
	Bob Shultz	WPAFB—AFIT
Education:	Bob Shultz	WPAFB—AFIT
Research Pro.:	Jim Wasson	Wasson Engterprises
Membership:	Jack Rosati	Carrier Corp.

Regional Director: Joe Olivieri

Meetings were held at the Dayton Engineering Club.
CRC held in Grand Rapids Michigan.

Total Members: 77

Committee Chairs

MEMBERSHIP

Vincent Caudill

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Environmental Comfort, LLC

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Heapy

Board of Governors

Rick Pavlak

Heapy

Lorraine Kapka

Sinclair College

Jennifer Eller

Heapy

MEMBERSHIP

New Members

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

November: Hannah Thomas



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

You can go to 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!



5 Year: Robert Pope
30 Years: Timothy Lehman
40 Years: John Stewart

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 or by calling 513-512-5359.

Membership Application Here

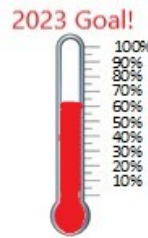
ASHRAE RP

It was great to see everyone last month at our monthly meeting. The November meeting included our Research & Promotion night. It provided a great opportunity for us to thank all the major donors who contribute to the success of the Dayton ASHRAE chapter. We are almost half way through the 22-23 campaign, and we still have a ways to go to meet our goals. For those looking to contribute, 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 .

2021 Goal = **\$ 19,680**
YTD = **\$ 12,800**
To go = **\$ 6,880**

% to GOAL: **65%**



Partner Level

Emerson

Honor Roll

Steve Meier
Lorraine Kapka
Brian Turner
Jennifer Eller
Evan Nutt
Bryan Schenk
Matt Dill
Rick Pavlak

Bronze Level

Russell Marcks
Uptime Solutions

Silver Level

Honorable Mention

Zak Schultz
Kort Kugel
Vincent Caudill

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!!



ASHRAE Info

Government Affairs Committee –December 2022 Newsletter Update

Chair's Comments

With the various 2022 local, state, and national elections completed, the Government Affairs committee has begun to reach out and connect with government officials connected to our area who will be involved in implementing or executing public policy in the near term. The goal is to facilitate dialog so that the local chapter membership will stay up to date on government actions related to our society's mission and activities, and to allow for the chapter and society to assist government officials with its technical expertise, experience, and knowledge. Future newsletters will keep you apprised on these efforts.

Below is a snapshot of some federal, state, and local government activities that have occurred recently. The activities highlighted connect in some way with one or more of ASHRAE's public policy priorities. If you want to understand more about the current ASHRAE public policy priorities, please visit <https://www.ashrae.org/about/government-affairs>

For any members that are interested in contributing time, efforts, and expertise to this committee, please email daytongov.ashrae@gmail.com

Thank you,

Brian Scullin
Government Affairs Committee Chair – ASHRAE Dayton



ASHRAE

Holiday Party

Will be

Saturday, January 21, 2022

More info to come on Separate Email!!! Keep a look out.

WE look forward to seeing you there for a relaxing night!

ASHRAE INFO

*We hope you all
Have a safe and happy
Holiday Season!!*

*Dayton ASHRAE
Chapter BOC*



E18 | Breaking Into HVAC&R: Challenges of Being a Young Engineer

You're only out of school a few years and you're excited to join the HVAC&R industry: Great jobs, great profession, great community, good money. But when you break into the industry, you discover that—in many cases—you're among the youngest in the company, let alone in the room. Turn off or great opportunity? Join Elizabeth Primeau, Associate Member ASHRAE; and Niss Feiner, C.E.T., CHD, Student Branch Advisor Member ASHRAE, in a conversation with ASHRAE Journal Assistant Editor Kaitlyn Baich on why being young can be a good thing in a traditionally older industry.

From left, Niss Feiner; Elizabeth Primeau



ASHRAE
JOURNAL 
Podcast

[Play Episode](#)

What are Young Engineers in ASHRAE (YEA)?

Role Models: Helping Ethnic Minority Engineering Students Become Practicing Engineers

ASHRAE News

International Energy Agency: Europe Must Act Now to Avoid Winter 2023 Gas Shortages

With the loss of Russian gas supply, and the expectation that China will continue to increase its demand for fuel and energy of all sorts, the International Energy Agency (IEA) is now saying that the European Union needs to act now to avoid a natural gas shortage *next* year. While the EU is currently succeeding in filling in their strategic reserves before what is predicted to be a moderate winter, the real test will be next year when these reserves have been spent down. In the meantime, the IEA says that it is crucial for more renewable energy to be brought online, and for mandated improvements in energy efficiency to be accelerated. You can read the full story [here](#).

Administration Considers Use of the Defense Production Act to Accelerate Heat Pump Manufacturing

The Administration, through the U.S. Department of Energy (DOE) has issued a joint Notice of Intent (NOI) and Request for Information (RFI) on how to best leverage the Defense Production Act to increase the domestic supply of heat pumps. These appliances are seen as a crucial component for achieving U.S. goals ranging from climate change to national security. Input received will guide the DOE on its deployment of \$250 million provided in the Inflation Reduction Act to accelerate domestic production of heat pumps. You can learn more about the role that heat pumps play in U.S. policy, and how to submit information to the administration by visiting [here](#). The deadline for responses is **November 30**.

City of Palo Alto Adopts New All-Electric Building Code

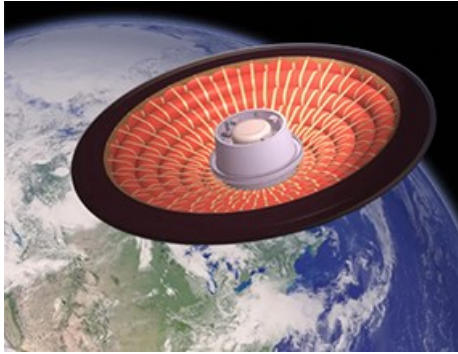
On October 17, the City Council of Palo Alto, California adopted an updated building code that requires all new buildings to be all-electric. This expands on the city's existing "all-electric" requirement, adopted in 2019, which only applied to low-rise residential buildings. The all-electric requirement, which applies to water heaters, space heaters, and HVAC systems, will also apply for major remodeling projects in existing buildings. It requires homeowners to install heat pump water heaters and requires new homes, apartment buildings, hotels and nonresidential buildings to provide "EV-ready" spaces. City Council members also approved a new program that would replace 1,000 gas-powered water heaters with heat pump water heaters by the end of next year. These new programs are aimed at achieving the city's target of full carbon neutrality by 2030.

Researchers Unveil New Zero-energy Cooling Device

A team at MIT has unveiled a new device that uses several passive cooling systems they claim can lower the temperature of a room by almost 20 degrees Fahrenheit *using no electricity or fossil-fuel energy*. This new device, which resembles a solar panel, is mounted on the roof, and uses three layers of passive cooling systems to drop the indoor temperature. The bottom layer is reflective and diverts incoming radiation. The middle layer is a hydrogel that absorbs heat until it evaporates into water vapor. The last layer is an aerogel that functions as an insulator while allowing the radiation and water vapor from the lower layers to rise and escape. This zero-electricity cooling system offers huge energy savings, since air treatment in more traditional ways is so energy intensive. You can learn more about this new technology and related issues [here](#).

ASHRAE News

NASA's Launch, Deployment and Retrieval of Innovative Inflatable Heat Shield

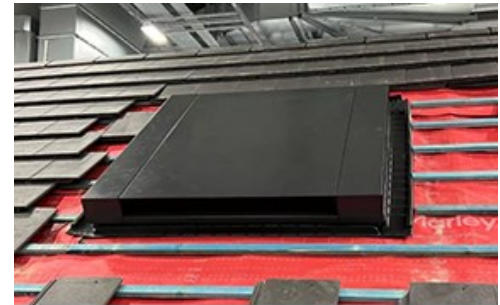


An Atlas V rocket last week launched JPSS-2, NOAA's newest environmental satellite, into orbit. Hitching a ride on the rocket was NASA's Low-Earth Orbit Flight Test of an Inflatable Decelerator (LOFTID). This mission demonstrated a cross-cutting aeroshell—a type of heat shield—for atmospheric re-entry. For destinations with an atmosphere, one of the challenges NASA faces is how to deliver heavy payloads (experiments, equipment and people) because current rigid aeroshells are constrained by a rocket's shroud size. One answer is an inflatable aeroshell that can be deployed to a scale much larger than the shroud. This technology enables a variety of proposed NASA missions to destinations such as Mars, Venus and Titan as well as return to Earth.

[Read more](#)

Roof-Mounted Heat Pump to Guide Route to Net-Zero

Roof-mounted heat pumps, said to be the first in the U.K., will be tested in the [Future Home](#), an experimental eco house at Salford University. Air-source heat pumps are expected to replace natural gas boilers in most homes once they begin being phased out in 2025. Already installed in several new homes, heat pumps are usually fitted to, or adjacent to, an exterior wall where they dominate a property's external appearance and take up outdoor space. [Read more](#)



Key Takeaways From the COP27 Climate Summit in Egypt

This year's U.N. climate summit featured visits by world leaders, proposals by business leaders and negotiations by nearly 200 nations on the future of global action related to climate change. From funding for climate justice, to the United States rekindled relationship with China, and Brazil entering back into the global climate fight, we include features some of the key takeaways from the two-week COP27 summit held in Egypt. [Read more](#)

UNEP Report Finds that Countries are Not on Track to Meet their Climate Commitments

On October 2022, the United Nations Environment Program (UNEP) released its 2022 Emissions Gap Report, *Emissions Gap Report 2022: The Closing Window – Climate crisis calls for rapid transformation of societies*. The report is an annual accounting of greenhouse gas emissions by country compared with their commitments. UNEP has produced this annual gap report since 2010. This year's report finds that countries are not on track to achieve their commitments, and policies currently in place are expected to result in global warming of 2.8oC over the 21st century. The report further concludes that in order to get on track for limiting global warming to 1.5 oC, global annual greenhouse gas emissions must be reduced by 45% by 2030, compared with emissions reductions under current policies. To read a summary of the report and to download the full report, please visit [here](#).

White Roofs Could be Quickest Way to Cool Off a Block of Triple-Decker Housing

A [new report](#) from Boston University suggests that painting the flat black roofs of Boston's brownstones and triple-deckers white could be a quick, cost-effective way to significantly reduce summer temperatures in some of the city's hottest and most vulnerable neighborhoods. The [report](#) builds on recent research at Boston University, which compared the cooling effect of tree cover, grass and white roofs across seven U.S. cities. The research found that both tree canopy and white roofs were important tools for Boston, but white roofs might offer more bang for the buck in neighborhoods with little room to plant trees.

[Read more](#)



Engineer's Notebook: Applying VRF in K-12 Schools: Case Studies and Lessons Learned

Variable refrigerant flow (VRF) systems offer many advantages in K-12 school system applications, including individual temperature control for rooms and opportunity for heat recovery and efficient operation of buildings. This column presents two case studies in which VRF systems were installed in high schools with successes, challenges and lessons learned. [Read more](#)

3D-Printed Air-Conditioning Ductwork: The Answer to Too-Cold Office Spaces?

An Australian architecture firm has reimagined ductwork as a branching network of 3D-printed plastic tubes that allows air to seep out evenly through a space. The designers found that relying on just a few points of exit for cold air was air-conditioning's key problem. So they looked for ways to more evenly distribute air without sacrificing cooling efficiency. They also wanted to find ways to cut down the carbon impact of air conditioning, from both an energy consumption and embodied carbon emissions perspective. [Read more](#)

ASHRAE Job Board

CAL State LA Engineering Tenure Track Roles Open Cal State L.A.; Los Angeles, Calif.	Electrical Engineer General Services Administration; New York, N.Y.
Industrial Refrigeration Service Account Manager Corval Group; St. Paul, Minn.	Manager, Refrigeration Engineer Bristol Myers Squibb; Devens, Mass.
Mechanical Engineer with a depth of knowledge in Electrical and strong HVAC background Clean Air Zone Inc.; Corona, N.Y.	Electrical Design Engineer Saint-Gobain; Faribault, Minn.
Security Systems Designer AMA Group; El Segundo, Calif.; Los Angeles, Calif.	Electrical Facility Engineer Oak Ridge National Laboratory; Oak Ridge, Tenn.
Utilities Operations Engineer Facilities Management Department - Duke University; Durham, N.C.	Construction Field Engineer VII - Electrical Fluor; Bagdad, Ariz.

[View All](#)

ASHRAE News



Join us in Atlanta, Feb. 4-8,
for the 2023 ASHRAE
Winter Conference
and co-sponsored
AHR Expo.

Lock in Early Bird rates by
registering for the confer-
ence by Oct. 30.

[Learn More & Register](#)

- LIVE WEBINAR

[REGISTER NOW »](#)

Effective Electric: Applying Variable Refrigerant Flow (VRF) Systems in Cold-Climate Applications

December 15, 2022 | 2 PM EST

[REGISTER NOW](#)

Today's VRF systems are an effective heating and cooling solution for a multitude of applications, including those in cold climates. This presentation will provide an overview of design considerations, methods and insights to help commercial HVAC contractors, engineers and developers ensure comfort, efficiency and resilience for tenants when applying heat pumps in cold-weather climates.

Learning Objectives:

- Describe how modern VRF systems perform in cold climates.
- Design to solve derating challenges and recognize when to apply flash-injection technology and water-source VRF systems.
- Design systems and install with precautions for snow and cold weather.
- Discuss the significance of successful cold-climate VRF applications for strategic electrification and decarbonization.