



February 2026
Volume 61, Issue 5

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QUAKER CITY CLIMATE

FEBRUARY MEETING

Women and STEM: Enhancing Innovation and Sustainability through Diversity

Tuesday, February 10, 2026

5:30 PM to 8:30 PM

Drexel University

NESBITT Hall, Stein Auditorium (Room 111)

3215 Market Street

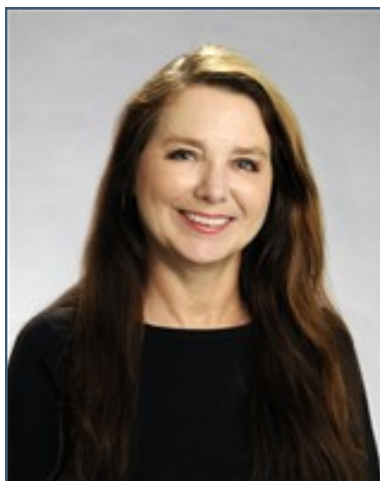
Philadelphia, PA 19104

Join us as we host Dr. Theresa Weston, an ASHRAE Distinguished Lecturer, who will present "Women and STEM: Enhancing Innovation and Sustainability through Diversity."

This joint meeting includes Drexel University's ASHRAE Chapter, the Society of Women Engineers (SWE), and the Philadelphia Chapter.

Stay up to date on latest events and meetings by visiting the ASHRAE Philadelphia Chapter website at ashraephilly.org

Follow us on [LinkedIn](#)



Dr. Theresa Weston received her Bachelor of Science degree in Chemical Engineering from the Massachusetts Institute of Technology, and Masters and PhD degrees in Chemical Engineering from the California Institute of Technology. She is the Vice-Chair of the ASHRAE-sponsored Buildings Conference Series. She serves on the ASTM Committee on Publications.

Join us for an engaging evening of discussion and networking. Plan to arrive a few minutes early to get settled and grab some food. Pizza and refreshments will be provided. See below for registration link.

Member Price: \$15 | Guest Price: \$25

[Click Here to Register](#)
or visit ashraephilly.org > programs > calendar

2025-2026

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PRESIDENT'S MESSAGE

Dear Philadelphia ASHRAE Chapter Members,

It's time again for the annual ASHRAE Winter Conference and AHR Expo, which takes place in Las Vegas this year. Whether you're an engineer, vendor, student, or simply looking to expand your knowledge, this is an excellent opportunity to do so. For those who will be in attendance, ASHRAE Regions I, III, and XI are hosting their annual dinner at Alexxa's on Sunday, February 1st. More information can be found here: <https://ashraeregion3.com/>

As for the Philly Chapter, January is already off to a great start. Last week's tour of the Xfinity Mobile Arena (XMA) set a new attendance record for us in many years, not including the many individuals on the waitlist. I would like to extend a warm thank you to all who made it happen: Anthony Rodio (President-Elect, Philadelphia ASHRAE), Tim Allen (VP of Operations, XMA), Arianna Alosi (Senior Director of Facilities, XMA), Steven Vito (Steamfitter Foreman, XMA), and Camille Simendinger (Senior Account Manager, 76ers). We recognize the popularity of this event and will work to provide more opportunities for similar tours moving forward.

In February, we are excited to host Dr. Theresa Weston, an ASHRAE Distinguished Lecturer, who will present "Women and STEM: Enhancing Innovation and Sustainability through Diversity." This joint meeting includes Drexel University's ASHRAE Chapter, the Society of Women Engineers (SWE), and the Philadelphia Chapter. We welcome all to attend and network with students who will soon be entering our industry. Additional details can be found on our homepage and throughout this newsletter.

Many of you may have noticed that last month's newsletter did not come from Hope Silverman, as it has for many years. As of January 1st, Hope has retired, and Cindy Cornish has stepped into this role. Hope worked with the Philadelphia Chapter since 1998 and has been a pivotal contributor to our success. We are truly grateful for all she has done over the years, and the Chapter will be sending a gift to show our appreciation. While Cindy has big shoes to fill, we are confident she will be a great asset to the Chapter, and we look forward to working with her and getting to know her better. From what we've seen so far, she already goes above and beyond.

Lastly, ASHRAE Region III's CRC will be hosted by the Philadelphia Chapter in 2027. As I will be stepping down as President in June of this year, I have volunteered to serve as the CRC Chair for Philadelphia. Those who have attended or planned a CRC understand the scope of this undertaking. We are actively seeking volunteers to join the CRC committee, and I encourage anyone interested to reach out to me directly for more details.

As always, thank you for your continued support.

Sincerely,
Tyler A. Holland
Philadelphia Chapter President
c021@ashrae.net



**Join us at Caesar's Palace
for the
2026 ASHRAE Winter Conference.
January 31—February 4, 2026 | Las Vegas, NV**

[Click here to register.](#)

Facilities Tour & Social Outing at Xfinity Mobile Arena

For our January event, members and guests of the Philadelphia ASHRAE Chapter had an exclusive, behind-the-scenes HVAC tour of Xfinity Mobile Arena (formerly Wells Fargo Center) followed by a match up between the Phoenix Suns and our Sixers!



GOVERNMENT AFFAIRS COMMITTEE NEWS

Questions or comments? Contact:

Andrew Mondell, Government Affairs Committee Chair

Andrew.Mondell@AMZenergysystems.com

Katherine Mahon, Government Affairs Committee Member

kem@ba-inc.com

United States Withdraws from 66 International Organizations Including UNFCCC

In February 2025 the Trump administration [instructed](#) the U.S. Department of State to review U.S. support for all global agreements and organizations. Subsequently, in an [executive order](#) issued on January 7, 2026, the country withdrew from 66 such organizations, including the U.N. Framework Convention on Climate Change (UNFCCC). The UNFCCC was established in 1992 as a treaty that sets a legal framework for international negotiations to address climate change. Under the treaty, nations gather annually for the Conference of Parties (COP) summit, and nations have used this framework to set their climate targets with mechanisms like the Paris Agreement and the Kyoto Protocol. Withdrawal from the treaty makes American participation in future climate action uncertain.

House Passes Government Funding Legislation

On January 8, the U.S. House of Representatives passed a package of government spending bills for fiscal year (FY) 2026, which began on October 1, 2025. The legislation would fund several agencies through September 30, 2026, including the Department of Energy (DOE), Environment Protection Agency (EPA), and National Institute of Standards and Technology (NIST). Highlights include:

- \$15 million for the Building Energy Codes Program at DOE, which is in line with FY25 funding levels.
- \$33 million for ENERGY STAR at EPA, which is a \$1 million increase from FY25 funding levels.
- \$1.84 billion for NIST, which is a \$70 million increase from FY25 funding levels.

More information on the legislation can be found [here](#). The Senate is expected to pass this legislation; however, to avoid a partial shutdown, Congress must still pass six other appropriations bills to fund the rest of the government before federal funding expires on January 30.

ASHRAE Responds to Texas Request for Information on High-Performance Building Systems

On January 5, ASHRAE President Bill McQuade sent a [response](#) to a request for information (RFI) from the Texas State Energy Conservation Office regarding a high-performance building evaluation system and an energy efficiency performance standard. The state had requested information to determine whether the 2024 International Green Construction Code (IgCC) and ASHRAE Standard 90.1-2022, *Energy Efficiency in Sites and Buildings Except Low-Rise Residential Buildings*, should be used for the design of state agency buildings and higher education facilities. In ASHRAE's response, President McQuade recommends the use of both standards and cites the advantages of the whole systems approach in the 2024 IgCC, powered by ASHRAE Standard 189.1-2023, *Standard for the Design of High-Performance Green Buildings*, along with the cost effectiveness and energy performance improvements in the 2022 edition of Standard 90.1.

New York State Law Ends Free Natural Gas Hookups for Residential Buildings

On December 19, New York Governor Kathy Hochul signed into law Senate Bill 8417, ending the "100-foot rule" for natural gas hookups for new residential buildings. This rule, in place since the 1980s, prevented utility companies from charging for new natural gas hookups for new homes if the building or development was within 100 feet of an existing gas line. The rule was originally intended to incentivize the use of natural gas for home heating instead of coal, and the new law similarly incentivizes the transition in new construction to electricity. Natural gas hookups will still be allowed for new construction, but they must be paid for by the individual customer. Analysis by RMI, a nonpartisan nonprofit focused on energy and climate issues, estimates the new law could [save utility ratepayers](#) statewide approximately \$200 million per year on their electricity bills.

Become a 2026-2027 Corporate Sponsor of the Philadelphia Chapter

Your firm’s participation in this program would enable us to make a donation to ASHRAE’s Research Promotion which includes over \$1.9 million in local research funding.

Some of the benefits your company will enjoy as a Corporate Sponsor include:

- listing on the Chapter’s website with a link to your own website
- five (5) free log-ins to the Digital Directory
- \$100 discount on an advertisement in the Digital Directory

The Philadelphia Chapter of ASHRAE is a proud sponsor of the Future City competition. On January 24, 2026, **over 300 students on 44 teams and more than 100 volunteers** took part at the event held at Archbishop Carroll High School in Radnor, PA.

CONGRATULATIONS TO OUR REGIONAL TEAMS!

Lionville Middle School—2026 Regional Winner

- 2nd Place: Downingtown Middle School
- 3rd Place: St. Mary Interparochial School

Honorable Mentions

- St. Andrew School
- Pottsgrove Middle School
- Lower Moreland Middle School

Show your support for the **Lionville** and **Downingtown** teams as they prepare for the national competition in Washington, DC in February!



DISCOVER PRESENTS

future City

COMPEITION

2026 THEME: Design a city that eliminates food waste from farm to table and keeps your citizens healthy and safe.

Future City is a hands-on cross-curricular educational program that brings STEM to life. To learn more, visit [Future City](#) and [Future City Philly](#).

Our Chapter Digital Directory is available!

The link to the Directory of Manufacturers’ Representatives in the Philadelphia Area is on our [home page](#) on the website, or you may [click here](#) to advertise or purchase access to the directory!



ASHRAE Philadelphia Chapter Digital Directory



The Philadelphia Chapter
of the
American Society of Heating,
Refrigerating and Air
Conditioning Engineers, Inc.

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not speak or act for the Society.
Any member with material to
submit for inclusion in the
Climate can send the information
to:

Cindy Cornish
P 610-971-2169
cindy@mmco1.com

Material can include letters to the
editor, member news, upcoming
events, comments on chapter
programs or issues, etc.

NEW PHILADELPHIA CHAPTER MEMBERS—WELCOME!

Nikolaos	Farfaras
Enya	Hughes
Andrew	Langenau
Casey	Lorimer
Joshua	Meyer
Malissa	Pumpuckdee
Jacob	Schrager
Nicholas	Shurley
Elin	Vergheese

What are the benefits of paying Philadelphia Chapter *dues** ?

Discounts:

- \$200 Discount for Basic HVAC Design Class
- Discounts on Monthly Chapter Meetings
- Free access to the Digital Directory
- And much more!

***Note that Philadelphia Chapter Membership Dues are \$50/year.**

To receive discounts, please remit your Chapter dues when renewing online or applying for a new membership. Feel free to upgrade online by clicking [here](#) or contact c021@ashrae.net for assistance.

Membership Advancement

If you are currently an ASHRAE Associate Member, becoming a full Member is easier than you think! The following count toward the required **12 points** to advance to full membership status. You must update your ASHRAE online biography and send an email to membership@ashrae.org to advance.

Non-accredited degree = 4 points
PE = 4 points

Accredited degree = 6 points
Industry experience = 1 point/year

IEQ APPLICATIONS

Column

BRIDGING THE GAPS

Mapping Space Types Across ASHRAE Standards 62.1, 170, & 241

By Meghan K. McNulty, P.E., Member ASHRAE; Travis English, P.Eng.,
Member ASHRAE; Marwa Zaatari, Ph.D., Member ASHRAE

ASHRAE Standard 241-2023, *Control of Infectious Aerosols*, sets minimum requirements to reduce the risk of disease transmission by infectious aerosols. The standard mandates compliance with indoor air quality (IAQ) standards, including ANSI/ASHRAE Standards 62.1, 62.2 and ANSI/ASHE/ASHRAE Standard 170. Standard 241 introduces an operating mode for times of high risk—called infection risk management mode (IRMM)—and defines minimum equivalent clean airflow rates for infection control (ECAi). These rates have units of airflow per person (cfm/person or L/s/person). Problematically, the rates cover 25 types of commercial, residential and health-care spaces that do not directly align with the 278 occupant categories defined in Standards 62.1 and 170. To resolve this,

Meghan K. McNulty, P.E., is a building systems engineer with Pacific Northwest National Laboratory. Travis English, P.Eng. is a senior director of engineering at Kaiser Permanente. Marwa Zaatari, Ph.D., is chief science officer of DZine Partners and head of product at Poppy.



ISTOCK.COM/AUBRELIANI

TABLE 1 Sample of spaces from Standard 62.1-2022 and their recommended Standard 241-2023 categories.

STANDARD 62.1-2022 TABLE 6-1		STANDARD 241-2023 TABLE 5-1		NOTE
OCCUPANCY GROUP	OCCUPANCY CATEGORY	CATEGORY	ECAi (cfm/p)	
Animal Facilities	Animal Exam Room (Veterinary Office)	Office	30	A
Correctional Facilities	Cell	Cell	30	
Educational Facilities	Classrooms (Ages 5–8)	Classroom	40	
Educational Facilities	Corridors (Ages 5+)	Not Applicable	-	B
Educational Facilities	Daycare Sickroom	Exam Room	40	
Educational Facilities	Music/Theater	Auditorium	50	C
Educational Facilities	Dance	Gym	80	C
Food and Beverage Service	Cafeteria/Fast-Food Dining	Food and Beverage Facilities	60	
General	Conference/Meeting	Office	30	
General	Corridors	Not Applicable	-	B
Hotels, Motels, Resorts, Dormitories	Bedroom/Living Room	Dwelling Unit	30	
Miscellaneous Spaces	Manufacturing Where Hazardous Materials are Not Used	Manufacturing	50	
Miscellaneous Spaces	Shipping/Receiving	Sorting, Packing, Light Assembly	20	
Miscellaneous Spaces	Telephone Closets	Not Applicable	-	D
Miscellaneous Spaces	Transportation Waiting	Transportation Waiting	60	
Miscellaneous Spaces	Warehouses	Warehouse	20	
Office Buildings	Office	Office	30	
Public Assembly Spaces	Courtrooms	Auditorium	50	
Public Assembly Spaces	Legislative Chambers	Convention	60	
Residential	Common Corridors	-	-	E
Retail	Sales	Retail	40	
Sports and Entertainment	Health Club/Aerobics Room	Gym	80	

Notes:

- A. Standard 241-2023's ventilation rates are based on human-to-human infection risk, not animal-to-human transmission, making the specified rates suitable for office spaces.
- B. No ECAI requirement for this transient space.
- C. Standard 62.1-2022 lists music, theater and dance as a single space type, but occupant activity levels are expected to be higher for a dance space.
- D. Not an occupiable space. Standard 62.1-2022's minimum ventilation rate for this space type is 0 cfm.
- E. Standard 241-2023 does not currently have a space type appropriate for residential corridors, which may be part of a multifamily building's ventilation system.

the Standard 241 working body, SSPC241, mapped Standards 62.1 and 170 onto Standard 241. This column presents the mapping and discusses its implications.

Applying ASHRAE Standard 241-2023 alongside Standards 62.1 and 170 is a challenge. If a specific occupancy from Standard 62.1 or 170 is not listed in Standard 241's Table 5-1, Minimum Equivalent Clean Airflow per Person in Breathing Zone in IRMM, users are instructed to select the “most similar” occupancy category. Some occupancy categories—like “classrooms”—align directly. However, many spaces—like “daycare sickroom”—lack clear matches.

Additionally, Standard 170 lacks default occupancy densities and uses air changes per hour (ach), a wholly different metric.

For ease of use, SSPC241 approved tables mapping Standards 62.1 and 170 onto Standard 241. Note that higher ECAI rates may still be necessary in spaces with increased activity or vocalization beyond conversational levels (Standard 241-2023 Section 5.1.2 and 5.1.3).

Standard 62.1-2022 Mapping to Standard 241-2023

ASHRAE Standard 62.1-2022 has 89 occupancy categories in Table 6-1. Each was assigned an IRMM

TABLE 2 Health-care spaces, by occupancy and room size and their recommended Standard 241 categories.

ASHRAE 170 OCCUPANCY CATEGORY	TYPICAL ROOM OR SPACE SIZE	IRMM OCCUPANCY	STANDARD 241-2023 TABLE 5-1 CATEGORY	ECAi (cfm/person)	NOTES
Small Typically Unoccupied Rooms	25 ft ² –40 ft ²	Normally Unoccupied	Not Applicable	-	A
Office-Size Rooms for Exams and Treatments	80 ft ² –120 ft ²	2 People	Exam Room	40	B
Larger Treatment Spaces	120 ft ² –250 ft ²	2–4 People	Exam Room	40	B
Patient Room	250 ft ² –350 ft ²	2–3 People	Resident Room or Patient Room, Depending on Facility	50 or 70	
Birthing Rooms	250 ft ² –350 ft ²	2–3 People	Patient Room	70	C
Surgery and Major Procedure Rooms	500 ft ² –650 ft ²	3–13 People	Not Applicable	-	D
Group Treatment Areas	Sizes Vary	20 People/1,000 ft ²	Group Treatment Area	70	B, E
Circulation Spaces	Sizes Vary	Normally Unoccupied	Not Applicable	-	A
Storage Spaces	Sizes Vary	Normally Unoccupied	Not Applicable	-	A
Staff Work Areas Where Patients are Not Permitted	Sizes Vary	5–7 People/1,000 ft ²	Office Space	30	
Waiting Rooms	Sizes Vary	30 People/1,000 ft ²	Waiting Rooms	90	B
Living/Activity/Dining	Sizes Vary	75 People/1,000 ft ²	Residential Common Space or Auditorium	40 or 50	E
Nursery Spaces	Sizes vary	20 people/1,000 ft ²	Group Treatment Area	70	B, E, F

Notes:

- A. Standard 241-2023 does not currently have a risk model for hallways, storage spaces or transient areas.
- B. In the Standard 241-2023 risk modeling, these health-care occupancies assumed a mask efficiency of 30%.
- C. Treat the birthing room for its normal use (labor, recovery), which is the smaller occupant number. At the time of birth, occupancy is higher but only for a short duration, rarely lasting a full hour.
- D. Ventilation of 12 ach–20 ach with MERV 14 or HEPA filtration, with a staff of 15 comes out to 100 cfm–120 cfm per person of ventilation, which exceeds Standard 241-2023 needs.
- E. This IRMM occupancy was used in the Standard 241-2023 risk modeling.
- F. The Standard 241-2023 risk modeling was based on adult occupants, not babies.

occupancy category from ASHRAE Standard 241. Table 1 shows a sample of those spaces. The full table can be found on the ASHRAE website www.tinyurl.com/JournalExtras.

User judgment is still required. Sometimes, a space may map to multiple categories in Standard 241. For example, occupant activity in “music, theater or dance” studios can vary. “Dance” spaces have higher activity levels and therefore higher ECAi requirements. This can happen to other spaces; the real-world occupant activity in a room may require a higher ECAi than recommended in the table. Also, not all spaces are addressed in the mapping. “Residential common corridors,” for instance, may be part of a multifamily building’s ventilation system. Other spaces with unique situations are explained in the table’s Notes section.

Standard 170 Mapping to Standard 241-2023

ASHRAE Standard 170 has four tables of health-care space requirements: inpatient (Table 7-1), outpatient (Tables 8-1 and 8-2) and residential (Table 9-1). For the purposes of ECAi, all 189 spaces may be categorized by occupancy and room size as follows:

- Small, typically unoccupied rooms, which include anterooms and toilet rooms.
- Office size rooms with two occupants—patient and provider—which include examination, consultation and treatment rooms.
- Larger spaces for more involved clinical procedures, where a patient interacts with a small team of two or three clinical providers.
- Patient bedrooms where a patient stays and sleeps, visited intermittently by staff and guests.
- Birthing rooms for labor, delivery and recovery.

- Surgery and major procedure rooms where a patient undergoes a procedure involving a team of three to 13 staff.
- Group treatment areas where several patients receive treatments, e.g. cancer, dental, dialysis treatment areas and psychiatric group meeting rooms.
- Circulation spaces, which are transiently occupied.
- Storage spaces for food, supplies and utilities.
- Staff work areas where patients are not permitted, e.g. laboratory, autopsy, pharmacy, workrooms, instrument processing, food preparation and laundry.
- Waiting rooms for patients. Design occupant density in these spaces will generally be 30–100 people/1,000 ft² (36–100 people/m²). These spaces may have reduced occupancy during IRMM.

- Living/activity/dining spaces in residential facilities.
- Nursery spaces.

Table 2 shows these categories, indicating the recommended Standard 241-2023 categorization.

Conclusion

SSPC241 developed mappings to help alignment with Standards 62.1 and 170. Practitioners must still use their own judgment, as higher ECAi rates may be needed for increased activities or vocalization. Further integration of ASHRAE's ventilation standards may include incorporating Standard 241's requirements into Standards 62.1 and 170. ASHRAE could then streamline implementation of all air quality standards, reduce ambiguities and provide unified guidance for both ventilation and infection control in diverse indoor environments. ■