

MINUTES

TECHNICAL ACTIVITIES COMMITTEE

2025 Winter Meeting

February 8 & February 12, 2025

Note: These draft minutes have not been approved and are not the official, approved record until approved by the Technical Activities Committee.

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PRINCIPAL MOTIONS TECHNICAL ACTIVITIES COMMITTEE February 8 & February 12, 2025

No.	Motion	Status
1	to accept minutes of the January 30 th TAC meeting.	PASSED
2	that Honors & Awards Committee approve Phil Naughton as the winner of the 2025 George Hightower Award.	PASSED
3	that the TC 9.7 scope be revised as shown:	PASSED

ACTION ITEMS TECHNICAL ACTIVITIES COMMITTEE February 8 & February 12, 2025

No.	Responsible Party	Action	Status
1	Mercer	send a list of all the projects with assigned champions	

ACTION ITEMS TECHNICAL ACTIVITIES COMMITTEE Meeting #2

No.	Responsible Party	Action	Status
1	TAC	Think about balance issue and base categories (General, User, Producer, and send thoughts on implementing this, if this was necessary, or how to implement (Refer to TAC #2 minutes)	

LIST OF ATTACHMENTS

ATTACHMENT A: PEAC report
ATTACHMENT B: Breakfast slides
ATTACHMENT C: MBO Update

LIST OF ACRONYMS

1	<u> </u>	
ALI	ASHRAE Learning Institute	
BOD	Board of Directors	
	Center of Excellence for Building	
CEBD	Decarbonization	
	Conference and Expositions	
CEC	Committee	
CEU	Continuing Education Unit	
	Chapter Technology Transfer	
CTTC	Committee	
CNV	Chair Not Voting	
Ex-O	Ex-Officio	
FG	Functional Group	
	Global Technical Interaction	
GTIC	Committee	
	International Standards	
ISO	Organization	

MBO	Management by Objectives	
MOP	Manual of Procedures	
MTG	Multi-disciplinary Task Group	
	Presidents Elect Advisory	
PEAC	Committee	
SH	Section Head	
TAC	Technical Activities Committee	
TAC TC	Technical Activities Committee Technical Committee	
TC	Technical Committee	
TC	Technical Committee	



M I N U T E S TECHNICAL ACTIVITIES COMMITTEE February 8 & February 12, 2025

MEMBERS PRESENT:

Kevin Mercer, Chair Satheesh Kulankara. Vice Chair Vikrant Aute, Training Coordinator Jason Atkisson, Section 1 Diane Fisler, Section 2 Tina Brueckner, Section 3 Kyle Gluesenkamp, Section 4 Esteban Baccini, Section 5 Doug Reindl. Section 6 Money Khanna, Section 7 Kashif Nawaz, Section 8 Joy Altwies, Section 9 GD Mathur, Section 10 Ongun Kazanci, MTG Kevin Muldoon, MTG Corey Metzger, BOD Ex-O

GUESTS:

Carrie Brown

ASHRAE STAFF:
Steve Hammerling, MORTS
Tara Thomas, Tech Services Coordinator
Amber Thomas, AA

MEMBERS NOT PRESENT:

Wade Conlan, Coord. Officer

1. Call to order

Chair Mercer called TAC meeting to order at approximately 8:00 AM EDT.

2. ASHRAE Value Statement:

ASHRAE Value Statement – In ASHRAE meetings, we will act with honesty, fairness, courtesy, competence, inclusiveness and respect for others, which exemplify our core values of excellence, commitment, integrity, collaboration, volunteerism and diversity, and shall avoid all real or perceived conflicts of interest. Our culture is one of inclusiveness, acknowledging the inherent value and dignity of each individual. We celebrate diverse and inclusive communities, understanding that doing so fuels better, more creative and more thoughtful ideas, solutions and strategies for the Society and the communities our Society serves. We respect and welcome all.

Code of Ethics

Core Values

Diversity Statement

3. Welcome guests/Roll call/Determination of quorum

TAC Member 2024-25	Role	
Kevin Mercer (25)	Chair	
Satheesh Kulankara (26)	Vice Chair & GTIC & Data Coordinator (temp)	
Vikrant Aute (26)	Training Coordinator	
Jason Atkisson (25)	Section 1	
Diana Fisler (28)	Section 2	
Tina Brueckner (26)	Section 3	
Kyle Gluesenkamp (28)	Section 4 & YEA Liaison	
Esteban Baccini	Section 5 & CTTC Liaison	
Doug Reindl (25)	Section 6	
Money Khanna (27)	Section 7	
Kashif Nawaz (27)	Section 8	
Joy Altwies (25)	Section 9	
Gursaran Mathur (27)	Section 10	
Ongun Kazanci (27)	Section MTG (ACR, BIM, CYB, EBO, BEQ)	
Kevin Muldoon (28)	Section MTG (HCDG, LowGWP, RAC, RES, CEA)	
Wade Conlan	Coordinating Officer	
Corey Metzger	BOD Ex-O	

Roster for 24-25 on TAC Basecamp - (https://public.3.basecamp.com/p/4MX7jMwzG8uZgAtNv5kFcpN1)

4. Changes/approval of the agenda

ASHRAE Strategic Plan discussion
 A draft plan was approved in December (available <u>here</u>). This plan will formally be rolled out at the Annual Meeting.

5. (Mercer) DRAFT minutes from TAC #5 Virtual Meeting

(1) it was moved (Kulankara) and seconded (Reindl) to accept minutes of the January 30th TAC meeting.

BACKGROUND: Posted to TAC Basecamp

(https://3.basecamp.com/3106353/buckets/389454/vaults/772403169) on Jan. 30th. No changes were suggested.

MOTION 1 VOTE: 14-0-1 - PASSES

6. (Mercer) Chair Announcements

YEA & Chapter Leadership Academy Update
 4 people signed up but no discussion after the initial conversation. TAC section heads can make

their TCs aware of the program when more details are available.

Publications Committee Updates

A spreadsheet from Publications Staff listing all the publications they manage with cognizant TC was posted to <u>TC/TAC Leadership Basecamp</u>. Please make TCs aware and direct questions to Hammerling.

GTIC Updates

Updates will be reported to TC chairs at the breakfast presentation on Sunday.

CEC Technical Paper discussion

CEC has a plan to eliminate Technical Papers at the ASHRAE Winter and Annual Meetings in favor of Conference Papers. Only 2 Technical Papers presented in recent meetings. Section Heads were asked to let their TCs know and invite feedback.

CEBD updates

TAC has three liaisons to the Center of Excellence for Building Decarbonization (CEBD) and continues to support by connecting TC experts to specific projects identified by the CEBD. A formal update will be included in the Breakfast presentation.

7. Possible Motions

George Hightower Award

TAC went into Executive Session to discuss candidates.

(2) It was moved (Aute) and seconded (Kulankara), TAC recommends that Honors & Awards Committee approve Phil Naughton as the winner of the 2025 George Hightower Award.

BACKGROUND: Mr. Naughton was recommended by TC 9.11. Nominations were also made by TCs 1.3, 6.9 and 7.10.

MOTION 2 VOTE: 13-0-1* CNV - PASSES

If approved by Honors & Awards Committee, the winner will be invited to receive the Award at the Awards Plenary at the Annual Meeting in Phoenix.

8. Open Action Items - Please be prepared to respond to below action items

Actions from TAC #2:

No.	Responsible Party	Action	Status
2	TAC	Think about balance issue and base categories (General, User, Producer, and send thoughts on implementing this, if this was necessary, or how to implement (Refer to TAC #2 minutes)	ongoing

9. Section issues (Section Heads)

None reported at this time

10. BOD Ex-O / (Coordinating Officer

a. BOD Ex-O report

Metzger presented PEAC report (Attachment A). Issues of interest to TAC to highlight:

- New ASHRAE tagline adds global focus: Shaping Tomorrow's <u>Global</u> Built Environment Today
- New ASHRAE Strategic Plan to be announced at 2025 Annual Conference www.ashrae.org/strategicplan
- Share your expertise with Government Officials through SMEs for GOEs program (email govaffairs@ashrae.org) if interested.
- b. CO report

No report issued

11. New/Unfinished Business

- Discussion to present a motion to Tech Council for a budget to automate the roster activity form
- · Ask FG what would help during meetings if the activity form was automated
- GTIC is looking for volunteers from section 4 and 6

12. Training

- a. Updated FG Activity Form and Section Head Tool Fisler
 - 1. Review of what to discuss with SH's in breakouts
 - 2. Section reports due for Part B
 - 3. Updated FG Activity Form and Section Head tools available here.
- b. FG Evaluation Workbook (here)

FGs asked to fill out each Winter Meeting.

c. Breakfast Agenda:

TAC discussed the agenda and finalized as shown:

- 1. Welcome Comments [Kevin Mercer] 2 Minutes
- 2. TAC Update [Kevin Mercer] 15 Minutes
 - a. Mentor Program
- 3. CEBD Update [Blake Ellis] 15 Minutes
- 4. GAC Update [Alice Yates] 10 Minutes
- 5. GTIC Update [Drake Erbe] 15 Minutes
- 6. Publications Committee [Jennifer Isenbeck] 15 minutes
- 7. College of Fellows [Kathleen Owen] 10 Minutes
- 8. Roster Training [Vikrant Aute] 15 minute Need a demo TC update site to help create the slides
- 9. Section Breakout Session 20 Minutes

The slide presentation for the Breakfast is included as **Attachment B**.

13. **2024-2025 MBOs**

MBOs were reviewed and updated. A report on TAC MBOs would be made to OPS and is included as **Attachment C**.

RECESS

RECONVENE

14. Section Head Reports (3 to 5 minutes per section)

Section Heads were asked to just present highlights from their submitted written reports.

Atkisson (Section 1) reported that the Chair of Standards and TC 1.6 will be liaison to Standards adhoc to provide terminology input.

Mercer reported that the first round of CEBD projects has now been approved. Mercer would send a list of all the projects with assigned champions (**Action Item X**).

Altwies noted TC 9.7 approved a scope change.

(3) It was moved (Altwies) and seconded (Aute) that the TC 9.7 scope be revised as shown:

TC 9.7 is concerned with the application of ventilating, air-conditioning, refrigeration, life safety, and energy conservation systems to educational (secondary school, college) facilities. for educational facilities, including early childhood education through higher education facilities.

MOTION 3 VOTE: 10-0-0 CNV - PASSES

Fisler (Section 2) noted TC 2.1 has had some leadership challenges but that the Secretary is stepping up to lead. Staff would send roster update link.

Thomas reported that the online rostering tool is again being utilized for the 2025-2026 roster update. TAC is collecting feedback for improvements. Section Heads note that TCs were asked to return their rosters by March 3rd.

15. Unfinished Business

None

16. New Business

TAC discussed future efforts planned to automate the roster update or TC activity sheets. Automation. No motions but Mercer would discuss preparing a formal motion with Reiniche to consider at a future meeting.

Mercer emphasized the importance of all TAC members attending both TAC meetings on Saturday and Wednesday, as well as the TC/TAC Leadership Breakfast.

17. Next Meeting

- a. Monthly TAC meeting in spring t.b.d.
- b. ASHRAE Annual Conference June 21-25 Phoenix, AZ

18. Adjournment (Mercer)

TAC meeting was adjourned at approximately 10 AM EDT.

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2025 ASHRAE WINTER CONFERENCE

ORLANDO, FEB 8-12 | AHR EXPO, FEB 10-12

LEADERSHIP PRESENTATION

ASHRAE Policies



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Code of Ethics

We will act with honesty, fairness, courtesy, competence, inclusiveness and respect for others, which exemplify our core values of excellence, commitment, integrity, collaboration, volunteerism and diversity, and we shall avoid all real or perceived conflicts of interest.

Harassment and Discrimination

ASHRAE strictly prohibits and does not tolerate discrimination against members or applicants for membership because of such individual's race, color, religion, age, sex, sexual orientation, national origin, physical or mental disability, pregnancy, genetic information, veteran status, uniformed service member status, or any other category protected under applicable law.

Commercialism

ASHRAE's Commercialism Policy allows for Society activities that fulfill the mission of technological advancement with adherence to business plans that generate income to offset operational expenses such as AHR Exposition, ASHRAE periodicals, website, and Society conference events such as the Welcome Party, luncheons, registration kits, and receptions.

Value Statement

In ASHRAE meetings, we will act with honesty, fairness, courtesy, competence, inclusiveness and respect for others, which exemplify our core values of excellence, commitment, integrity, collaboration, volunteerism and diversity, and shall avoid all real or perceived conflicts of interest. Our culture is one of inclusiveness, acknowledging the inherent value and dignity of each individual. We celebrate diverse and inclusive communities, understanding that doing so fuels better, more creative and more thoughtful ideas, solutions and strategies for the Society and the communities our Society serves. We respect and welcome all.



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MARKETING CENTRAL

ASHRAE has a NEW TAGLINE! Shaping Tomorrow's Global Built Environment Today.



Download Now at Marketing Central

Download

2025-28 ASHRAE Strategic Plan



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2025-28 Strategic Plan Available for Committees and Councils



A preview of the new Strategic Plan is available for committees, councils and chapters to reference while planning for the upcoming Society year.



The complete 2025-28 Strategic Plan will be announced at the 2025 ASHRAE Annual Conference.

Download the Strategic Plan at ashrae.org/strategicplan

Download

ASHRAE Board of Directors



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M. Dennis Knight, P.E. BEMP, Fellow Life Member ASHRAE Mt. Pleasant South Carolina





Bill McQuade, P.E., CDP Fellow ASHRAE Jessup, Maryland





Sarah Maston, P.E., BCxP, LEED AP Hudson, Massachusetts





Jeff LittletonPeachtree Corners,
Georgia

Vice Presidents



Devin Abellon, P.E.Portland, Oregon



Kenneth Fulk, P.E. Allen, Texas



Wade Conlan, P.E. BCxP, CxA Maitland, Florida



Chandra Sekhar, Ph.D., CPEng.Fellow ASHRAE
Singapore

ASHRAE Director and Regional Chairs



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Charles Bertuch Manlius, New York

Region II



Genevieve Lussier Quebec, Canada

Region III



Sherry Abbott-Adkins, P.E., CPD, GPD, **LEED AP** Westminster, Maryland

Region IV



Bryan Holcomb Oak Ridge, North Carolina

Region V



James Arnold, P.E. Dublin, Ohio

Region VI



Susanna Hanson Sturgeon Bay, Wisconsin

Region VII



Mobile, Alabama

Region VIII



Oklahoma City, Oklahoma

Region IX



Jonathan Smith, P.E. Lenexa, Kansas

Region X

Buzz Wright, P.E. Tucson, Arizona **Region-at-Large**

Region XI



Rob Craddock Saskatchewan, Canada

Region XII



John Constantinide, P.E. Merritt Island, Florida



Scott Peach, P.E.





Cheng Wee Leong, P.E., Singapore



Joseph Sanders

Region XIV



Mahroo Eftekhari, CEng., DPhil Loughborough, UK



Richie Mittal, Fellow ASHRAE New Delhi, India



Bassel Anbari, P.E. Abu Dhabi, United Arab Emirates

ASHRAE Directors at Large



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Doug Cochrane, P.Eng., CDPMississauga, Ontario, Canada



Blake Ellis, P.E., CDP Overland Park, Kansas



Patrick Marks, P.E. York, PA



Corey Metzger, P.E. Omaha, NE



Carrie Brown, Ph.D.Oakland, California



Wei Sun, P.E. Ann Arbor, Michigan



David Yashar, Ph.D.Gaithersburg, Maryland



Luke Leung, P.E, BEMP Clarendon Hills, Illinois



Heather Schopplein-Anderson, P.E. Santee, California

Government Affairs

ASHRAE

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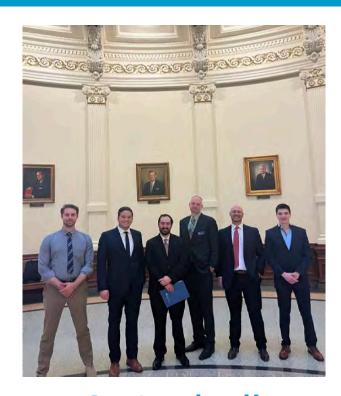
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GOVERNMENT OUTREACH



Get Involved! 136 Government Outreach Events during the 23-24 SY

GOVERNMENT AFFAIRS UPDATE



Sign up for the Government
Affairs Update
online or email
GovAffairs@ashrae.org

LETTERS & TESTIMONY



180 Technology Parkway, NW · Peachtree Corners, GA 30092-2977 · Tel: 404.636,8400 · Fax: 404.321.5478

Ginger Scoggins 2023-2024 ASHRAF President Engineered Designs, Inc. 1151 SE Cary Pkwy., Ste. 200 Cary, NC 27518 Phone: (919) 851-8481

November 17, 2023

California Energy Commission Docket Unit, MS-4 Docket No. 22-BSTD-01 715 P Street Sacramento, California 95814

Sent via email to: docket@energy.ca.gov

RE: Docket 22-BSTD-01: 2025 Update to California Energy Code

Dear Chair Hochschild and Commission Members:

Thank you for the opportunity to comment on Docket 22-BSTD-01, California's proposed 2025 Building Energy Efficiency Standards.

ASHRAE is a technical and professional society with a mission to serve humanity by advancing the arts and sciences of heating, ventilation, air conditioning, refrigeration and their allied fields. Our more than 51,000 members include over 3,000 members in California. Since 1894, ASHRAE has been involved in improving technology for the built environment, including through research, voluntary consensus-based standards development, training/education and certification.

Government Affairs



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Share your Expertise with Government Officials through the new **SMEs for GOEs** Program





Policymakers and elected officials need your expertise to make better decisions as they craft legislation and regulations impacting HVAC&R and the built environment.

The Government Affairs Committee (GAC) has developed a new program to identify Subject Matter Experts (SMEs) who can effectively communicate with non-technical audiences such as government officials

BE THE SOURCE of technical expertise for these decisions!

Sign up online or email GovAffairs@ashrae.org

RP and ASHRAE Foundation: Supporting ASHRAE's Mission



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Society Year ending June 30, 2024



\$2.7M Research Promotion Campaign (Research, YEA, ALI, Scholarships, General)



\$1.5M Raised for Endowments



\$232,100 Awarded through 52 Scholarships



\$1.9M Raised for Research



\$57,600 Raised by College of Fellows and Life Members Club



\$1.18M Given by ASHRAE Regions, Chapters and Sections

More than 4,000 contributions from Members, Organizations and other Associations

Center for Excellence in Building Decarbonization (CEBD)



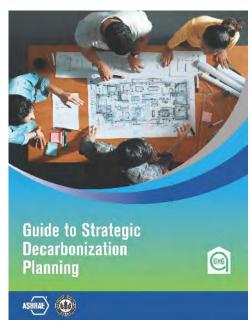
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- Developed Project Summaries for eight (8) CEBD projects
- New eLearning Course on Grid Interactive Buildings
- Publication of Guides:
 - ✓ Grid Interactive Buildings for Decarbonization Design
 - Decarbonizing Hospital Buildings
 - ✓ TM65 Addendum for North America with CIBSE.
 - Building Decarbonization Retrofits for Commercial & Multifamily Buildings
 - ✓ Decarbonizing Building Thermal Systems: A Guide for Applying Heat Pumps & Beyond with NREL
 - ✓ Whole Life Carbon Guide for Building Systems: In Process
 - Guide to Strategic Decarbonization Planning with USGBC: In Process

Standards



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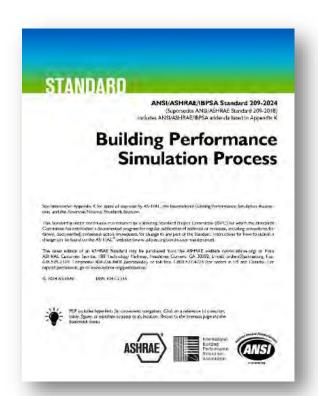
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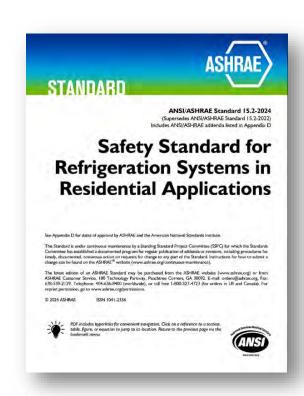
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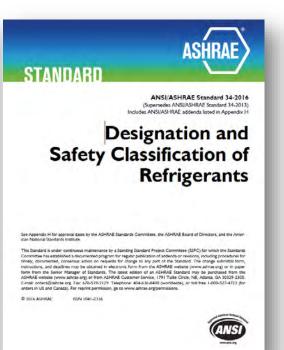
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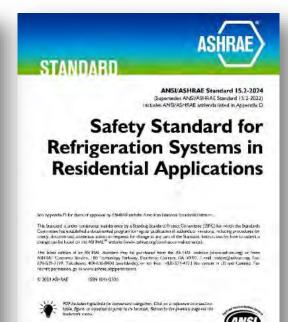
Building Energy Modeling

Updated Early! Refrigeration Safety Standards









ASHRAE Bookstore



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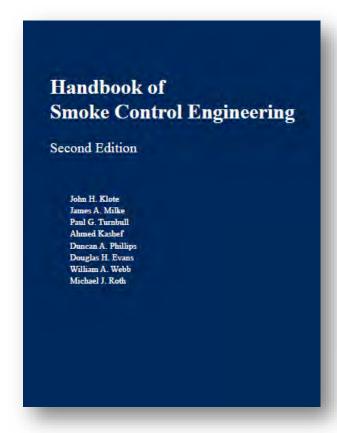
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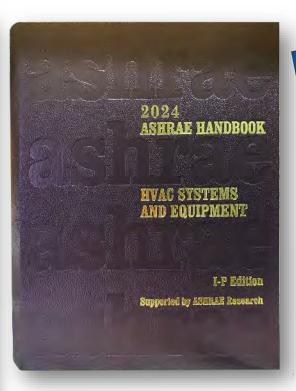
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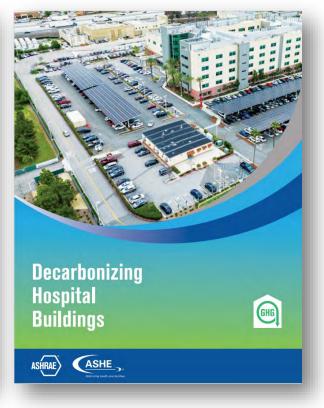
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Professional Development



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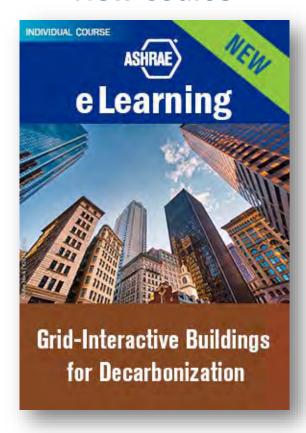
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eLearning

New Course



ASHRAE Learning Institute

New Training in Orlando

Ultra-Low-Energy Buildings
and Microgrids:
Tools for Resilience and
Decarbonization
February 10 | 2:45 PM



Solar Energy Systems Design, Applications, and Real-World Best Strategies

February 11 | 9 AM

Certification

New Certification



Record Application Total in SY 2024

2025 Conferences

TECHNICAL RESOURCES **ABOUT**

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Qatar, Doha, April 23-24, 2025

Third International Conference on Energy and Indoor Environment for Hot Climates

Denver, August 13-15, 2025

2025 ASHRAE Conference for Integrated Design, Construction & Operations

Montreal, September 24-26, 2025

IEQ 2025 Conference

Co-Organized by ASHRAE and AIVC

Chicago, October 22-24, 2025

2025 ASHRAE Building Decarbonization Conference

Clearwater Beach, Fl, December 8-11, 2025

Buildings XVI Conference



Registration opens in Spring 2025. See you in Phoenix!

ASHRAE at the AHR Expo



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Meet and Greet with Dennis Knight at the **ASHRAE Booth (3201)** Monday at 3:00 PM



M. Dennis Knight, P.E., BEMP, Fellow ASHRAE 2024-25 ASHRAE President

Stop by the ASHRAE Booth 3201 and Bookstore 455 while at the AHR Expo.

Your paid conference badge provides entry to the show.

Grab your ASHRAE Member device charging lanyard while visiting the ASHRAE booth!

New ASHRAE Region XV



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Director and Regional Chair: Bassel Anbari



Director and Regional Chair: Richie Mittal

Committees and Student Scholarships



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Find Committees and Nominate Yourself or Others

FEB 2025

February 14: Nominations for appointed committees are due.

JUN 2025 **June:** Speak with your committee ExO/CO if your current appointment/elected position ends to be nominated for another.

SEP 2025 **September:** Nominations for elected positions are due. (Publications & Education Council, Tech Council, RAC, TAC, Standards, Handbook, Nominating)

Communities > Student Zone > Scholarships

44 Society Scholarships Available for 2025-2026 SY

Each year the ASHRAE Foundation awards scholarships of up to \$12,500 USD each to qualified students.



Spread the word to students and encourage them to apply.



Consider donating to help support the scholarship program.

Membership



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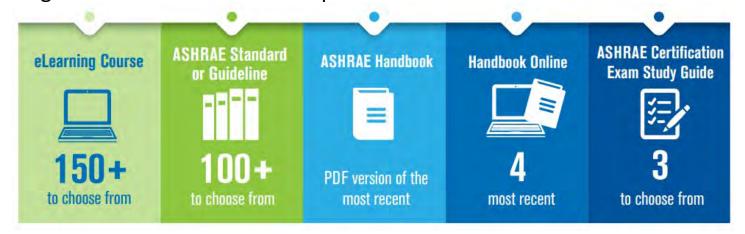
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Have you selected your Annual Membership Benefit?

Benefits are selected during the join & renewal process. If you haven't done so, login and select from benefit options available.



New, Full Dues Paying Members Automatically Get:



HONORS & AWARDS

The following award nominations have a May 1 deadline:

Fellow | Honorary Member | ASHRAE Hall of Fame | F. Paul Anderson Award ASHRAE Pioneers of the Industry | Award for Distinguished Public Service







Asked to make a statement on behalf of ASHRAE?

Please send all media inquiries to publicrelations@ashrae.org

before responding to members of the press.



Thank you! Questions or Comments?

ashrae.org



FG Chair's Breakfast Meeting

Orlando February 9, 2025

AGENDA



- TAC Update
- CEBD Update
- CEC Update
- GAC Update
- GTIC Update
- Publications Committee
- College of Fellows
- Roster Update Training
- Section Breakout Session



TAC Update

TAC Update



- YEA Mentor's Program during Winter and Annual Conferences
- www.ashrae.org/communities/young-engineers-in-ashrae-yea/yea-eventsand-programs/ashraeconnect

- Automated Activity Forms Project
 - Streamline data metrics to help the society better serve membership and identify strategic areas of interest

2025-2028 Strategic Plan & Initiatives



MISSION:

To serve humanity by advancing the arts and sciences of heating, ventilation, air conditioning, refrigeration and their allied fields.

VISION:

A healthy and sustainable built environment for all.



STRATEGIC GOALS

Position ASHRAE as the global leader in advanced solutions to improve indoor environmental quality (IEQ) and address climate change.

2

Pursue impact-focused engagement by targeting stakeholders to support a strong workforce and maximize utilization, adherence, and trust of ASHRAE's global expert resources. 3

Increase the accessibility of ASHRAE content, resources, and member opportunities.

OBJECTIVES

- Lead the development of widely adopted standards to support indoor environmental quality, decarbonization, and resilience.
- Develop alliances and diverse working groups that position ASHRAE to lead and collaborate globally in identifying challenges, defining solutions, and developing approaches to address them.
- Develop resources based on member needs and industry trends.

- Tailor and target engagement and resources to ASHRAE members and defined key stakeholders.
- Provide guidance to targeted stakeholders on impactful ways to maximize the positive downstream effect of their engagement on the built environment.
- Empower professionals in their journey to maximize industry impact in support of ASHRAE's mission and vision.
- d. Pursue partnerships to amplify the impact of ASHRAE's mission and support the HVAC&R and built environment workforce.

- a. Identify and address structural, content, and financial barriers to access.
- Align communication and delivery methods and formats to enhance accessibility and effectiveness of content, resources, and volunteer opportunities.
- c. Strengthen communication channels with and through chapters and regions to empower contribution to the Society as thought partners in adapting resources to local context and needs.

Shaping Tommorrow's Global Built Environment Today



- . Research: The value of ASHRAE's resources is grounded in unbiased data, developed through rigorous research methods.
- . Al: The use of Al enables ASHRAE to improve data collection, automate internal operations, and promote agility.
- . Global Network: ASHRAE's global network convenes the industry to generate unparalleled knowledge and content.

STRATEGIC INITIATIVES



Healthy, Sustainable and Resilient Communities

Providing a healthy, productive and resilient indoor environment, while minimizing greenhouse gas emissions, is critical to today's built environment. Further, global stakeholders' leveraging of ASHRAE's standards and technical resources presents an opportunity for ASHRAE to solidify global leadership in supporting healthy, sustainable and resilient communities. ASHRAE prioritizes timely identification of industry trends, expedient content development, and forges key partnerships to advocate and collaborate with industry.



Empowered Workforce

The development of a skilled, competent, and solutions-oriented workforce is critical to addressing the challenges facing the built environment and the HVAC&R industry, today and in the future. ASHRAE continues to provide educational and professional development resources. Our members and industry partners need these tools to implement key initiatives such as decarbonization, resiliency, and indoor environmental quality goals and policies. ASHRAE, with the support of our chapters and regions, partners with key industry stakeholders in tackling the unique workforce challenges facing the industry globally.



Organizational Agility

ASHRAE's ability to serve communities, the industry, the current and future workforce, and provide value to its volunteer members, is dependent on forward-looking products, services, and solutions. ASHRAE will use emerging technologies to support the development of resources and knowledge flow between ASHRAE's chapters, regions, technical bodies, and the industry, harnessing organizational and operational efficiencies.



Emerging Technologies

In today's rapidly evolving landscape, emerging technologies are revolutionizing the built environment and HVAC&R industry, expanding numerous career opportunities. By combining technological advancements such as AI with human creativity, both seasoned professionals and new talent can collaborate to drive industry-wide progress. Advanced automation and AI-enabled systems propel energy efficiency and smart buildings, enhance comfort and IEQ, improve operations and maintenance, and deliver holistic and sustainable solutions for industry professionals. ASHRAE engages in a thoughtful process to evaluate and prioritize opportunities to leverage new technologies.



- ASHRAE's member and volunteer base maximizes the organization's reach, foresight, leadership position, and organizational knowledge.
- A broad group of stakeholders leverage ASHRAE's resources to make decisions and meet objectives that positively affect the environment.
- A viable, thriving industry makes a positive global impact.





Center of Excellence for Building Decarbonization (CEBD) Update

CEBD Organizational Structure





CEBD Responsibilities



Primary Responsibilities

- Strategy
- Thought Leadership
- Collaboration
- Public Advocacy

• Supporting Activities

- Technical Resources
- Technical Review
- Standards Coordination
- Training Development
- Resource Internationalization
- Member Engagement
- Development

Strategic Partnerships



- Streamlined Flexible Codes
 - MOU with IEA presented at COP 29
 - Presented in UK, Sudan, Ghana
 - Flexible Code Framework for Indonesia
 - Net Zero World is funded by DOE
 - Piloted in 2025 by Berkley Lab funding
- United States White House
 - A3 refrigerants
- International Energy Agency (IEA)
- Française de Normalisation (AFNOR)

- Department of Energy (DOE)
 - Air Conditioning, Heating and Refrigeration Institute (AHRI)
 - PCR Standard Coordination
 - CEBD Liaison
- United States Green Building Council (USGBC)
- Chartered Institute of Building Services Engineers (CIBSE)
- Others?

Member's Council Activities



Chapter Technology Transfer

- Presentations at Chapter Meetings
- Development of 45 Minute Presentations for chapter meetings

Government Affairs

- Update Public Policy Information Briefs
- Update GAC Presentation on Decarbonization
- Eunice Foote Decarbonization Award



Member's Council Activities



- Honors & Awards
 - Eunice Foote Decarbonization Award
- Membership Promotion
 - Decarbonization Training & Education Priorities
- Young Engineers in ASHRAE
 - Decarbonization Challenge Fund



Paul Torcellini, NREL 2024 Eunice Foote Award Winner

Publication & Education Council Activities



Certification

New Certified Decarbonization Professional

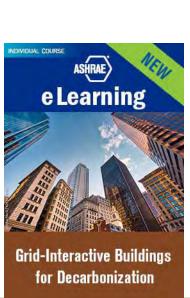
Publications

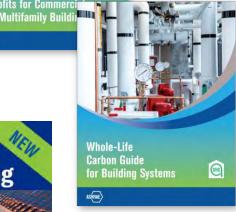
 Building Decarbonization Retrofits for Commercial and Multifamily Buildings, Whole-Life Carbon Guide for Building Systems, Strategic Decarbonization Planning Guide

Training & Education

- Grid-Interactive Bulidings for Decarbonization
- Decarbonizing Hospital Buildings
- Decarbonizing Building Thermal Systems
- Building Decarbonization Retrofits for Commerical and Multifamily Buildings





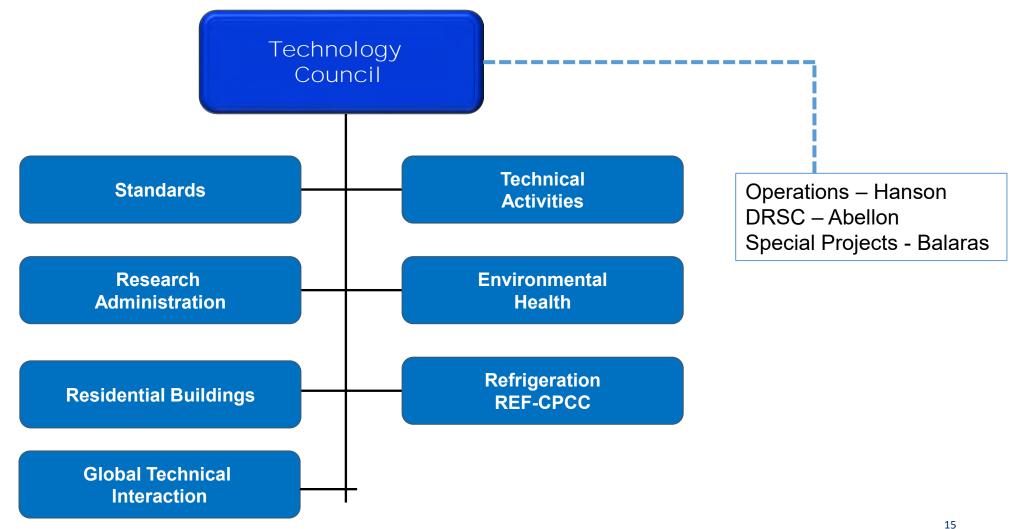




Technology Council Activities

Technology Council







Special Projects

- Special Projects may be any regular activity of the Society that fits one or more of the following:
 - Performed outside of the ASHRAE research program
 - Require extensive effort
 - Cannot be accomplished entirely on a volunteer basis
 - Require accelerated approvals or activities
 - Funded in large part by outside sources
 - Performed in cooperation with other organizations
- NOTE: Not all co-funded and/or research projects are Special Projects, but a Research Project can also be a Special Project.



Title: Evaluating Global ASHRAE Member Needs for Building Decarbonization Education

Scope: ASHRAE is a vital hub for scholarly exchange and professional growth in the HVAC&R

discipline. With ASHRAE's global membership exceeding 50,000, understanding its members' diverse needs and expectations is essential. Within the evolving standards and technologies landscape, research to understand the needs of professional members using market research methods. Insights collected will help ASHRAE identify continuing education opportunities and tailor content to specific regional and international needs. It will also provide a research-

driven, needs-based member segmentation to assist in targeting and tailoring specific

education and training deliverables.

Collaborators: Internal



Title: Refrigerant Emissions Management, Tracking and Compliance

Scope: Refrigerant emissions, particularly from HFCs, are projected to contribute 57.15

gigatons of CO₂ equivalent by 2050, significantly impacting climate change. Effective

management of refrigerant leaks is crucial to mitigate their potent greenhouse effect,

yet current systems lack centralized tracking, leading to regulatory non-compliance

and inefficient recovery. The Refrigerant Leakage Database, managed by the DOE

and informed by ASHRAE, will systematically track and manage refrigerant leaks

across sectors, enabling precise leak monitoring and fostering compliance. This

project aims to enhance environmental protection and potentially save operational

costs, ensuring comprehensive field data integration and industry expertise.

Collaborators: DOE, EPA, UNEP



Title: Harmonizing Global Decarbonization Standards for Streamlined Compliance

Scope: With the global building sector responsible for approximately 40% of energy-related CO₂

emissions, ASHRAE recognizes the urgency of addressing decarbonization. Currently, selected

countries have no holistic carbon regulations. Others have numerous standards tailored to

specific regions, building types, and metrics, resulting in a fragmented landscape. ASHRAE's initiative aims to harmonize these disparate standards, especially between the EU and the US,

through collaborative research, development, and adoption efforts. By aligning methodologies,

through outdoording to cool of a cool of the standard line of a collection of the standard line of the standard li

terminology, and metrics, ASHRAE seeks to streamline decarbonization strategies, facilitating

broader implementation and enhancing global impact. This project promises to offer clarity,

consistency, and efficacy in the pursuit of a whole-life carbon approach.

Collaborators: US DOE, Architecture 2030, International Energy Agency (IEA), World Green Building Council

(WorldGBC)



Title: Streamlined, Flexible International Building Code Framework

Scope: For all new buildings to be zero emissions ready by 2030, all countries must implement national

building codes, along with enabling policies and programs, that will drive the market towards

deep energy efficiency, net zero emissions, building electrification, low-GWP refrigerants,

renewables integration, and demand flexibility. Eighty-two percent of the population growth

through 2030 is expected in emerging economies, where many countries lack mandatory energy

codes. This project seeks to develop a flexible building code framework with specific countries to

streamline the development and adoption of consensus-based national/subnational model building codes, supporting tools, and training.

Collaborators: US DOE, US State Department, PNNL, IEA, ICC, WRI, WBCSD, Climate Group, C40, WorldGBC,

UNEP, GlobalABC, Australia, Canada, Germany, Namibia, Ghana, Colombia, Kenya, Vietnam



Title: Optimizing PCR Protocols for Enhanced EPD Precision in HVAC&R

Manufacturing

Scope:

Establishing Product Category Rules (PCRs) is pivotal for standardizing environmental assessments in the equipment industry, aligning with the significance of Environmental Product Declarations (EPDs) for sustainability. Currently, gaps exist in PCR frameworks, hindering comprehensive evaluations. This project aims to bridge these gaps by developing robust PCRs, addressing data collection, life-cycle assessments, and third-party verification. Through the creation of customized PCRs, we enable manufacturers to produce precise EPDs. This allows all parties to make well-informed choices grounded in clear environmental performance data.

Collaborators: AHRI, CSA, ISO, GRI

Standard 244P – Sustainability Assessment for

Mechanical, Electrical, and Plumbing Products



Title: Update HVAC Equipment Service Life Data

Scope: The project will update ASHRAE's equipment service life tables from 1978 and 2005

data. Determining the useful life of equipment is important to understand the

embodied carbon impact of equipment replacement over a building's lifetime and in

developing building decarbonization roadmaps. The source of equipment service life

is Chapter 38 of the ASHRAE HVAC Applications Handbook. In 1978, ASHRAE

published research project RP-186, which contained service life data for HVAC

equipment. In 2005, research project TRP-1237 gathered updated data on

equipment, but not as comprehensive as RP-186. Both data sets need updating due

to new manufacturing processes and equipment categories.

Collaborators: AHRI



Title: Standardizing Whole Life Carbon Calculations for Building Systems

Scope: The whole life embodied carbon impact of Mechanical, Electrical, and Plumbing

(MEP) systems can constitute up to 50% or more of a building's total carbon

footprint. It is, therefore, critical to understand and minimize the carbon

contributions of these systems during the planning, design, construction, operation,

and end-of-life phases of a building's lifecycle. This project aims to establish a

consistent framework for calculating the embodied carbon of MEP systems,

including the impacts of equipment, refrigerants, ducts, and piping. The anticipated

outcome is a set of robust, practical methodologies adaptable to various building

types and scalable across different project sizes.

Collaborators: MEP 2040, CLF



Title: Decarbonizing Single-Family Homes: A Guide for Sustainable Retrofits

Scope: Single-family homes, which represent a significant portion of the residential sector,

contribute up to 18% of national GHG emissions. This emphasizes the importance of

clear guidance to decarbonize these dwellings. Urban areas, responsible for a

substantial share of emissions, further highlight the need for this project. It

addresses retrofitting challenges in single-family homes by focusing on building

electrification, envelope retrofitting, and the integration of renewable energy. This

guide aims to consolidate data and strategies to streamline retrofit initiatives,

thereby aligning with global and ASHRAE emission reduction targets.

Collaborators: RBC, 90.1

Timeline: 2025

Questions



Thanks for the time.

Special Projects Chair – Costas Balaras (costas@noa.gr)

Tech Council Chair – Wade Conlan (wconlan@hanson-inc.com)

• Tech Council Vice Chair - Devin Abellon (dabellon@pwsigroup.com)



TC Chair Breakfast

Conferences & Expositions Committee (CEC)

Maggie Moninski, Chair CEC

2025 Winter Program Statistics



Program	Proposals Submitted	Proposals Scheduled
Panel Sessions	9	3
Forum Sessions	18	3
Seminar Sessions:	158	63
Workshop Sessions	10	4
Debate Sessions	3	2
Total	198	75
Total with Paper Sessions		113



Upcoming Conferences

Annual Phoenix – June 21-25, 2025



Conference Chair : Craig Bradshaw, (crbrad@illinois.edu)

- Fundamentals and Applications
 - Atilla Biyikoglu (abiyik@gazi.edu.tr)
- HVAC&R Systems and Equipment
 - Ng Yong Kong (nyk@nyk.com.my)
- Research Summit
 - Haotian Liu (sjtulht@hotmail.com)
- Workforce Development
 - Anuj Gupta (anuj@design2occupancy.com)
- Industrial Ventilation, Refrigeration, Air-Conditioning and Energy Utilization
 - Vinod Venugopal (vinodpvgopal@gmail.com)
- Heat Pumps, Refrigerants and Decarbonization
 - Money Khanna (khannamoney@gmail.com)
- On-Site Energy Storage
 - Kevin Brown (kevin@kbsquared.net)

Key Dates - Phoenix



- November 20, 2024: Conference Paper Abstracts due
- December 13, 2024: Conference Paper Abstract Accept/Reject Notifications
- January 3, 2025: Website Opens for Seminar, Workshop, Panel, Debate, and Forum Proposals and Extended Abstracts
- February 26, 2025: Seminar, Workshop, Panel, Debate, and Forum Proposals Due
- March 5, 2025: Conference Paper and Extended Abstracts Due
- April 11, 2025: Seminar, Workshop, Panel, Debate, and Forum Accept/Revise/Reject Notifications

Winter Las Vegas – Jan 31-Feb 4, 2025



Conference Chair : Aaron Boranian (aaron.boranian@bigladdersoftware.com) Tentative Tracks

- Fundamentals and Applications
- HVAC&R Systems and Equipment
- Refrigeration and Refrigerants
- Research Summit
- Energy Storage and Grid Resiliency
- Pathways to Building Decarbonization
- Artificial Intelligence
- Advancements in Construction
- Ventilation and Indoor Environmental Quality for Healthy Buildings
- Future-Proofing the Built Environment

Other details yet to be fully defined.

TC Program Subcommittee Training on Tues, February 11, 11:15am-12pm in room Clear Lake (Lobby Level) for more information.

Upcoming Conferences



Third International Conference on Energy and Indoor Environment for Hot Climates

April 23-24, 2025 – Doha, Qatar

<u>CLIMA 2025</u> (REHVA conference, organized and executed by AiCARR, and endorsed by ASHRAE)

June 4-6, 2025 – Milan, Italy

2025 ASHRAE Conference for Integrated Design, Construction & Operations (call for presentations open)

• August 13-15, 2025 – Denver, Colorado

IEQ 2025 Conference

• September 24-26, 2025 – Montreal, Quebec, Canada

2025 ASHRAE Building Decarbonization Conference

October 22-24, 2025 – Chicago, Illinois

Buildings XVI Conference

December 8-11, 2025 – Clearwater Beach, Florida

CEC Notes



- **o** TC Program Subcommittee Training
 - Tuesday February 11, 11:15 12:00 Clear Lake (Lobby Level)

Questions?



Maggie Moninski, Chair CEC

maggie.moninski@gmail.com

Kristen Cetin, Vice Chair CEC

cetinkri@msu.edu



Overview of Government Affairs Department For TC/TG Chairs Breakfast Meeting – Winter 2025 - Orlando

Alice Yates
Director of Government Affairs
February 2025

Government Affairs Staff: Who Are We?



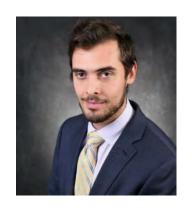
We have a team that is ready to support you!

Contact all of us at GovAffairs@ashrae.org



Alice Yates

Director



Jacob Karson

Advocacy & Outreach







Bryce Causey Federal



Neil Gavigan
Policy Analyst



Chris Miller Office Manager

ASHRAE Government Affairs Website: a Multitude of Resources and Information https://www.ashrae.org/about/government-affairs





What Staff Have Been Assigned To Do



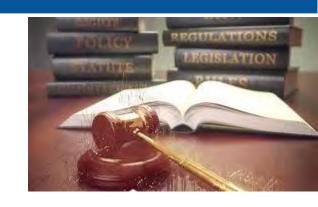
ASHRAE Government Affairs Mission Statement:

- To establish ASHRAE as a **leading source for expertise** in the built environment and a resource for policy-makers in the development of legislation and regulations affecting the public, the HVAC&R community, and the engineering profession.
- To this end the ASHRAE Washington D.C. office will:
 - OBuild relationships between the Society and all levels of government in the United States and with the appropriate international community representatives.
 - oFacilitate the transfer of **technical counsel** and assistance on matters affecting the public, engineering profession and ASHRAE professional community.
 - oCollect, digest and disseminate to members and staff relevant information regarding current or anticipated government actions.
 - oPursue **technology transfer** and government funding opportunities independently or jointly with other appropriate organizations.

Key Areas of Focus for Government Affairs Staff



- Bi-Weekly Government Affairs Updates
- Support and planning for Government Outreach Events
 - Tremendous Growth: 136 GOEs in SY23-24



Public Law 110-140 110th Congress

To move the United States broard greater energy independence and security, to increase the preduction of dean remarkable facin, to profest consumers, to encounte the efficiency of products buildings, and vehicles, to promote research, on and deploy greenhouse gas capture and storage options, and to improve the energy performance of the Federal Government, and for other purposes

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

(a) SHORT TITLE.-This Act may be cited as the "Energy Independence and Security Act of 2007

(b) TABLE OF CONTENTS - The table of contents of this Act

Sec. 1. Share title table of contents.

Sec. 3. Relationship to other law,

TITLE 1-ENERGY SECURITY TREOUGH IMPROVED VEHICLE FUEL ECONOMY

SubOth W-Incremed Corporate Average Visit Keening Gittimush

Sec. 101. Shart title. Sec. 102: Average find economy standards for automobiles and systain other vehi-Sec. 103 Definitions

Sec. 104: Credit trading program Sec. 105 Cosmics information

Sec. 106. Customed applicability of existing standards

107. National Academy of Sciences studies.

108. National Academy of Sciences study of manuar-duty and heavy-duty Extension of flexible fuel vehicle credit program.

Periodic review of accuracy of faul ensuring labeling procedures

12. Use of civil penalties for research and development 113. Karupation from separate calculation requirement

Substitle B-Improved Vehicle Technislagy

Sec. 182. Demestic manufacturing conversion grant programs. Sec. 193. Inclusion of electric drive in Durgy Polley Act of 1992. Sec. 194. Long margations for Eud-Hillians automobile parts manufactures.

135. Advanced battery loan guarantee progress.

- Tracking legislation and regulations, drafting letters and testimony, connecting members with agencies and elected officials, strengthening relationships with aligned organizations
- Supporting webinars, briefings, and hearings for policy makers
- GAC Staff Support

Recent Letters and Testimony



- 1-31-2025- Letter Supporting Maryland HB 339, "Residential Rental Apartments Air Conditioning Requirements"
- 1-30-2025 <u>-Testimony on NE LB 163 to the NE Committee on Natural Resources</u>
- 1-29-2025- Joint Comment Letter Supporting FEMA's Public Assistance Mitigation Cost Share Incentives Policy
- 1-23-2025- ASHRAE Letter in Opposition to Hawaii Senate Bill 48 "Relating To Building Codes"
- 1-23-2025- ASHRAE Letter in Opposition to Hawaii Senate Bill 120 "Relating To Building Codes"
- 1-17-2025- ASHRAE Letter of Support of New Hampshire House Bill 93, "Requiring New Hampshire builders to use the 2021 Energy Building Codes"
- 1-17-2025- HVACR Alliance Letter to 119th Congress
- 1-16-2025- District of Columbia State Public Meeting on Indoor Air Quality in Schools
- 1-12-2025- Letter to European Commission with Technical Input on the Study for the review of Commission Regulation (EU) 2019/424 (Ecodesign requirements for Servers and Data Storage products)

Recent Letters and Testimony (cont.)



- 11-12-2024- FY25 EE Funding Ltr to Appropriators
- 11-08-2024- Comments re: Oregon Proposed Building Energy Performance Standards
- 11-07-2024- Response to DOE RFI on Frontiers in AI for Science, Security and Technology Initiative
- 10-09-2024- Comments re: Maryland Building Energy Performance Standard Regulation
- 9-25-2024- Green Building Groups Affirm Support for Zero Emissions Buildings
- 9-19-2024- NIST FY25 Support Letter
- 9-13-2024 <u>Letter to Vice President Harris Presidential Campaign Regarding Affordable Housing and Codes</u>
- 9-3-2024 <u>Letter to New Jersey Governor Murphy on S. 2188, "An Act Concerning Legionnaires' Disease"</u>
- 08-22-2024 ASHRAE Letter re: California Building Energy Performance Strategy Report
- 07-18-2024 <u>ASHRAE Letter of Support for the Pro Codes Act</u>
- 07-08-2024 Committee for the Study for the review of Commission Regulation 2019/424 (Ecodesign of Servers and Data Storage Products) Task 6 Design Options

Key Topics of Interest



- Building code updates and revisions
- Indoor Air Quality especially new IAQ requirements for schools
- •Decarbonization/Electrification majority of these bills are outside the scope of ASHRAE policy positions
- Data Centers
- Building Performance Standards
- Refrigerants
- Affordability Costs

Shifts in Policy Focus

















THREATS

- Climate, building decarbonization, energy efficiency regulations and tax incentives are under attack by some interests that believe:
 - Government is over-reaching
 - Regulations (including building standards/codes) could negatively impact jobs, the economy, and affordability
 - Scientific claims are unfounded
- ASHRAE's long-standing private-public partnership with government may be challenged:
 - Participation of federal government employees
 - Lawsuit against federal agencies (HUD and USDA) that use ASHRAE (and ICC) standards

U.S. Federal: A New Administration



43 Executive Orders, Presidential Memoranda, and Proclamations, including:

Declaring a National Energy Emergency

Directs agencies to utilize their statutory emergency powers to speed up development and authorization of fossil fuel energy projects

Unleashing American Energy

Calls for an immediate "pause in the disbursement of funds" appropriated through the Inflation Reduction Act and Investment Infrastructure and Jobs Act

Areas of Focus for the U.S. Congress



- Appropriations: March 14 deadline for FY25; Summer focus: FY26
 - Challenges with funding for our federal partners (DOE BTO, EPA ORIA, NIST)
 - Possible opportunities for report language to guide investments
- Budget Resolution and Reconciliation
 - Extension of 2017 tax cuts (\$5 trillion over 10 years per the CBO)
 - Possible elimination of tax incentives that support HVACR investments
 - Threats to non-profits like ASHRAE
- Congressional Review Act
 - Rules issued after August 16, 2024, are at risk of being overturned through a joint resolution of disapproval (several CRA bills already introduced)
 - DOE/EPA energy regulations at risk (water heaters, walk-in coolers/freezers, refrigerants)
- Possible EPCA Reform





PIVOTS

- Resilient and strong built environment rather than climate change and decarbonization.
- Productive and healthy workplaces rather than improved IAQ/IEQ.
- Economic growth from HVACR investments rather than HVACR investments to improve sustainability and mitigate climate change.
- Reduction of waste, energy security, grid resiliency & reliability rather than clean energy generation.
- Support for our military and jobs rather than decarbonizing DOD.

ASHRAE is a private-sector organization that creates industry consensusbased voluntary standards





OPPORTUNITIES

- Private sector resources and public-private partnerships
 - National Technology Transfer and Advancement Act
- Electric grid under increased strain
 - Data centers / Al
 - Manufacturing
- Sustained interest in IAQ/Healthy buildings, especially in schools
- Resilience from natural disasters
- Affordability energy efficiency saves money

State and Local Outlook



- 46 state legislatures are currently in session; most will be in session through June
- Staff have reviewed approximately 3,000 bills
 - 150 flagged as priority and most relevant to ASHRAE
- Trends in state and local legislation:
 - Building code updates and revisions
 - Indoor Air Quality especially new IAQ requirements for schools
 - Decarbonization/Electrification majority of these bills are outside the scope of ASHRAE policy positions

Share your Expertise with Government Officials through the new "SMEs for GOEs" Program





- Policymakers and elected officials need your expertise to make better decisions as they craft legislation and regulations impacting HVAC&R and the built environment.
- The Government Affairs Committee (GAC) has developed a new program to identify Subject Matter Experts (SMEs) who can effectively communicate with non-technical audiences such as government officials
- BE THE SOURCE of technical expertise for these decisions!
- Scan the QR code to learn more and apply!
- Questions? Email <u>GovAffairs@ashrae.org</u>







Questions?

ASHRAE's Role in the Globalization of Standards Global Technical Interactions Committee (GTIC) Activities





ISO WORKSHOP SEPTEMBER 2024



- On September 30, 2024, keynote speakers from Industry organizations presented their views on standardization leading to harmonization in Saint Denis, France.
- The main purpose is to bring attention to, and discuss, the opportunities in developing and using ISO standards to meet the global needs of decarbonization and energy efficiency in the built environment.
- The speakers provided an outlook on global trends to specific policies, regulations, and methods for alignment globally with Europe.
- <u>Link to Workshop presentations</u>

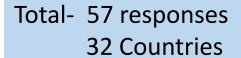
GTIC Survey Initiative



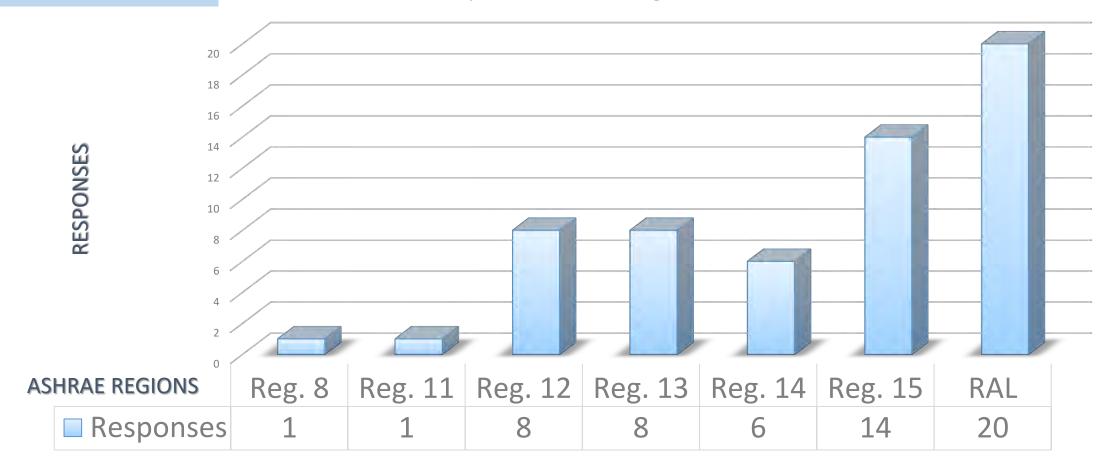
- In May 2024, GTIC's Regions & Chapters Interaction Subcommittee developed and distributed a survey to Chapters and Industry Associations to gather information on how ASHRAE standards are currently used in their respective regions.
- The information will provide insight on what ASHRAE can do to assist in promoting/adopting/adapting ASHRAE products and services in their countries.
- ASHRAE can support HVAC&R needs in achieving global alignment with Energy and Decarbonization goals in the coming years
- Link to Survey

Responses by Region



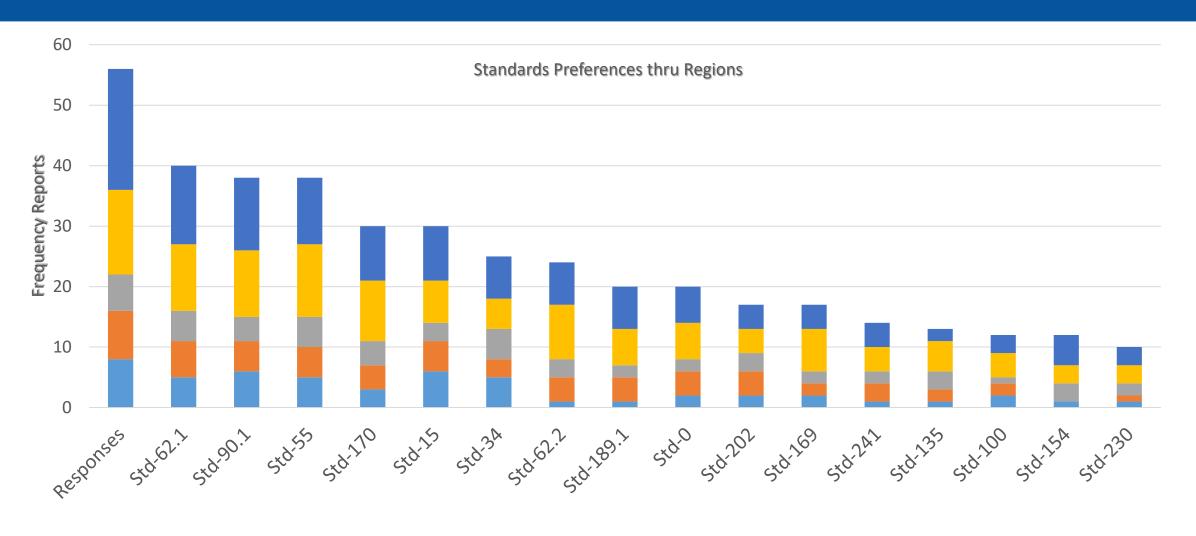


Responses thru ASHRAE Regions



ASHRAE

ASHRAE Standards in use by Region



Next Steps



GTIC proposes to launch pilot project(s) with standards of high demand and interests.

- Process to be developed and modified as needed
- •GTIC to define resources within ASHRAE



ISO TAG ACTIVITIES

Where does ASHRAE fit in ISO?



Administrative support for TAGs is delegated by ANSI to accredited Secretariats that are usually ANSI SDOs.

ASHRAE serves as Secretariat for five U.S TAGS

- ISO/TC 86 Refrigeration and air-conditioning
- ISO/TC 142 Cleaning equipment for air and other gases
- ISO/TC 163 Thermal performance and energy use in the build environment
- ISO/TC 205 Building environment design
- ISO/TC 59/SC 13 Organization and digitization of information about buildings and civil engineering works, including building information modeling (BIM)

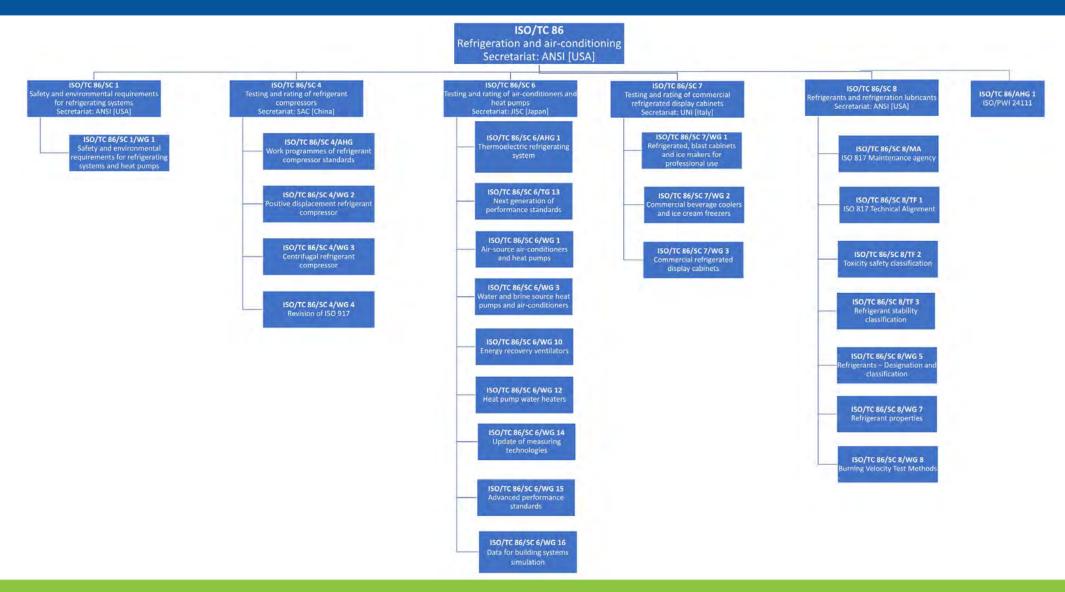
How do ASHRAE TCs and ISO Working Groups Relate to Each Other?



ASHRAE Technical Committee	ISO Subcommittee/Working Group	
TC 1.4, Control Theory and Application	ISO/TC 205/WG 3, Building Automation and Control System (BACS) Design	
TC 2.9, Ultraviolet Air and Surface Treatment	ISO/TC 142/WG 2, UV-C Technology	
TC 4.1, Load Calculation Data and Procedures	ISO/TC 205/WG 9, Heating and cooling systems	
TC 4.7, Energy Calculations	ISO/TC 163/SC 2, Calculation methods	
TC 5.5, Air-to-Air Energy Recovery	ISO/TC 86/SC 6/WG 10, Energy Recovery	
TC 6.5, Radiant Heating and Cooling	ISO/TC 205/WG 8, Radiant heating and cooling systems	
TC 7.6, Building Energy Performance	ISO/TC 205/WG 2, Design of energy-efficient buildings	
TC 8.1, Positive Displacement Compressors	ISO/TC 86/SC 4/WG 2, Positive displacement refrigerant compressor	
MTG.BIM, Building Information Modeling	ISO/TC 59/SC 13, Organization and digitization of information about buildings and civil engineering works, including building information modelling (BIM)	

ISO/TC 86 Committee Structure





ISO/TC 86 Scope



Standardization in the fields of refrigeration and air-conditioning, including terminology, mechanical safety, methods of testing and rating equipment, measurement of sound levels, refrigerant and refrigeration lubricant chemistry, with consideration given to environmental protection. The scope includes factory-assembled air-conditioners (cooling), heat pumps, dehumidifiers, refrigerants, and refrigerant reclaiming and recycling equipment as well as other devices, components and equipment such as humidifiers, ventilation equipment and automatic controls used in air-conditioning and refrigeration systems that are not covered by other ISO technical committees.

ISO/TC 205



Building Environment Design

WG 1 – General principles

WG 2 – Design of energy-efficient buildings

WG 3 – Building automation and control system (BACS) design

WG 6 – Indoor acoustical environment

WG 7 – Integration of nature and biodiversity in building design

WG 8 – Radiant heating and cooling systems

WG 9 – Heating and cooling systems

WG 10 – Commissioning

JWG between TC 163 and TC 205 (TC 163/WG 4) - Energy performance of buildings using a holistic approach

AG 1 between TC 163 and TC 205 – Coordination of ISO 52000 family

JWG 11 between TC 205 and TC 163 - Moisture damage

JWG 12 between TC 205 and ISO/TC 274 – Indoor visual environment

ISO/TC 205 Scope



Standardization in the design of new buildings and retrofit of existing buildings for acceptable indoor environment and practicable energy conservation and efficiency. Building environment design addresses the technical building systems and related architectural aspects, and includes the related design processes, design methods, design outcomes, and design-phase building commissioning. Indoor environment includes air quality, and thermal, acoustic, and visual factors.

https://www.iso.org/committee/54740.html

ISO/TC 163



Thermal performance and energy use in the built environment

SC 1 – Test and measurements methods

SC 2 - Calculations methods

SC 3 – Thermal insulation products, components and systems

WG 4 – Joint TC 163 and TC 205 – Energy performance of buildings and holistic approach

ISO/TC 163 Scope



Standardization in the field of building and civil engineering works of:

- thermal and hygrothermal performance of materials, products, components, elements and systems, including complete buildings, both new and existing, and their interaction with technical building systems;
- thermal insulation materials, products and systems for building and industrial application, including insulation of installed equipment in buildings

https://www.iso.org/committee/53476.html

ISO/TC 142



Cleaning equipment for air and other gases

WG 1 – Terminology

WG 2 – UV-C Technology

WG 3 – General Ventilation Filters

WG 4 – HEPA and ULPA Filters

WG 5 – Dust Collectors, Droplet Separators and Purifiers

WG 7 – Cleanable filter media used in industrial applications

WG 8 – Gas-phase air cleaning devices

WG 9 – Rotary machinery

JWG 10 – Aerosol filters for nuclear applications

JWG 11 – Portable room air cleaners

WG 12 – Sustainability

WG 13 – Biological equipment for water gas treatment

WG 14 – Test Method for airborne microorganism filtration efficiency and decontamination efficiency

ISO/TC 142 Scope



Standardization in the fields of terminology, classification, characteristics, and test and performance methods for air and gas cleaning and disinfecting equipment for general ventilation and industrial applications.

Excluded:

- exhaust gas cleaners for gas turbines and IC engines in mobile equipment, this being within the scope of other ISO technical committees;
- filters for personal protection equipment which are the field of work of technical committee ISO / TC 94;
- cabin filters in mobile equipment covered by ISO / TC 22, 23 and 127.

ISO/TC 59/SC 13 Scope



SC 13 is charged by TC 59 to focus on international standardization of information through the whole life cycle of buildings and infrastructure across the built environment

- to enable interoperability of information;
- to deliver a structured set of standards, specifications and reports to define, describe, exchange, monitor, record and securely handle information, semantics and processes, with links to geospatial and other related built environment information;
- to enable object-related digital information exchange.

How Can ASHRAE Members Get Involved in International Standards?



ASHRAE members can get involved in international standards by:

- Joining a U.S. TAG
- Attending ISO meetings as a U.S. expert
- Agree to be a resource for TAGs to reach out to for review of documents

NOTE: INTERNATIONAL TRAVEL IS NOT REQUIRED TO PARTICIPATE!

Interested in getting involved?

Contact Kai Nguyen (knguyen@ashrae.org), AMOS – I for more information

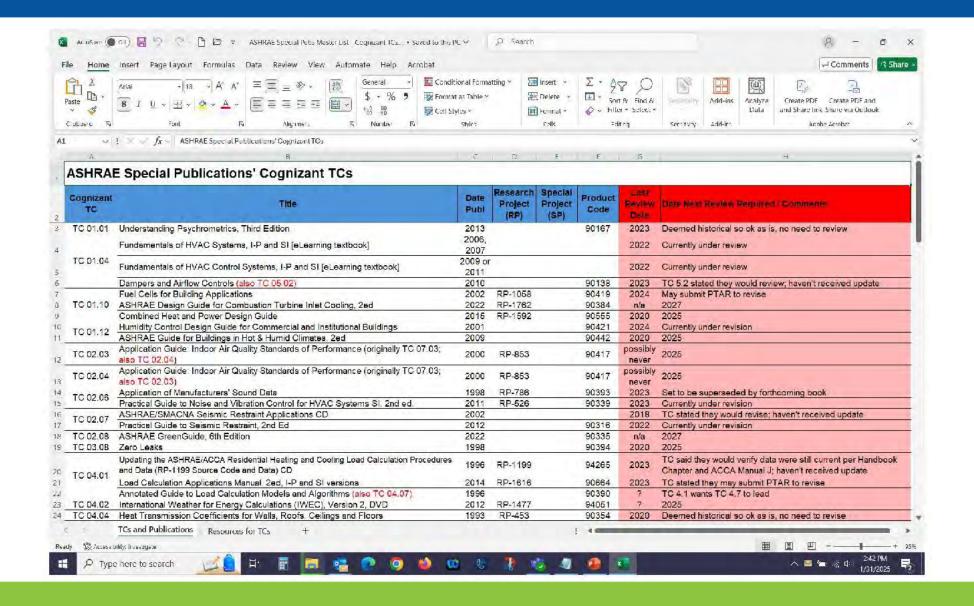
PUBLICATIONS COMMITTEE





ASHRAE Special Pubs Master List with Cognizant TCs





TC Form for Reviewing Older ASHRAE Publications



TC Form for Reviewing Older ASHRAE Publications



ASHRAE staff needs your expertise! It is essential that ASHRAE publishes relevant, up-to-date technical content, and Publications staff is not qualified to make such determinations. Your feedback will help determine whether a publication needs revisions and, if so, to what extent. **THANK YOU for taking the time to review this publication.** Please complete this form online at www.ashrae.org/TCpubreview or submit this filled-out PDF to ASHRAE Special Publications.

Title reviewed:	Reviewing TC #:
The following checklist is a starting point t The TC may wish to apply additional criter	hat TC members can use when asked to review an older ASHRAE publication. a not listed here.
MANDATORY CONSIDERATIONS	
☐ Yes ☐ No	pic that is of interest/valuable to those in the HVAC&R industry <u>today?</u> publication current or out of date/no longer relevant?
	revised best practices, or new technologies, procedures, resources, and/or uld be included in the coverage of this publication's topic?
 What do you recommend as the r Continue to sell as is, in both p Continue to sell as is, but only Revise/update content and se Remove from sale and do not 	rint and PDF formats as a PDF (not print) new edition
 Do you feel a revision of t Yes No Do you feel the TC is capa Yes No 	vise/update and sell a new edition of this publication: nis publication would require new research to be conducted? ole of completing the required revision work?
	ould be completed on a volunteer basis or would require funding? Funding required Why?

Note:

Reviews of existing books only come up about once every 4 years.

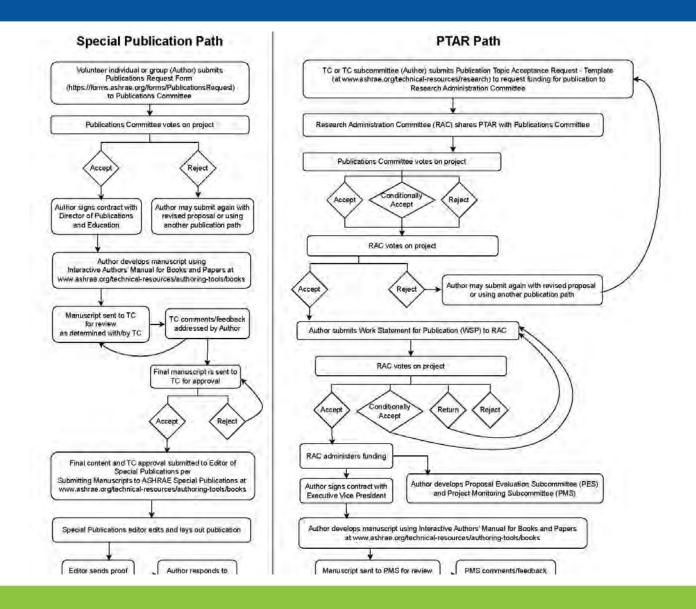
Submission and Contact information for Publishing with ASHRAE



Publication Type	How to Submit Proposals	ASHRAE Staff Contact	
ASHRAE Journal articles (technical, for practicing engineers)	www.ashrae.org/technical-resources/ashrae- journal/submission-guidelines-for-ashrae-journal	ASHRAE Journal Editor, Drew Champlin, DChamplin@ashrae.org	
Books	Individual authors, authoring groups, and TC/TG/MTG volunteer efforts: http://cms.ashrae.biz/forms/pubplan/index.php	Special Publications Editor, Cindy Michaels, cmichaels@ashrae.org	
	TC/TG/MTG paid efforts: Use the Publication Topic Acceptance Request template available at https://www.ashrae.org/technical-resources/research	Manager of Research and Technical Services, morts@ashrae.net	
ASHRAE Journal Podcast	Submit topic or guest suggestions via email to ASHRAE Journal Managing Editor Kelly Barraza at kbarraza@ashrae.org		
Insights, HVAC&R Industry News, and ASHRAE Journal Newsletter	Submit article or topic suggestions via email to ASHRAE Journal Assistant Editor Mary Sims at msims@ashrae.org		
CDs/DVDs/Software/ Online databases	http://cms.ashrae.biz/forms/pubplan/index.php	Special Publications Editor, Cindy Michaels, cmichaels@ashrae.org	
Apps	https://xp20.ashrae.org/secure/special_pubs/app_propose/	Special Publications Editor, Cindy Michaels, cmichaels@ashrae.org	
Translations of ASHRAE's books, standards, guidelines, position documents, white papers, or reports	Submit requests to translate specific titles via email to Special Publications Editor Cindy Michaels at cmichaels@ashrae.org		

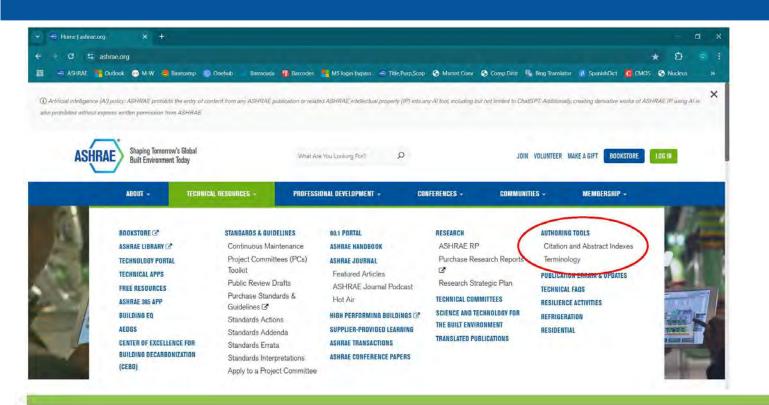
Flowchart of Publication Paths for Book Projects

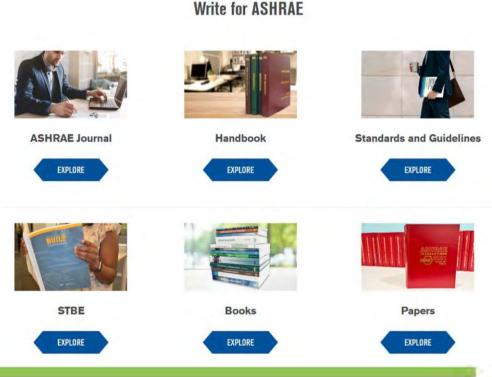


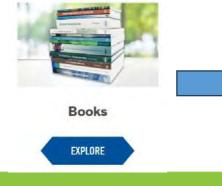


Authoring Tools Available from the ASHRAE Website









Interactive Authors' Manual
ASHRAE's Publishing Ethics
ASHRAE SI Guide for HVAC&R
ASHRAE Commercialism Policy and Guidelines
Figure Permission Scenarios
Permission Request Form
Submitting Manuscripts to Special Publications

Contacts for Publications Committee



Publications Committee Chair PubChair@ashrae.net

Publications Committee Vice Chair PubVChair@ashrae.net

Special Publications Editor, Cindy Michaels
SpecialPub@ashrae.net
or directly at cmichaels@ashrae.org

ASHRAE Journal Editor, Drew Champlin dchamplin@ashrae.org

ASHRAE Fellows





Overview



- 1) What is the Grade of ASHRAE Fellow
- 2) Tips & Suggestion for How to Apply (H&A)
- 3) Contributions of College of Fellows
- 4) Additional Resources

Grade



A member who has "attained <u>distinction</u> and made <u>substantial contribution</u> in HVAC&R and the built environment".

- "Distinction" as seen by his/her peers in the industry as a person of interest.
- "Substantial contribution" one or more contributions to the industry which had a notable, unique and positive impact in the advancement of the arts and/or sciences of HVAC&R, the built environment and a sustainable world.

Tips & Suggestions for Application (H&A)



- List of 1-3 key projects/significant work/research, MAJOR notable, unique, positive impact
- MANDATORY 100 word or less description of the nominee's contributions having a substantial impact.
- This information gets reviewed thoroughly!

- Work in education and/or research.
- Engineering design/consulting/forensics work, including that of contractors, manufacturers and representatives.
- Invention/original work.
- Engineering executive on projects of unusual or important scope.
- Sharing knowledge, outreach such as mentoring, publications, oral presentations, involvement in industry activities.
- Activities leading to advancement of HVAC&R, built environment & sustainability.

Nomination Applications Dos & Don'ts



- H&A considers <u>state of the art of industry and</u> <u>locale at time of contribution</u> when determining if project is considered "notable".
- "Significant contribution" and "substantial impact" is not necessarily associated with a physical project or "invention or research".
- Professional references (min 2) familiar with nature of contribution (not necessarily nature of nominee).
- Nominee confirms applicants "positive impact on advancement of arts and/or sciences of HVAC&R, built environment and sustainable world" vs "pedigree" of references.

- Service to ASHRAE? Consider nominating member for DSA or ESA award instead.
- Quantity vs. Quality. Large amounts of "routine work" does not qualify a member for Fellow.
- Length of career. No requirement (But a minimum of 10 years at Full Member Grade in ASHRAE is required).
- Highly visible projects using routine technology vs. innovative & notable technology/design used.

Nomination Process



- Review ASHRAE Fellow Nomination Checklist to make sure all that is needed is included in the Fellow Nomination packet.
- Use most current version of Fellow Nomination form (check ASHRAE website).
- Nominator does NOT need to be a Fellow BUT, at least one letter of recommendation DOES need to be written by a current ASHRAE Fellow.
- Be concise in nomination write-up. H&A Personal Awards Subcommittee reviews all nominations, so be considerate of volunteer's time.
- H&A always provides a reason why a member was not accepted for Fellow Grade. A
 nomination can be resubmitted annually with no limit to the number of times.
 Reasons are confidential and not to be shared.
- Future nominations submitted must address any deficiencies noted in the H&A feedback provided.



Contributions of College of Fellows includes:

- Graduate student travel awards
- Mentorship of earlier career ASHRAE members
- Giving and Sponsoring Seminars
- Currently working to do more!

• All activities are self funded and managed by the College of Fellows

Additional Resources:



Website

https://www.ashrae.org/membership/honors-and-awards#fellow

Podcast Link

https://www.ashrae.org/news/ashraejournal/ashrae-journal-podcast-episode-42

- Local Chapter H&A
- Current ASHRAE Fellows
- COF Executive Committee

https://www.ashrae.org/communities/college-of-fellows







ROSTER UPDATE



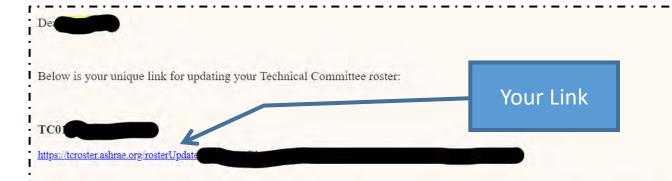


How to get access?



- Refer to email sent from ASHRAE to TC Chair alias and also actual email
- To request access, contact
 - Your Section Head or
 - Tara Thomas

tthomas@ashrae.org



You can update and save changes as often as you like; however, once the changes are submitted your updates are considered FINAL. All updates go into effect July 1st.

I Special notes for updating your roster:

You will notice that there is not a section to add new individuals. If someone has expressed interest in joining the committee, please direct them to the website at www.ashrae.org/joinate. By joining online, the individual is instantly placed on the committee and gives them immediate access to committee functions.

Additional Notes – If there are changes needed that is not allowed on the update form, please list those changes in the additional notes section.

If a member serves in multiple positions, you might see them listed duplicate times under the Membership List Section. Additional entrees are for the management team section only. No Changes (NC) is required to those entrees under the membership list.

You will not be able to submit your roster if any sections of the "Mandatory" section is left blank. If there is currently no one to put in that position, please assign it to the TC Chair.

I The completed workbook should be submitted by Monday, March 3rd. For your reference, the current 2024-2025 rosters can be accessed at www.ashrae.org/myactivecommittees.

Please feel free to contact me or your section head at shl@ashrae.net if there are any questions or concerns.

What to know?



- Term limits
 - Chair = 2 years with a 1 year extension through the approval of the Section Head;
 - Vice Chair = 2 years;
 - The Chair's term is not limited by the policy limiting normal Member and Member Non Quorum reappointments to four (4) consecutive terms.
- Chair and Vice Chair MUST BE ASHRAE members!
- The Chair should have served at least one one-year term as Vice Chair or Secretary.
- Corresponding Members can serve in all TC management positions except Chair.
- Refer to the FG Reference for more details

Roster Update Workbook – Key Elements



- 1. Management Team
 - Name Search will auto-populate (from current roster) once you begin to type
 - No position should be left blank
- 2. Additional Placements (non-mandatory positions)
- 3. Proposed Membership List and Status
- 4. Future Roster
- 5. New Members
 - Can sign up at anytime as a PCM
 - Must have ASHRAE number or contact info

Roster Update: Landing Page

1. Instructions

Shows instructions

2. Save

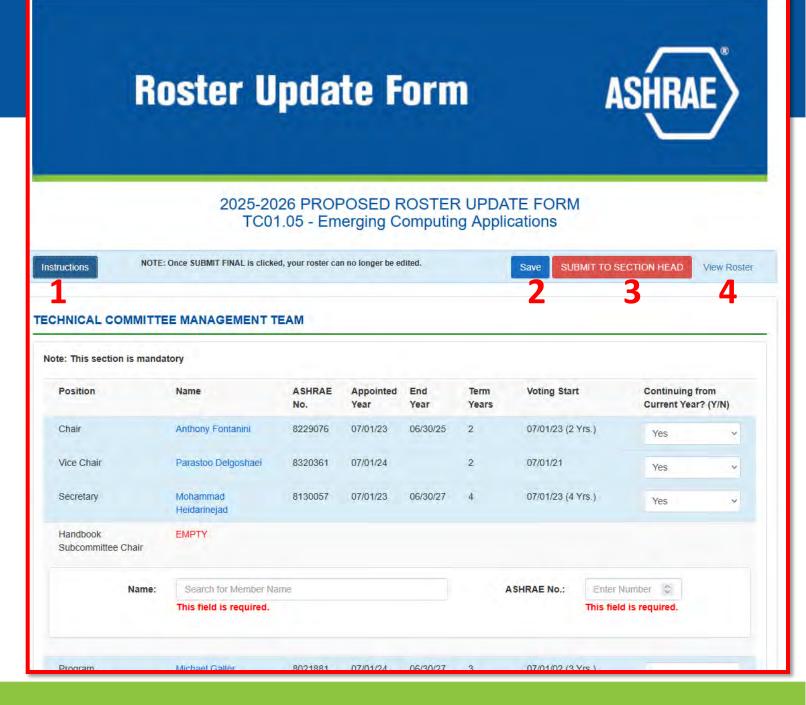
Click to save your updates from time to time

3. Submit

Submit to Section Head. Once submitted, cannot be changed

4. View Roster

Click to see proposed roster; download as CSV



Instructions



2025-2026 PROPOSED ROSTER UPDATE FORM TC01.05 - Emerging Computing Applications

Instructions

NOTE: Once SUBMIT FINAL is clicked, your roster can no longer be edited.

Save

SUBMIT TO SECTION HEAD

View Roster

TC/TG/TRG CHAIRS

TC Roster Update Form is designed to give you all the information needed to produce a desired draft roster for the upcoming Society year. Changes to your roster will go into effect on July 1st. Here's what you need to know:

Section 1: Technical Committee Management Team (Mandatory Positions)

This section will assist you with developing your committee management and subcommittee chair's section.

The TC Chair should have served at least one one-year term as Vice Chair or Secretary. The Chair of a TC/TG/TRG will be expected to serve two (2) consecutive one-year term. TAC may grant a one-year extension with the written request of the chair approved by the Section Head, but no more than three (3) consecutive terms as Chair. The Chair's term is not limited by the policy limiting normal Member and Non-Quorum Member reappointments to four (4) consecutive terms.

Vice Chair must be prepared to train and to serve as Chair following his/her term. A Chair's training breakfast is provided during the Winter and Annual meeting. The Chair and Vice Chair MUST BE ASHRAE MEMBERS! Corresponding Members can serve in all TC management positions except Chair.

- 1. The form is populated to list members in their current positions. If those members will continue to serve in their current position, select "yes". However, if you would like to appoint someone else to serve in a mandatory position, select "no". Once you have selected "no" you will be prompted to enter their replacement (name and ASHRAE number). The details will automatically populate as you enter the individual's name.
- 2. An individual is not required to be a voting member to serve on a subcommittee or mandatory position.
- 3. You will not be able to move forward with submitting the roster if a mandatory position is left blank or the membership information is incomplete.

Section 2: Additional Placement

This section allows you to list individuals in positions that are not mandatory. Common additional positions are Member Non-Quorum and ALI Coordinator. A maximum of 2 Non-Quorum (voting) members may be appointed each year. You may also list any special subcommittee chair in this section.

Section 3: Proposed Membership List and Status

This section should be used to revise voting and nonvoting statuses. Please determine which members of the committee should move voting status. A minimum of six (6) and a maximum of eighteen (18) voting members are allowed in a given Society year. This does not include Non-Quorum Members who are also eligible to vote.

Provisional Members act as Corresponding members, but only serve 2-year terms. Now is the time to review the list of Provisional Corresponding Members and decide if they should be added as voting, corresponding members or be deleted from your roster. If there are no changes, after 2 years, they will drop from the roster automatically.

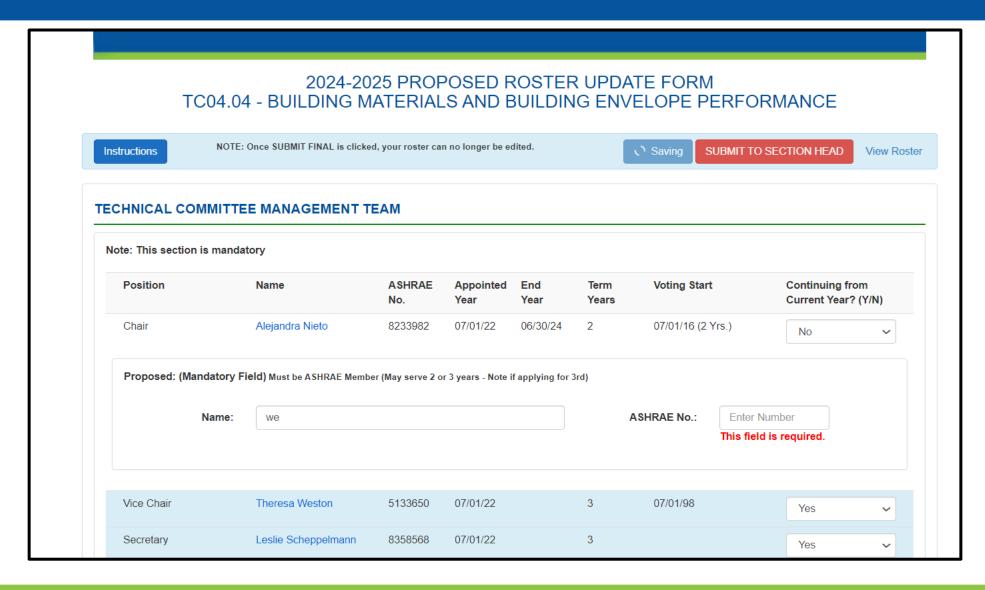
Save and Submit

You should save your form as you make updates. You can make as many changes to the form as needed, until you submit it. Once you have submitted the form, you can no longer make changes. Any changes after you have submitted the form will need to be discussed and submitted to your Section Head.

TECHNICAL COMMITTEE MANAGEMENT TEAM

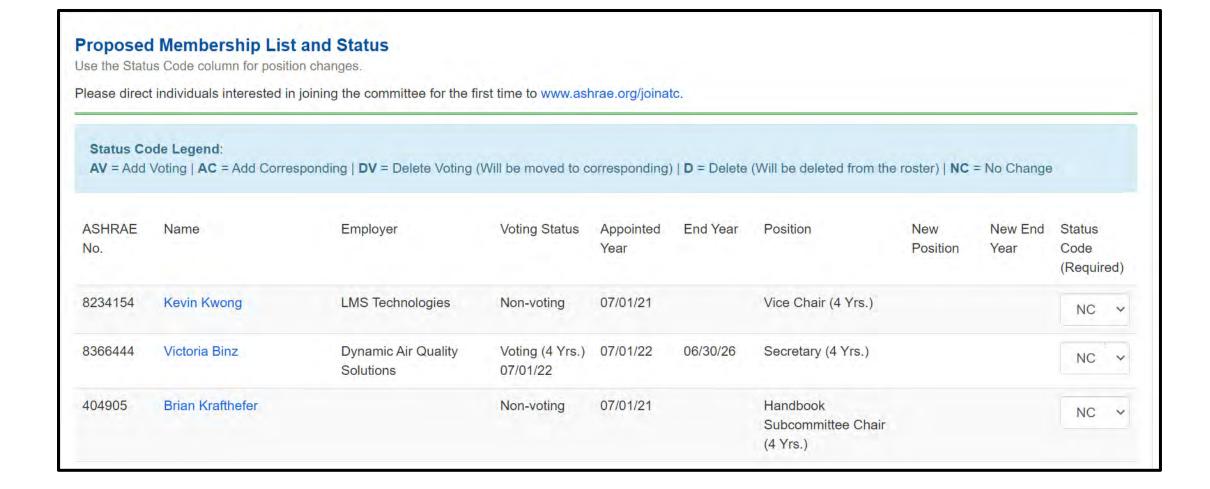
Management Team





Proposed Membership List & Status



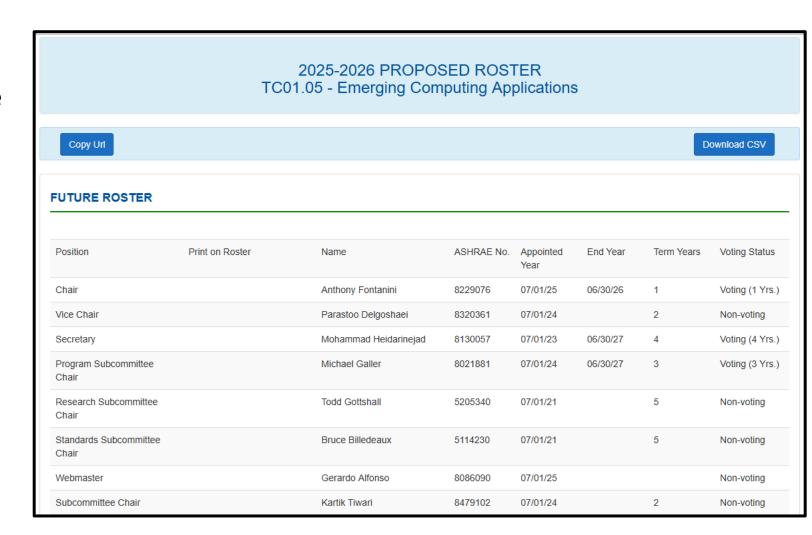


Proposed Roster



View by clickingView Roster

link on the top-left of the update page



MBO#	Description	Metric	Completion % /Date	Financial Assist Req'd?	MBO Comments
		(how do we determine success?)			
1	Promote balance in TCs by Section Heads reviewing FG rosters	10 Section Head Reports submitted that indicate review of rosters to help assure technical balance in new and continuing committees	50% by March 1st 2025 and 100% by Aug. 1st 2025	No	Ongoing as TAC activity as we are in 2024- 25. TAC working to develop guidance on 'interest categories' to help FG chairs in assuring balance on FG that would be aligned with Standards. (We want balance, but also do not want to burden membership either). UPDATE: TAC has identified initial list of categories and continues to discuss
2	Create new YEA mentorship program.	Recruit at least 1 new YEA member that would shadow each Section Head. Connect younger talent with the more experienced membership. Work through TAC YEA liasion to establish the correct format and structure.	50% by March 1st 2025 and 100% by Aug. 1st 2025	No	We are wanting to create more connections between ASHRAE leadership and our younger membership, and take opportunity for mentorship, professional development, as well as learn ASHRAE processes and procedures. UPDATE: TAC is working with YEA on their meeting mentor program and volunteering to participate
3	Empower sections for strategic engagement	Section level meetings (one for each section) held between each Conference (as needed)	50% by March 1st 2025 and 100% by Aug. 1st 2025	No	Chairs Breakfasts in Winter and Annual meetings feature sections breakout session for section-level strategy ideation and other issues. SHs are tasked to hold a section meeting - AS NEEDED, not mandatory if everything is going well in a section. UPDATE: TAC continues to have breakout sessions at TAC/FG Breakfast

4	Work on global collaboration through TCs	TAC VC attends all GTIC activities and reports to TAC	100% by Aug. 1st 2025	No	TAC VC is member of GTIC and is actively participating. TAC regularly updates membership and FG leadership on GTIC activities. TAC is connecting GTIC to TC expertise as requested UDPATE: GTIC again gave presentation at TAC/FG Breakfast and continues to connect FG members
5	Work on collaboration for CEBD projects	TAC Chair attends the SP sub- committee of Tech Council and reports back to TAC	100% by Aug. 1st 2025	No	TAC Chair is a member of the SP committee, which oversees CEBD activities. The TAC Chair can take actions as needed to connect society membership expertise with identified needs for CEBD projects. UPDATE: CEBD continues to develop 15 projects with TAC servicing as a liaise to connect CEBD with FG expertise.
6	Emphasize TC Chairs training for effective operations, using existing administrative resources and procedures and outreach to other standing committees	Every Chair's Breakfast program includes a training from a different standing committee	50% by March 1st 2025 and 100% by Aug. 1st 2025	No	UDPATE: TAC/FG Training Breakfast focused on various committee updates and roster updates for 25-26 SY.
7	Continue online rostering project	complete or incomplete (will never be fully complete)	100% by Aug. 1st 2025	Yes	TAC continues to collect feedback for continuous improvements. UPDATE: Instructions for 2025-26 roster update and training we rolled out in ORL. Deadline for roster updates to SH's is March 3

8	Train new TAC members	TAC Training Coordinator establishes Section Head mentoring process through an update to the TAC Reference Manual and as a reference for any TAC member to go to for help.	100% by Aug. 1st 2025	No	Active role on TAC is training coordinator for full-filling this responsibility
9	Update TAC informational tools, e.g. Functional Group Evaluation Workbook, TAC webpage	complete or incomplete	100% by Aug. 1st 2025	No	Active role on TAC is data coordinator for full-filling this responsibility
10	Maintain TAC Strategic Plan (using these MBOs as benchmarks) developed in 2023-2024 Society Year.	Post updated plan to TAC webpage	100% by Aug. 1st 2025	No	100% complete. TAC Strategic Plan approved in Indianapolis and reported to OPS.