



Board of Directors

Open Session

Sunday, February 9, 2025 | 1:30 – 5:30 PM CST (UTC-05:00) | Orlando I-II (Lower Level)

<https://ashrae.webex.com/ashrae/j.php?MTID=me7d6a6c84b0a24988167377a7e355ff0>

Meeting Number: 2340 529 0928 | **Meeting Password:** BODW1

1. CALL TO ORDER - Knight

2. ASHRAE VALUE STATEMENT – Knight

In ASHRAE meetings, we will act with honesty, fairness, courtesy, competence, inclusiveness and respect for others, which will 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: <https://www.ashrae.org/about/governance/code-of-ethics>)

(Core Values: <https://www.ashrae.org/about/ashrae-s-core-values>)

(Diversity Statement: <https://www.ashrae.org/about/diversity-equity-and-inclusion-dei>)

3. ROLL CALL/INTRODUCTIONS - Knight

4. REVIEW OF MEETING AGENDA – Knight

5. APPROVAL OF MINUTES – Knight

A.* November 6, 2024

B.* December 4, 2024

6.* REVIEW OF ACTION ITEMS - Knight

7. OPEN SESSION – Addresses to the Board of Directors

8.* PRESIDENTIAL RESOLUTIONS - Knight

9. NOMINATING COMMITTEE REPORT

10. TREASURER’S REPORT – Maston

A.* 2024-25 Financial Update

B.* Major Variations and Financial Statements – December 2024

C.* Finance Committee Report

11.* BOD DEI ADVISORY SUBCOMMITTEE REPORT – Hanson

12. COMMITTEE REPORTS

A. Executive Committee – Knight

i.* Saturday, February 8, 2025

B.* Planning Committee - Abellon

13. PRESIDENTIAL AD HOC COMMITTEE REPORTS

A.* ASHRAE Headquarters Ad Hoc – Knight (Darryl Boyce)

B.* Membership Model Ad Hoc – Fulk

14. EXECUTIVE SESSION (Separate Agenda)

15.* APPOINTMENTS UPDATE (SINCE JUNE 2024) – Knight

16. INFORMATION ITEMS – Knight

A.* Report of the President

17. OLD BUSINESS

A.

18. NEW BUSINESS

A.

19. UPCOMING MEETINGS

Wednesday, February 12, 2025 | 2:00 – 6:00 PM ET (UTC-05:00)

Spring Conference Call

Wednesday, April 2, 2025 | 9:00 AM – 12:00 PM ET (UTC-05:00)

May Conference Call

Wednesday, May 28 | 9:00 – 11:00 AM ET (UTC-05:00)

20. ADJOURNMENT



MINUTES

BOARD OF DIRECTORS MEETING

Wednesday, November 6, 2024

Note: These draft minutes have not been approved and are not the official record until approved by the Board of Directors.

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Wednesday, November 6, 2024

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PRINCIPAL APPROVED MOTIONS

Board of Directors Meeting
Wednesday, November 6, 2024

No. - Pg.	Motion
1 - 2	The minutes from the June 23, 2024 and June 26, 2024 Board of Directors meetings be approved.
4 – 4	Members Council recommends to the Board of Directors the regional borders be adjusted so that the countries of Afghanistan, Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan, and Uzbekistan be changed from within Region XIV and Region XV to Region-at-Large, effective immediately.
5 – 4	<p>Technology Council recommends to the Board of Directors that the Rules of the Board 1.300, Position Documents and Public Policy Issue Briefs be revised as follows:</p> <p>1.300 POSITION DOCUMENTS AND PUBLIC POLICY ISSUE BRIEFS</p> <p>1.300.001 Definitions</p> <p>1.300.001.1 An ASHRAE Position Document is a BOD-approved document expressing the views of the Society on a current issue of importance to ASHRAE and its members. It includes a concise summary statement as well as supporting documentation, analysis and/or rationale, and recommendations.</p> <p>1.300.001.2 An ASHRAE Public Policy Issue Brief (PIIB) is a one-page brief on current relevant legislative/regulatory issues that are of interest to ASHRAE. (07-01-31-23B)</p> <p>1.300.002 Initiation: Any ASHRAE officer, member, committee or council, or any responsible outside entity may suggest issues for which an ASHRAE Position Document or Public Policy Issue Brief should be developed or may suggest whether existing ASHRAE documents should be revised, withdrawn, or rescinded.</p> <p>a. <u>Requests for new</u> Position Document requests should be sent to the Technology Council chair for consideration. <u>Technology Council recommends initiation of new position to the Board of Directors Executive Committee for approval.</u> Position Documents are produced using the procedures and forms located in the Technology Council MOP. (22-02-02-15)</p> <p>b. Public Policy Issue Brief requests are sent to Government Affairs Committee for consideration. Government Affairs Committee shall make recommendations to create a new PIIB; re-affirm, amend, or expire and remove existing PIIBs. PIIB's are developed by the Government Affairs Committee.. (22-02-02-15)</p> <p>1.300.003 Approval</p> <p><u>1.300.003.1 Revision of Existing Position Documents.</u></p> <p><u>A. Technology Council approves requests for initiation of revision of existing position documents when there is no proposed changes to the title, purpose and scope (TPS).</u></p> <p><u>B. Technology recommends revisions to position document title, purpose and scope changes to the Board of Directors Executive Committee for approval.</u></p> <p>1.300.003.1 Technology Council recommends publication of Position Documents including changes, to the Board of Directors for approval. Position Documents will be</p>

	<p>distributed to document review subcommittee (DRSC), Technology Council and the Board of Directors for a review at least 30 days prior <u>to being considered for approval. PDs should be reviewed for technical content, to assure procedures have been followed, and to assure the document stays within the approved TPS.</u></p> <p>1.300.003.2 Technology Council approves re-affirmation or withdrawal of Position Documents and reports to the Board of Directors for information.</p> <p>1.300.003 The Board of Directors acts on Technology Council recommendations for publication of Position Documents) (14-07-02- 29)</p> <p>1.300.003.4 GAC shall send newly developed, revised or reaffirmed PPIBs for review by Technology Council or its designee. After review by Technology Council or its designee, comments shall be sent to the GAC, and the GAC shall communicate to Technology Council how it has addressed comments received. GAC shall submit each revision reaffirmation or withdrawal of existing PPIBs as an information item to ExCom. The GAC shall submit any new PPIBs to ExCom for approval along with background information describing how it addressed comments received from Technology Council or its designee. (22-02-02-15)</p> <p>1.300.004 Archiving (12-06-27-19/12-10-26-11/22-02-02-15)</p> <p>1.300.04.1 Position Documents</p> <ul style="list-style-type: none"> A. The Technology Department shall maintain information concerning the history of development and approval of Position Documents. B. Position Documents are reviewed every 30 months and are automatically withdrawn if not reaffirmed or revised within 36 months of issue. Each version of a Position Document will contain the expiration date on the cover. (22-02-02-15) C. Current Position Documents will be posted on the ASHRAE website for free download. D. Technology Council shall maintain the current list of Position Documents on the ASHRAE website. <p>1.300.004.2 Public Policy Issue Briefs (17-06-28-11/22-02-02-15)</p> <ul style="list-style-type: none"> A. Government Affairs Committee shall manage the current list of Public Policy Issue Briefs by evaluating each at least on an annual basis and formally decide to re-affirm, amend, or let expire and remove, each brief, subject to the approval of the Executive Committee of the ASHRAE Board of Directors. B. The Government Affairs Committee shall be responsible for archiving, publication and distribution of Public Policy Issue Briefs. GAC shall maintain and annually review each PPIB and determine whether to update or rescind it. PPIBs will include the date of creation or update. (23-02-08-02/22-02-02-15)
6 – 6	Technology Council recommends that the Board of Directors approve a revision to the <i>Energy Efficiency in Buildings</i> position document (PD) as shown in ATTACHMENT D.

ACTION ITEMS

Board of Directors Meeting
Wednesday, November 6, 2024

No. - Pg.	Responsibility	Summary of Action	Status	Goal Date
1 – 2	Scoggins	Work with AASA to review and provide recommendations on external actionable items from the Global HVAC Summit. (Assigned February 5, 2023)	Ongoing	



MINUTES

BOARD OF DIRECTORS MEETING

Wednesday, November 6, 2024

MEMBERS PRESENT:

Dennis Knight, President
Bill McQuade, President-Elect
Sarah Maston, Treasurer
Devin Abellon, Vice President
Wade Conlan, Vice President
Ken Fulk, Vice President
Chandra Sekhar, Vice President
Jeff Littleton, Secretary
Charles Bertuch, Region I DRC
Genevieve Lussier, Region II DRC
Sherry Abbott-Adkins, Region III DRC
Bryan Holcomb, Region IV DRC
Jim Arnold, Region V DRC
Susanna Hanson, Region VI DRC
Scott Peach, Region VII DRC
Joe Sanders, Region VIII DRC

Jonathan Smith, Region IX DRC
Buzz Wright, Region X DRC
Rob Craddock, Region XI DRC
John Constantinide, Region XII DRC
Cheng Wee Leong, Region XIII DRC
Mahroo Eftekhari, Region XIV DRC
Richie Mittal, Region XV DRC
Bassel Anbari, RAL DRC
Carrie Brown, DAL
Doug Cochrane, DAL
Blake Ellis, DAL
Luke Leung, DAL
Patrick Marks, DAL
Corey Metzger, DAL
Wei Sun, DAL
David Yashar, DAL

GUESTS PRESENT:

Andres Sepulveda
Ashish Rakheja
Trent Hunt

Dunstan Macauley
Julia Riordan
Megan Cruz
Leigh Lain Walker

STAFF PRESENT:

Candace Denton, Sr. Manager - Board Services
Chandrias Jolly, Manager - Board Services
Vanita Gupta, Director – Marketing
Lizzy Seymour – Director – Member Services
Mark Owen, Director - Publications & Education
Kirstin Pilot, Director - Development
Stephanie Reiniche, Director - Technology
Alice Yates, Director - Government Affairs
Craig Wright, Director of Finance

Tammy Catchings, Mgr. – Region Activities
Steve Hammerling, Sr. Mgr. – Research & Technical Services
Rhiannon Masterson, Mgr. – Chapter Programs
Ragan McHan, Mgr. – Conference Services
Tanisha Meyers-Lisle, AMOS - Administration
Ryan Shanley, Sr. Mgr. - Standards
Tony Giometti, Group Mgr. – Conf. Programs

CALL TO ORDER

The meeting was called to order at 8:02 am.

VALUE STATEMENT

Mr. Knight read the value statement and advised that the full code of ethics, core values and diversity statements were available online.

ROLL CALL/INTRODUCTIONS

Roll call was conducted; members introduced themselves. Guests were welcomed and thanked for their attendance. Members, guests, and staff were in attendance as noted above.

REVIEW OF MEETING AGENDA

Mr. Knight reviewed the meeting agenda. There were no changes or additions.

REVIEW OF ACTION ITEMS

Action item 1 was reported as ongoing. All other action items were reported as complete.

AI - 1

Mr. Leung and Mr. Rakheja reported on action item 2. It was reported that GAC may be starting a program in Africa. Additionally, GTIC is working to create 'global champions' who would be regional conduits for information exchange.

ATTACHMENT A was shown on screen and identifies organizations (in bold) that are recommended for Society to enter into an MOU with.

Mr. Leung and Mr. Rakheja were thanked for their work. They were asked to provide additional feedback on how the proposed relationships might work. The recommendations will be presented at an upcoming ExCom meeting.

APPROVAL OF MINUTES

Mr. Peach moved and Mr. Craddock seconded that

1. The minutes from the June 23, 2024 and June 26, 2024 Board of Directors meetings be approved.

Mr. Wright (Buzz) asked for an editorial change on page 19, his comments regarding motion 12:

Mr. Wright (Buzz) reported that 80-90% of the current system relies on the honor system already; and that Regional Leadership workload likely results in over crediting or no points being entered.

MOTION 1 PASSED (Unanimous Vote, CNV).

2025-28 STRATEGIC PLAN REVIEW AND APPROVAL

Mr. Abellon stated that the Planning Committee and Strategic Plan Development Subcommittee were excited to present the draft 2025-28 S for the BOD's approval.

Julia Riordan and Megan Cruz from McKinley Advisors reviewed the work and development of the draft plan. They reviewed the objectives, stakeholders, and engagement plans.

BOD members provided feedback and comments. Comments submitted via the chat are included in ATTACHMENT B.

Mr. Abellon moved and Mr. Smith seconded that

2. The Planning Committee recommends that the Board of Directors approve the goals, objectives, and initiatives, as proposed for the 2025-28 ASHRAE Strategic Plan as presented in ATTACHMENT C, with the addition of IEQ and removal of the word *cause* as part of Goal #1 and editorial changes/review regarding the professional journey in Goal #2, AI as a key enabler, the importance of IEQ and the use of the terms *decarbonization* and *climate change*.

Mr. Abellon reported that the full background was included in the presentation, attached to the agenda.

After some discussion it was suggested that the motion be postponed and that a “clean” document be presented to the BOD in December.

Mr. Craddock moved and Mr. Cochrane seconded that

3. MOTION 2 be postponed until the December 4, 2024, BOD meeting.

It was suggested that it might be more productive to defeat the original motion with the understanding that a revised recommendation will be made to the BOD in December.

MOTION 3 WITHDRAWN (without objection).

MOTION 2 WITHDRAWN (without objection).

Mr. Abellon asked that BOD members provide any additional comments or feedback on the draft plan as soon as possible.

Mr. McQuade stated that the BOD should be giving guidance on the direction of the plan. Final wording of all the plan documents won't happen until the spring but initiatives, goals, and objectives need to be approved so the PLC can continue their work. He suggested that the motion presented in December should be stated in such a way that Marketing has the ability to make editorial changes. He stated that the BOD should not get into the minutia of the plan.

The BOD was encouraged to review the plan before the December meeting for the best use of the BOD's time.

Mr. Knight reminded the BOD that this is an important decision for the Society.

Representatives from McKinley Advisors left the meeting.

EXCOM REPORT TO THE BOD

Mr. Knight reported that there were no recommendations for the BOD's consideration. He reviewed information items presented in the report. The full report was attached to the agenda.

He advised that the EHC trends report was attached for the BOD's information and review.

Mr. Knight was asked to provide clarification on the information item regarding the possible development of technician training. He stated that the training would be for any non-engineer working in the HVAC&R industry.

COUNCIL REPORTS TO THE BOD

MEMBERS COUNCIL

Mr. McQuade reported on behalf of the council. The full report was attached to the agenda. He expressed his gratitude for the great members serving on the council. He reported that the council was on track to complete all MBOs.

Mr. McQuade moved that

4. Members Council recommends to the Board of Directors the regional borders be adjusted so that the countries of Afghanistan, Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan, and Uzbekistan be changed from within Region XIV and Region XV to Region-at-Large, effective immediately.

Mr. McQuade provided background on the motion. On September 9, 2024, the DRCs from Region XIV, Region XV and the Region-at-Large submitted a joint letter requesting the adjustment of regional boundaries to move nine countries from Region XIV and one country from Region XV to the Region-at-Large. The letter states that these countries will be better served by the Region-at-Large due to their geographic proximity and their shared demographics. The letter also states that RAL is well-positioned to drive membership in these countries. All three DRCs signed the letter.

MOTION 4 PASSED (Unanimous Vote, CNV).

Mr. McQuade reviewed information items from the report.

He reported that a motion to convert ribbons, banners, and certificates into digital format was defeated. The elimination of these hard copy recognition items was assumed when the council budget was finalized. The council should be able to absorb this expense but he wanted to bring it to the BOD's attention.

Mr. Knight thanked Mr. McQuade and the council for their report and great work.

PUBLISHING AND EDUCATION COUNCIL

Mr. Sekhar reported on behalf of the council. The full report was attached to the agenda.

He reported that there were no recommendations for the BOD's consideration. He reviewed information items from the report.

TECHNOLOGY COUNCIL

Mr. Conlan reported on behalf of the council. The full report was attached to the agenda.

Mr. Conlan moved that

5. Technology Council recommends to the Board of Directors that the Rules of the Board 1.300, Position Documents and Public Policy Issue Briefs be revised as follows:

1.300 POSITION DOCUMENTS AND PUBLIC POLICY ISSUE BRIEFS

1.300.001 Definitions

1.300.001.1 An ASHRAE Position Document is a BOD-approved document expressing the views of the Society on a current issue of importance to ASHRAE and its members. It includes a concise summary statement as well as supporting documentation, analysis and/or rationale, and recommendations.

1.300.001.2 An ASHRAE Public Policy Issue Brief (PPIB) is a one-page brief on current relevant legislative/regulatory issues that are of interest to ASHRAE. (07-01-31-23B)

1.300.002 Initiation: Any ASHRAE officer, member, committee or council, or any responsible outside entity may suggest issues for which an ASHRAE Position Document or Public Policy Issue Brief should be developed or may suggest whether existing ASHRAE documents should be revised, withdrawn, or rescinded.

a. Requests for new Position Document ~~requests~~ should be sent to the Technology Council chair for consideration. Technology Council recommends initiation of new position to the Board of Directors Executive Committee for approval. Position Documents are produced using the procedures and forms located in the Technology Council MOP. (22-02-02-15)

b. Public Policy Issue Brief requests are sent to Government Affairs Committee for consideration. Government Affairs Committee shall make recommendations to create a new PPIB; re-affirm, amend, or expire and remove existing PPIBs. PPIB's are developed by the Government Affairs Committee.. (22-02-02-15)

1.3000.003 Approval

1.300.003.1 Revision of Existing Position Documents.

A. Technology Council approves requests for initiation of revision of existing position documents when there is no proposed changes to the title, purpose and scope (TPS).

B. Technology recommends revisions to position document title, purpose and scope changes to the Board of Directors Executive Committee for approval.

1.300.003.1 Technology Council recommends publication of Position Documents including changes, to the Board of Directors for approval. Position Documents will be distributed to document review subcommittee (DRSC), Technology Council and the Board of Directors for a review at least 30 days prior to being considered for approval. PDs should be reviewed for technical content, to assure procedures have been followed, and to assure the document stays within the approved TPS.

1.300.003.2 Technology Council approves re-affirmation or withdrawal of Position Documents and reports to the Board of Directors for information.

1.300.003.3 The Board of Directors acts on Technology Council recommendations for publication of Position Documents) (14-07-02- 29)

1.300.003.4 GAC shall send newly developed, revised or reaffirmed PPIBs for review by Technology Council or its designee. After review by Technology Council or its designee, comments shall be sent to the GAC, and the GAC shall communicate to Technology Council how it has addressed comments received. GAC shall submit each revision reaffirmation or withdrawal of existing PPIBs as an information item to ExCom. The GAC shall submit any new PPIBs to ExCom for approval along with background information describing how it addressed comments received from Technology Council or its designee. (22-02-02-15)

1.300.004 Archiving (12-06-27-19/12-10-26-11/22-02-02-15)

1.300.04.1

Position Documents

- A. The Technology Department shall maintain information concerning the history of development and approval of Position Documents.
- B. Position Documents are reviewed every 30 months and are automatically withdrawn if not reaffirmed or revised within 36 months of issue. Each version of a Position Document will contain the expiration date on the cover. (22-02-02-15)
- C. Current Position Documents will be posted on the ASHRAE website for free download.
- D. Technology Council shall maintain the current list of Position Documents on the ASHRAE website.

1.300.004.2 Public Policy Issue Briefs (17-06-28-11/22-02-02-15)

- A. Government Affairs Committee shall manage the current list of Public Policy Issue Briefs by evaluating each at least on an annual basis and formally decide to re-affirm, amend, or let expire and remove, each brief, subject to the approval of the Executive Committee of the ASHRAE Board of Directors.
- B. The Government Affairs Committee shall be responsible for archiving, publication and distribution of Public Policy Issue Briefs. GAC shall maintain and annually review each PPIB and determine whether to update or rescind it. PPIBs will include the date of creation or update. (23-02-08-02/22-02-02-15)

Mr. Conlan reviewed the proposed changes, shown in red. He reported that the proposed edits would allow Tech Council to approve a TPS if it isn't changing; if there are changes, the recommendation would come before the BOD.

MOTION 5 PASSED (Unanimous Vote, CNV).

Mr. Conlan moved that

- 6. Technology Council recommends that the Board of Directors approve a revision to the *Energy Efficiency in Buildings* position document (PD) as shown in ATTACHMENT D.

MOTION 6 PASSED (30:0:1 CNV). Mr. Constantinide abstained.

Mr. Conlan reviewed information items from the report.

FINANCE COMMITTEE REPORT

Ms. Maston reported on behalf of the committee. The full report was shown on screen and attached to the agenda.

She reported that Finance is looking for outside of the box ways to collect dues as the current model of annual dues increases does not seem to support global growth. The Finance Committee plans to have further discussions and will bring a recommendation regarding dues to the BOD at the December meeting.

It was reported that Chapter Treasurers had expressed concern over current available training. The Finance Committee will develop baseline financial training for chapter volunteers.

Mr. McQuade reported that Chapter Treasurer training is a co-MBO with Members Council; and Members Council is willing and able to help with Finance's efforts.

It was asked if Chapter Treasurer training could be developed in time for 2025 spring CRCs. Ms. Maston advised that the request would be taken back to Finance.

Ms. Hanson reported that there was an existing Treasurer training PPT currently being used. She suggested that Finance Committee may want to review it as they work to develop new training.

DEI SUBCOMMITTEE REPORT

Ms. Hanson reported on behalf of the subcommittee. The full report was attached to the agenda and shown on screen.

She reported that the subcommittee restructured into four different ad hocs. The biggest objective of the subcommittee this year is to develop a cohesive method and call to action with regional chairs and within ASHRAE as a whole.

The DEI Subcommittee will be organizing one cultural event this Society Year. The event will be at the Annual Conference and will represent Hispanic heritage.

She reported that the DEI Subcommittee already created resources, but they weren't necessarily conducive to discussions. The subcommittee wants to work with existing resources to repurpose them as well as identify gaps.

Ms. Hanson moved that

7. The Board DEI Advisory Subcommittee recommends to the ASHRAE Board of Directors that the Board DEI Advisory Subcommittee rebrand with the new title, the Board of Directors IMPACT (Inclusivity for Maximizing Positive Action and Change, Together) Subcommittee.

Ms. Hanson reported that the proposed change identifies where Society has already defined a mission while also recognizing that other issues like accessibility have not been addressed. She reported that the subcommittee believes the change will boost the group's mission statement. The proposed change also hopes to eliminate some headwind for this group while inspiring and energizing those signing up to do this work at the chapter level.

She reported that chapter level volunteers would be called IMPACT Chairs.

There was extensive discussion of the motion. A summary of that discussion is below:

Spoke against the motion. Believe that DEI is well known by many, and IMPACT is not. The proposed change makes the purpose of the subcommittee less clear. If approved, it may be perceived that Society eliminated the DEI Subcommittee.

Don't like the idea of changing the subcommittee's name because of political pressure. Would rather have a clear role for a position that may not be filled as opposed to an unclear definition for a filled role.

The charge can be adjusted as needed but the current name is more clear.

Voted in favor of the motion at the subcommittee but speaking against the proposed motion. Have been involved in ASHRAE DEI initiatives for about 10 years. The term DEI has been politicized in the US and am concerned with the optics of approving this change.

Ms. Hanson advised that the subcommittee wanted to submit the proposed change to ExCom prior to the election so the recommendation would not be seen as a response to the election.

She suggested that IMPACT could be presented as a new program, a reboot. The DEI Subcommittee deliberated on this matter for quite some time.

Spoke against the motion. Given the timing, the optics could be disastrous.

Like the action and acronym and understand the subcommittee's desire. Suggest that it could be presented as the 'DEI Subcommittee presents IMPACT.'

MOTION 7 FAILED (0:27:2, CNV). Ms. Hanson and Mr. Smith abstained.

MEMBERSHIP MODEL AD HOC REPORT

Mr. Fulk reported on behalf of the ad hoc. The full report was shown on screen and attached to the agenda.

Mr. Fulk thanked members of the ad hoc for their good work and engagement. He also thanked staff for their great support, specifically Ms. Seymour and Mr. Gurley who had done the heavy lifting to this point.

He encouraged BOD members to review the information presented and provide comments so they can be addressed prior to Orlando. The goal is to have a final recommendation to the BOD in Orlando.

He reported that the ad hoc met with the Life Members Club leadership and they were in favor of the proposal as it relates to Life Members.

Mr. Fulk reviewed the current membership model and presented the proposed *simplified membership model*.

BOD members were asked to send comments to Mr. Fulk via email. Comments submitted in the chat would be shared with Mr. Fulk and the ad hoc.

Mr. Knight thanked Mr. Fulk and the ad hoc for the report and good work.

ASHRAE BRANDING

Ms. Gupta provided background on Society's change to its DBA in 2012.

She reported that there was consensus from staff not to rebrand to *ASHRAE International*. She reviewed the proposed recommendations and staff's responses. The full report was attached to the agenda.

She reported that there was consensus that ASHRAE is already known as a global and international society.

Mr. Owen added that spelling out the ASHRAE acronym isn't done anymore, so it wouldn't serve any great purpose to change what the acronym stands for.

The floor was opened for discussion. A summary of that discussion is below:

In favor of staff's recommendation. Like the addition of 'global' to the tag line and feel that it accomplishes all the desired changes.

Agree with staff's assessment.

Need to confirm if a motion is needed. If not, Marketing should be empowered to move forward.

Staff confirmed that the tag line is not in the ROB.

Mr. Knight stated that there was consensus from the BOD on the proposed change to the tagline. He advised that the Marketing Department was empowered to make the necessary updates.

Ms. Gupta reported that the Marketing team would have the tag line updated everywhere forward facing by January 1, 2025.

Mr. Knight thanked Ms. Gupta and Mr. Owen for their good work.

EXECUTIVE SESSION

Executive session was called at 10:45 am.

Open session reconvened at 11:00 am.

UPCOMING MEETINGS

Mr. Knight reviewed the BOD's upcoming meetings.

ADJOURNMENT

The meeting adjourned without objection at 11:00 am.

Jeff Littleton

Jeff H. Littleton, Secretary

ATTACHMENTS:

- A. Recommendations for Collaboration in the Global South
- B. WebEx Chat Log
- C. Draft 2025-28 Strategic Plan Presentation
- D. Proposed PD Edits

Investigate Organizations in the Global South that ASHRAE should Proactively Enter into MOUs with

What is GLocal South?

[Global South](#) broadly comprises Africa, [Latin America and the Caribbean](#), Asia (excluding [Israel](#), [Japan](#), and [South Korea](#)), and [Oceania](#) (excluding [Australia](#) and [New Zealand](#)). The Global South is home to over 6 billion people. (See Figure 1)

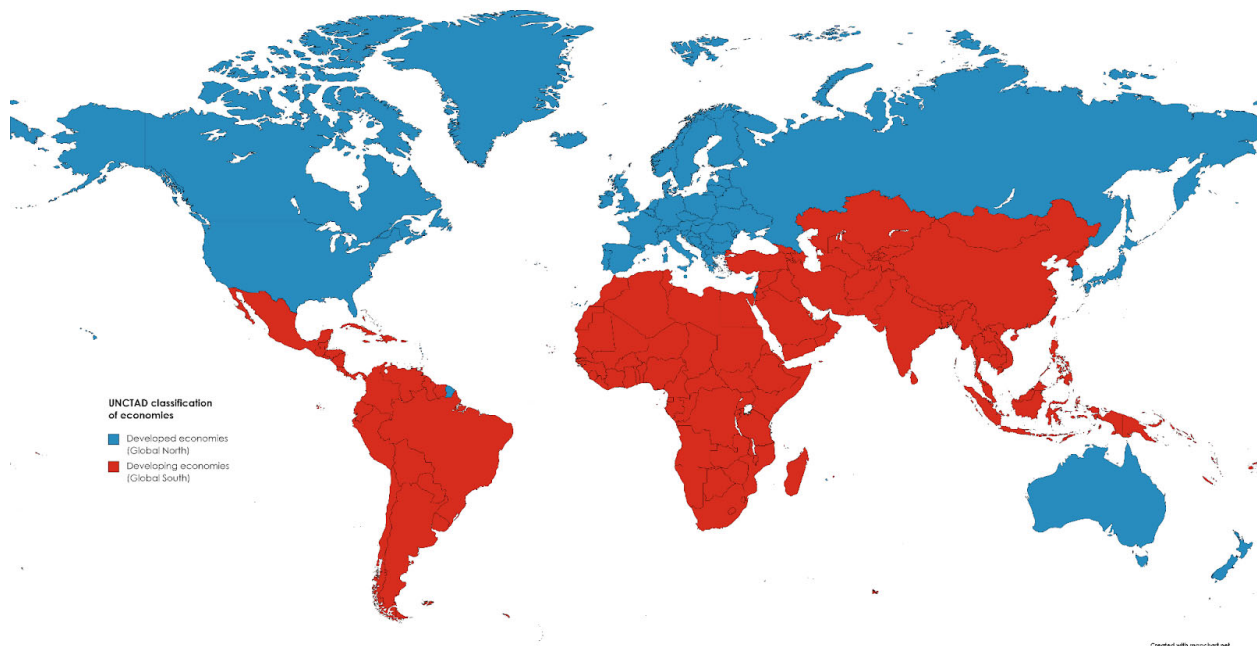


Figure 1. Global South Countries

In terms of global future building floor area additions to 2060 (see Figure 2), while the global north is still seeing steady growth, it will be relatively slower by 2030 compared to global south. The global south is anticipated to see accelerated growth to 2040, and some countries, especially the ones in Africa and India, are anticipated to see significant growth from 2040 to 2060.

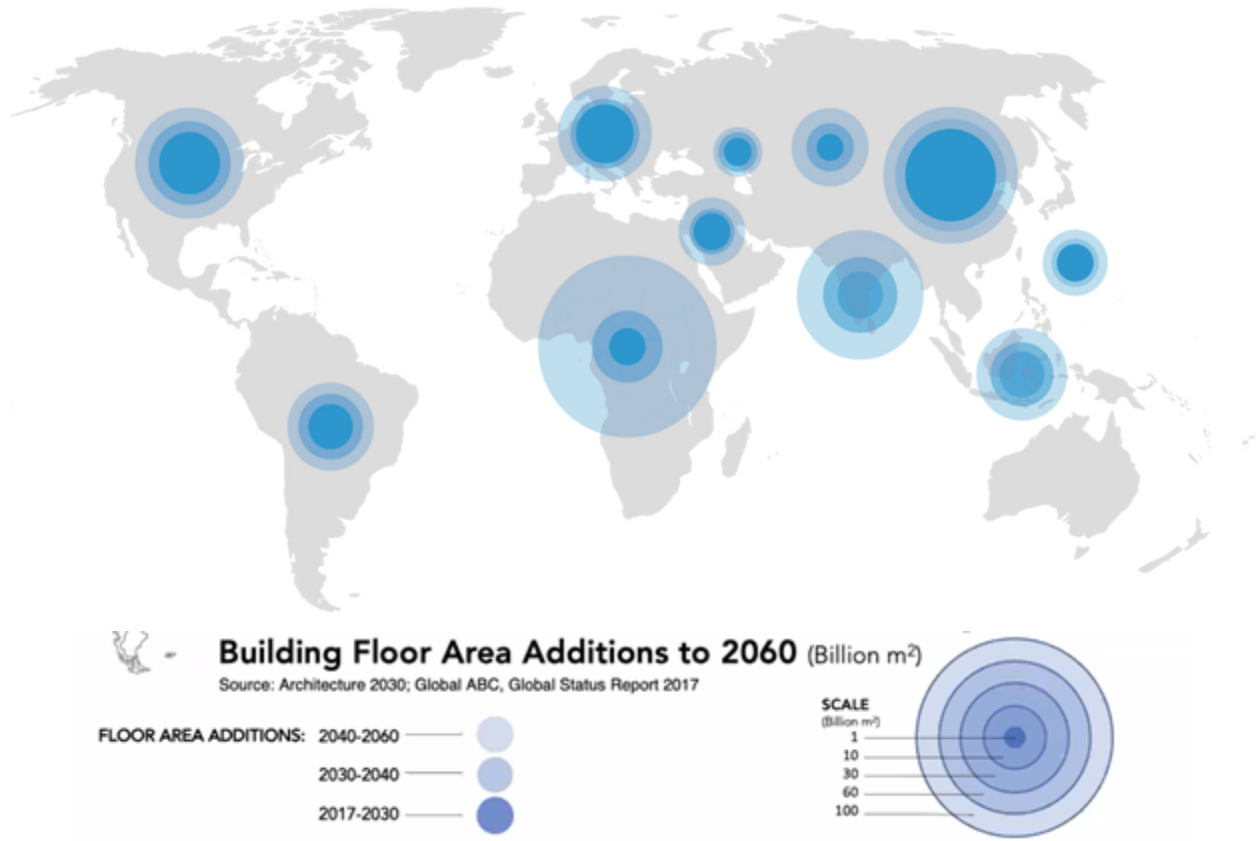


Figure 2. Global South Growth
 Credit: [Architecture 2030](#)

In terms of air conditioning, especially units stock, there will be significant global growth by 2050, almost 2.5 times compared to 2024 because of the building floor area additions, climate change, and also shifting of the focus from heating, in the global north. to cooling in the global south. China and India are the obvious growth targets, Indonesia, Mexico, Brazil, Middle East, and Africa will be also seeing significant growth (see Figure 3).

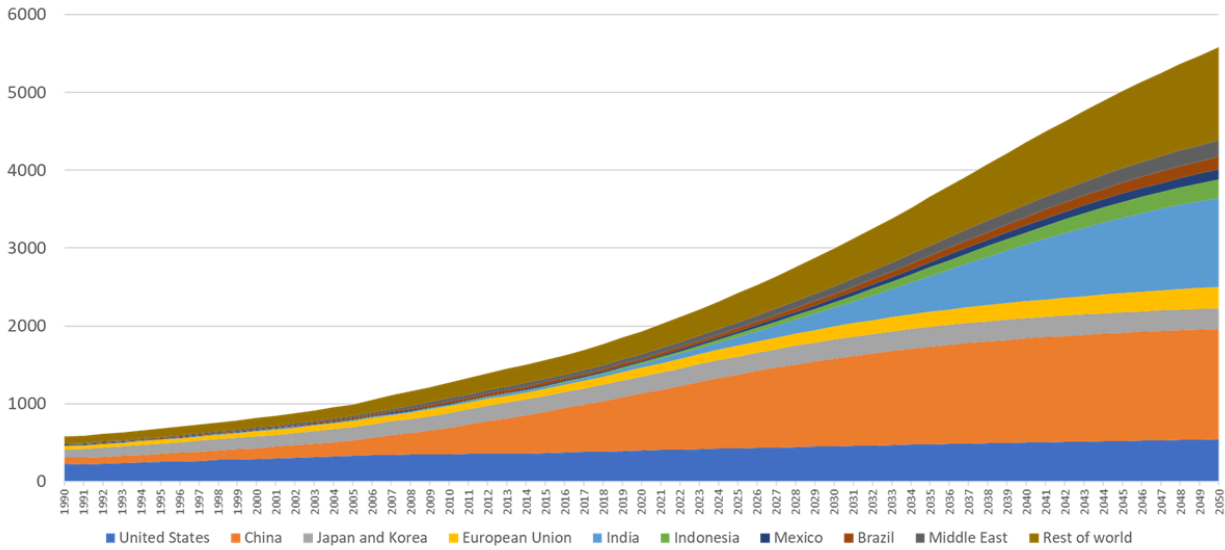


Figure 3. Global Growth in Air Conditioning Stock

Credit: IEA

Based on the above information regarding HVAC growth stock and population (see Fig, the following countries are identified as good opportunities to develop MOUs within 2024-2025:

- India
- China
- Taiwan
- Indonesia
- Pakistan
- Nigeria
- Brazil
- Mexico

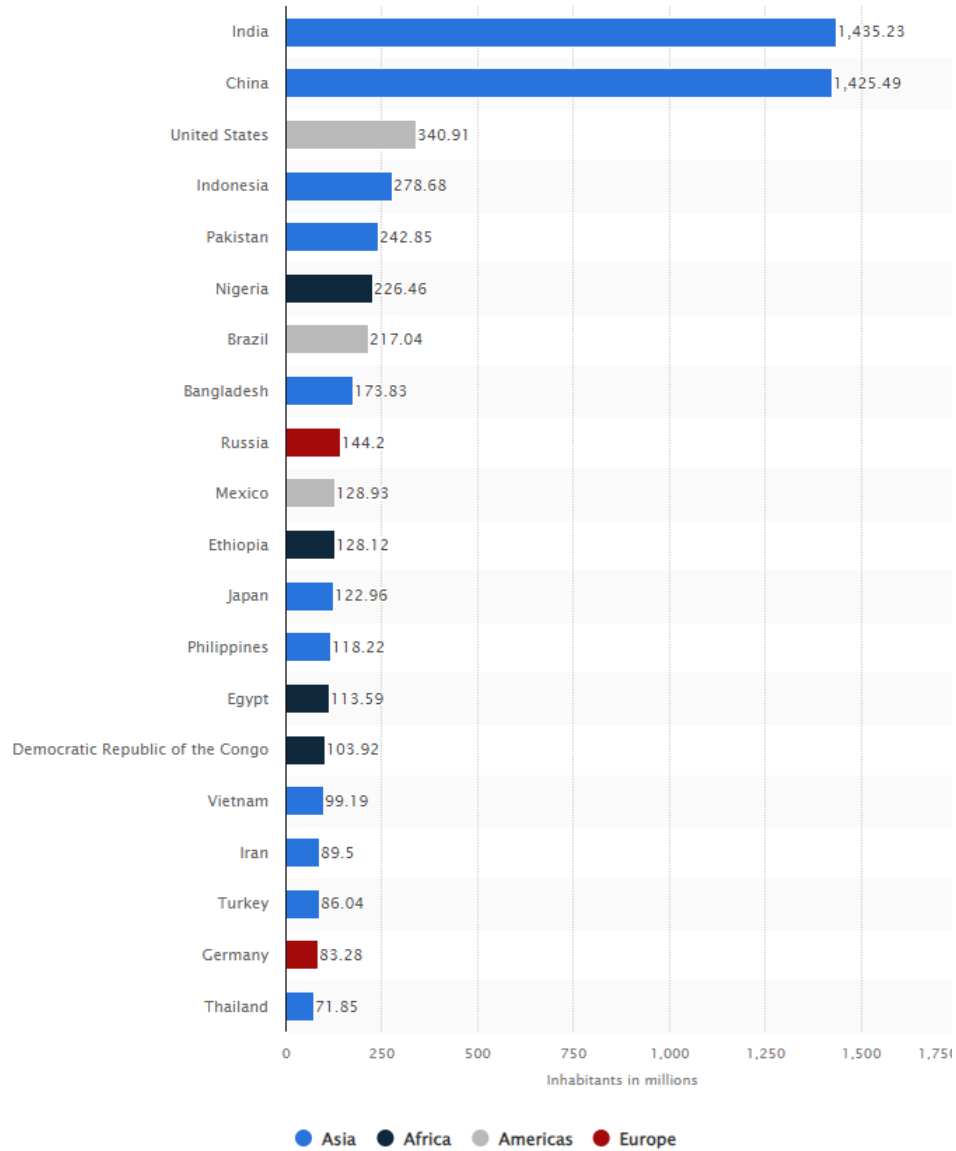


Figure 4. Top 20 Countries with the Most Population in 2024

Credit: Statista

***Organizations with Bolded text are preferred organizations for consideration in the next round.**

List of Potential Technical/Govt Organization in Developing Economies for MoU with ASHRAE					
NO.	*ORGANIZATION NAME	EMAIL ADDRESS	LOCATION	CONTACT	CLASSIFICATION

A AFRICA					
1	Environmental Protection Agency	cmo@epa.gov.gh	Ministries, Accra	0501301535/ 0501301518	Regulatory / certification
2	Ghana Institution of Engineers	cmo@epa.gov.gh	Ministries, Accra	0501301535/ 0501301518	Regulatory / certification
3	Public Utilities Regulatory Commission	info@purc.com.gh	Liberation Road, Accra	0302240046	Regulatory/Energy
4	Energy Commission	info@energycom.gov.gh	Ghana Airways Ave., Accra	0302813756	Regulatory/Energy
5	Ghana Standards Board Authority	gsanep@gsa.gov.gh	Gulf.St., Accra	0302500066	Regulatory/certification
6	Ghana Institute of Architects	secretariat@ghie.org.gh	Roman Ridge, Accra	0302760867	Professional Body
7	EDGE Ghana	admin@gia.com.gh	Accra	0303966841	Professional Body
8	Green Building Council	kofosu@worldbank.org.com	Accra	0302214142	EDGE certification (IFC)
9	KNUST	info@ghgbc.org	Spintex Road	0302817092	Best practices
10	Accra Technical University	fkemausuor.soec@knust.edu.gh	Kumasi	0500099299	Educational Institution
11	Ashesi University	vc@atu.edu.gh	Barnes Rd., Accra	0332095371	Educational Institution
12	World Green Building Council – Africa Regional Network	https://worldgbc.org/africa/	Kenya		
13	Kenya Green Building Society	https://www.kgbs.co.ke/	Kenya		
B. ASIA					
1	Bureau of Energy Efficiency	sdiddi@beeindia.gov.in	New Delhi, India		Regulatory/Energy
2	Center for Tall Buildings & Urban Habitat		Mumbai, India		Professional Body
3	Alliance for Energy Efficient Economies (AEEE)	satish@aeee.in	New Delhi, India		Energy
4	International Finance Corporation (IFC)	asayyed@ifc.org	Mumbai, India		International / Finance
5	Council of Architects		New Delhi, India		Professional Body

6	Sustainable Energy Authority		Colombo, Sri Lanka		Regulatory/Energy
7	Institute of Post Harvest Technology		Colombo, Sri Lanka		Regulatory/Refrigeration
8	Institute of Architects		Colombo, Sri Lanka		Professional Body
9	Green Building Council		Colombo, Sri Lanka		Certification
10	CCHVAC (China Committee of HVAC)		China		Professional Body
11	Green Building Council Indonesia		Indonesia		
C	Middle East				
1	Jordan Green Building Council		Jordan		Certification
2	Jordan Standards and Metrology Organization (JSMO)	info@ashesi.edu.gh	1 University Ave., Berekuso, E/R	0302610330	Educational Institution
3	Jordan Engineers Association (JEA)		Jordan		Regulatory/Engineering
4	Engineers training Center		Jordan		Regulatory/Engineering
5	Ministry of housing and public works		Jordan		Regulatory
6	Ministry of Energy and Mineral Resources		Jordan		Regulatory
7	Royal scientific society		Jordan		Regulatory
D	South America				
1	ABNT's Brazilian Committee #55		Brazil		
2	ABRAVA		Brazil		Professional Body
3	FAIAR, Federation of Latin American HVACR associations	https://faiar.net/			
4	Brazilian association of Refrigeration	https://abrava.com.br/	Brazil		
5	CONFEA (Brazilian federal		Brazil		

	engineers licensing organization, MOU passed by BOD, work plan and MOU being considered by CONFEA still for passage)				
6	Chilean chamber of Refrigeration	https://www.cchryc.cl/	Chile		
7	National Standards Institute (INN, the Chilean counterpart to ANSI)		Chile		
8	Chamber of Refrigeration of Argentina	https://www.camaraargentina.de refrigeracion.com/	Argentina		
9	Colombian association of Air conditioning	https://acaire.org/	Columbia		
10	CROSQ (Caribbean Community (CARICOM) standards organization for all Caribbean nations)				
11	Mexican Association of Refrigeration and Airconditioning distributors	https://www.andira.org.mx/	Mexico		
12	BOMA mexico	https://imei.org.mx/	Mexico		
13	Federación de Colegios de Ingenieros Mecánicos, Electricistas y Electrónicos de México (FECIME) - Federation of Colleges of Mechanical, Electrical, and Electronics Engineers of Mexico		Mexico		
14	Instituto Mexicano del Edificio Inteligente y Sustentable (IMEI) - Mexican Institute of Intelligent and Sustainable Buildings		Mexico		
15	AEE Latam - Association of Energy Engineers Latin		Mexico		

	America				
16	Asociación Nacional de Fabricantes para la Industria de la Refrigeración en México (ANFIR) - National Association of Manufacturers for the Refrigeration Industry in Mexico		Mexico		
17	Unión Nacional de Constructores Electromecánicos (UNCE)- National Union of Electromechanical Contractors		Mexico		
18	AMERIC - Asociación Mexicana de Empresas del Ramo de Instalaciones para la Construcción - Mexican Association of Companies in the Construction Facilities Industry		MEXICO		

11/6/2024

Cheng Wee Leong 11/6/2024 7:54 AM • Good evening everyone

Richie Mittal 11/6/2024 8:00 AM • Good morning. good afternoon and good evening everyone

John Constantinide 11/6/2024 8:01 AM • Good morning/afternoon/evening, everyone. I'll need to stay on mute due to a briefing, but I'll participate in chat.

Yes

For roll call, I am here, Candace.

Yates, Alice 11/6/2024 8:11 AM • Sorry - I kept getting booted off the meeting. Hope 3rd time is a charm.

c bertuch 11/6/2024 8:13 AM • C Bertuch now on

Buzz Wright 11/6/2024 8:15 AM • Mr. Wright (Buzz) reported that 80-90% of the current system relies on the honor system already, and that Regional Leadership workload likely results in over crediting, or no points being entered.

John Constantinide 11/6/2024 8:29 AM • Can the professional journey objective be more explicit to be more cross generational?

Wei Sun 11/6/2024 8:30 AM • My connection is on/off, I will log out and log in again.

Megan Cruz, McKinley Advisors 11/6/2024 8:30 AM • I am back, my apologies!

John Constantinide 11/6/2024 8:32 AM • For AI, please consider including volunteer use to streamline grassroots operations. Internal operations infers, to me, ASHRAE HQ and Staff operations.

John Constantinide 11/6/2024 8:34 AM • Please note this comment, as well.

John Constantinide 11/6/2024 8:33 AM • Correct, Dennis.

Corey Metzger 11/6/2024 8:34 AM • Can we consider a slight modification to Strategic Goal 1 to read something like: ASHRAE leads globally in advancing solutions that address the cause and impact of climate change and create healthy indoor environments

Wade Conlan 11/6/2024 8:40 AM • Can we move IEQ in front of climate change? Isn't that critical to have to then optimize for energy or carbon?

Luke Leung 11/6/2024 8:47 AM • Should we consider : "... leads globally in addressing climate change..."

John Constantinide 11/6/2024 8:37 AM • Will do. I also have a change for the AI enabler.

Carrie Brown 11/6/2024 8:39 AM • I think Corey's edit is aligned with the objectives and initiatives.

c bertuch 11/6/2024 8:42 AM • Possibly: Modifu Strategic Goal 1 to read: ASHRAE leads globally in advancing solutions that address climate change and create healthy indoor environments

Carrie Brown 11/6/2024 8:46 AM • If an edit is required, I would prefer this to just removing "cause." While I understand the sensitivity, if we only leave "impact" I don't think this sufficiently includes decarbonization. (I think this would be adaptation, not mitigation.)

Luke Leung 11/6/2024 8:44 AM • "Empowered Workforce" - align to above, should we consider use "climate change" rather than "decarbonization"?

Susanna Hanson 11/6/2024 8:46 AM • who's speaking? It's not dennis

Pat Marks 11/6/2024 8:46 AM • Scott Peach

Susanna Hanson 11/6/2024 8:46 AM • Is someone in Dennis' office?

Devin Abellon 11/6/2024 8:46 AM • Scott is in the room with Dennis

You deleted your message. 11/6/2024, 8:46 AM

Scott Peach, PE, FPE 11/6/2024 8:47 AM • Yes Susanna - it works better if there is only one mic in here.

Susanna Hanson 11/6/2024 8:51 AM • Just wanted you to know I'm awake. Dumber, but awake.

John Constantinide 11/6/2024 8:57 AM • Perhaps climate change solutions should be in the outcomes, whereas decarbonization is in the objectives.

Decarb is the action.

Littleton, Jeff 11/6/2024 8:59 AM • Proposed Changes Summary:

Littleton, Jeff 11/6/2024 8:59 AM •

- Goal 1: Remove "cause" of climate change. Bill.
- Goal 1: Add IAQ to the first goal. Corey.
- Key Enabler on AI: AI should be applied to grass roots not just HQ business operations. John.
- Objective 2C: Professional journey -- be more explicit about career stages. John.
- Strategic Initiatives: Replace decarbonization with Climate Change (consistency). Healthy Communities: Prioritize IEQ.

Carrie Brown 11/6/2024 9:00 AM • Slight edit: • Goal 1: Remove cause and impact, leave address. Bill.

- Goal 1: Add IEQ to the first goal. Corey.

Devin Abellon 11/6/2024 9:01 AM •

The Planning Committee recommends, and I so move, that the Board of Directors approve the goals, objectives, and initiatives, as proposed for the 2025-28 ASHRAE Strategic Plan as presented in **ATTACHMENT A**, with the addition of IEQ and removal of the word cause, as part of Goal #1 and

editorial changes/review regarding the professional journey in Goal #2, AI as a key enabler, the importance of IEQ and the use of the terms decarbonization and climate change.

John Constantinide 11/6/2024 9:02 AM • Edits: Add “early, mid-career, and senior” before “professionals” on Objective 2c.

Add “volunteer and” before “internal” in AI enabler statement.

Wade Conlan 11/6/2024 9:06 AM • Suggested phrasing for item 1: ASHRAE leads globally in advancing solutions to provide indoor environmental environments and address the impact of climate change

Bassel Anbari 11/6/2024 9:08 AM • I second that

John Constantinide 11/6/2024 9:12 AM • They could withdraw.

John Constantinide 11/6/2024 9:27 AM • Out of meeting and can talk now.

John Constantinide 11/6/2024 10:10 AM • Concur with Sarah

Against

Mahroo Eftekhari Region XIV 11/6/2024 10:25 AM • What about smartstart scheme. Is it still available.

Chandra Sekhar 11/6/2024 10:31 AM • With HBO being the new norm for all members with this model, what would happen to the print version of handbooks? Would we still need to publish the print version of handbook each year?

John Constantinide 11/6/2024 10:33 AM • I would recommend maintaining a PDF as a standard of care.

Owen, Mark 11/6/2024 10:33 AM • We would still publish and sell print Handbook to members and nonmembers.

Bassel Anbari 11/6/2024 10:40 AM • I agree with the recommendations and the comments

John Constantinide 11/6/2024 10:42 AM • So move, if needed

Pat Marks 11/6/2024 10:42 AM • Second, if needed.

New messages

Leigh Lain Walker 11/6/2024 10:45 AM • Thank you!

Ken 11/6/2024 10:52 AM • Sorry, my computer tried to do an update. Sorry if it disrupted the meeting.

ASHRAE Strategic Planning: Strategic Plan & Initiatives

November 6, 2024

Agenda

- Overview of Project Progress
- Strategic Plan & Initiatives Review
- Group Discussion
- Project Next Steps

Work and Development To Date

How did we get here?

- Member and stakeholder research
 - Qualitative interviews with ASHRAE members and Industry Partners
 - Quantitative survey of ASHRAE members and non-members
- Board and Planning Committee formative, generative, and strategic discussions
- Iteration with ASHRAE's council leadership and strategic plan subcommittee
- Collaboration with PEAC, TRAC, PubEd and Tech Councils to understand alignment between the strategic plan and existing work streams
- Implementation discussions with ASHRAE staff directors.

Key Inputs

What elements helped shape the strategic plan?

- Member and stakeholder research findings
- Takeaways from ASHRAE's Strategic Plan feedback form responses
- Synthesis of the analysis, development, discussion and debate of emerging concepts by ASHRAE volunteer leaders
- Alignment of strategic plan goals and objectives to ASHRAE's Vision 2030

Draft Strategic Plan



MISSION STATEMENT | 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.

ORGANIZATIONAL VALUES | Collaboration, Commitment, Diversity, Excellence, Integrity, Volunteerism

2025 – 2028 Strategic Goals

Objectives

1. ASHRAE leads globally in advancing solutions to address the cause and impact of climate change

- a. Lead the development of widely adopted standards to support decarbonization, resilience and indoor environmental quality.
- b. 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.
- c. Develop resources based on member needs and industry trends.

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

- a. Tailor and target engagement and resources to ASHRAE members and defined key stakeholders
- b. Provide guidance to targeted stakeholders on impactful ways to maximize the positive downstream effect of their engagement on the built environment
- c. 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 and built environment workforce.

3. Increase the **accessibility** of ASHRAE content and resources

- a. Identify and address structural, content, and financial barriers to access
- b. Align communication and delivery methods and formats to enhance accessibility 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

Outcomes

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.

Key Enablers

Research: The value of ASHRAE's resources is grounded in unbiased data, developed through rigorous research methods.

AI: The use of AI 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.

Draft Strategic Initiatives

Strategic Initiatives

Healthy, Sustainable and Resilient Communities

Empowered Workforce

Organizational Agility

Emerging Technologies



Healthy, Sustainable and Resilient Communities

Minimizing greenhouse gas emissions from the built environment is essential to address climate change. It is equally important to enhance IEQ while advancing decarbonization strategies that support healthy and resilient buildings and communities. Key stakeholders leverage ASHRAE's standards and technical resources globally. This presents an opportunity for ASHRAE to solidify global leadership in 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 required to advance a healthy and sustainable built environment for all. 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, and technical bodies, the industry, and to deliver 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.



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




2025 – 2028 Strategic Goals

Objectives







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Global Network: ASHRAE's global network convenes the industry to generate unparalleled knowledge.

Group Discussion

Strategic Initiatives and Plan Discussion

What other thoughts or reactions do you have to the strategic plan or initiatives?

What needs to be addressed, in the plan or initiatives, before approval?

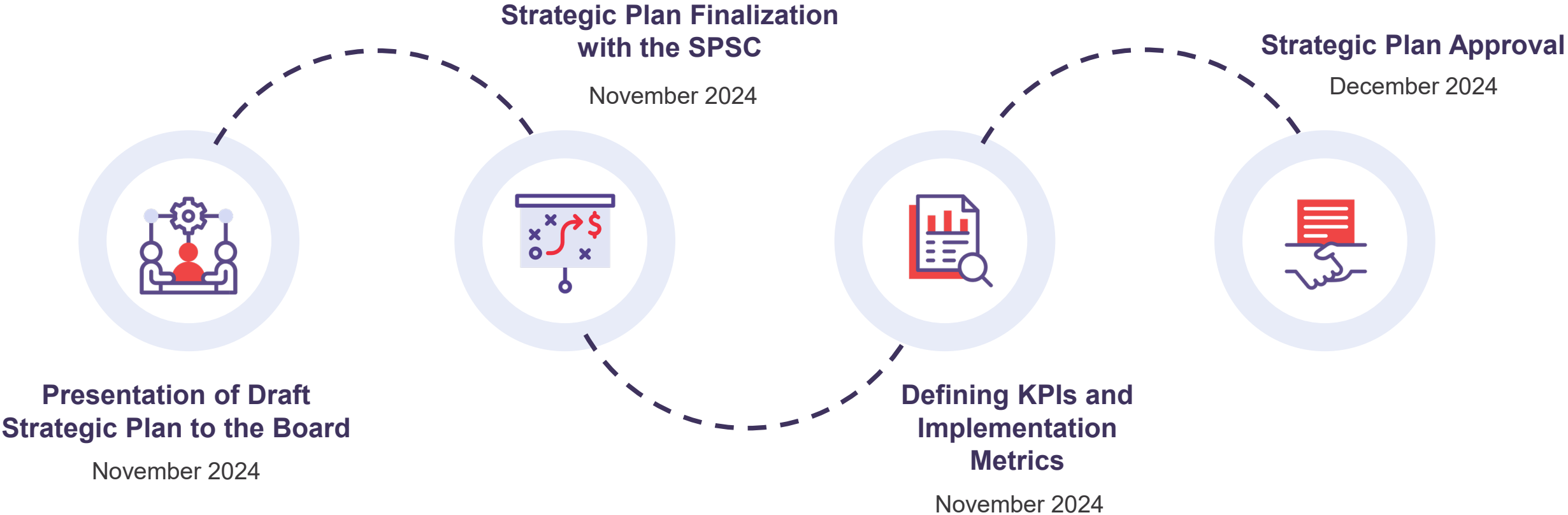
What additional information do you need to see (e.g. KPIs) before approval?



Next Steps

- Determine the right metrics to help assess strategic plan performance in collaboration with ASHRAE Staff Directors (e.g. KPIs)
- Review the strategic plan and initiatives with ASHRAE communications teams to develop plans to socialize with ASHRAE members
- Discuss operationalization and metrics with the Validation and Documentation Subcommittee.
- Following approval:
 - Work with communications staff to socialize plan with membership
 - Share potential programmatic ideas with relevant Councils and Committees to jump-start integration of strategic plan into future work plans and MBOs

Next Steps



Thank you!

Megan Cruz, CAE

macruz@mckinley-advisors.com

Julia Riordan, M.A.

jriordan@mckinley-advisors.com

Kristi Langham

klangham@mckinley-advisors.com

Attachment A



FINAL DRAFT

ASHRAE Position Document on

Energy Efficiency in Buildings

Approved by the ASHRAE Board of Directors [DATE] Expires [DATE]

ASHRAE is a global professional society of over 55,000 members, committed to serve humanity by advancing the arts and sciences of heating, ventilation, air conditioning, refrigeration, and their allied fields (HVAC&R). ASHRAE position documents are approved by the Board of Directors and express the views of the Society on specific issues. These documents provide objective, authoritative background information to persons interested in issues within ASHRAE's expertise, particularly in areas where such information will be helpful in drafting sound public policy. The documents also clarify ASHRAE's position for its members and building professionals.

Energy Efficiency is a Public Interest Issue

It has never been more necessary or urgent to improve the energy efficiency of buildings. ASHRAE has long advocated for energy efficiency as the central means for reducing the environmental impact of buildings through lowering their energy use. Energy efficiency, when implemented strategically, uniquely reduces greenhouse gas (GHG) emissions associated with the built environment while simultaneously reducing life-cycle costs and maintaining or improving occupant health, comfort, and safety.

Why ASHRAE Takes Positions on Energy Efficiency in Buildings

ASHRAE consensus standards and design guides provide the technical foundation for international building practices and energy codes. Energy efficient design, construction, operation, and considerations for end of life can dramatically reduce and sometimes eliminate building net energy use and associated GHG emissions.

ASHRAE resources span the entire life cycle of buildings. Since buildings account for 34%¹ of global energy use, our work in this sector is crucial. ASHRAE's Position Document on Building Decarbonization² states that decarbonization of buildings and their systems must be based on a

¹ UN Environment Programme's Global Alliance for Buildings and Construction; 2021 Global Status Report for Buildings and Construction. <https://globalabc.org/our-work/tracking-progress-global-status-report>

² See ASHRAE Position Document on Building Decarbonization, June 26, 2022
https://www.ashrae.org/file%20library/about/ashrae_building_decarbonization_pd_2022rev.pdf

Commented [WB1]: This isn't correct. Current membership is closer to 53,000. "More than 50,000" is safe.

Commented [B2R1]: ASHRAE-provided figure, outside of our purview.

Commented [WB3]: It continues to bother me that we say this but have stripped the references out of PDs so that the authority of statements in the PD is less clear than it was.

Commented [B4R3]: ASHRAE-provided language from standard PD template, outside of our purview.

Commented [WB5]: Efficiency does not inherently lead to energy use reduction. E.g., data centers inherently use huge amounts of energy regardless of how efficient HVAC systems are. Increases in residential efficiency are largely offset by increases in the size of a typical single-family home.

Commented [B6R5]: Good point, but does not contradict the statement in the PD. I don't think ASHRAE wants to advocate for fewer data centers or smaller homes. ☹️

Commented [WB7]: Does this mean "when applied to the largest consumers"?

Commented [B8R7]: It was intended to have broader meaning in reference to the rest of the sentence. If not implemented strategically, energy efficiency might not hit those other objectives.

Commented [WB9]: Would prefer something like "ASHRAE's role in building energy efficiency"

Commented [B10R9]: ASHRAE-provided language from standard PD template, outside of our purview.

Commented [B11]: Not sure what "energy efficient...end of life" is. Would need to say something like "energy efficient... considerations for end of life."

holistic analysis including healthy, safe, and comfortable environments. Energy efficiency is the first priority in reducing building GHG emissions.

ASHRAE Takes These Positions

1. Improving Building Energy Efficiency is Paramount

Energy efficiency of existing buildings is essential because the average lifespan of a building is over 70 years. While new buildings reach net zero, most of the building population will consist of older buildings. Energy efficiency reduces building GHG emissions in these buildings, an immediate and crucial policy goal to reducing the impacts of climate change. Furthermore, energy efficiency is necessary to permit older buildings to compete economically by reducing operating costs while maintaining occupant health and safety.

2. Energy Efficiency is the Leading Cost-effective Solution for Decarbonization and Climate Change Mitigation

Efficiency is the lowest cost energy resource we have³; it results in the reduction of building operational GHG emissions while saving life-cycle costs and increasing property values. Reducing loads through efficiency is the most cost-effective approach to whole building decarbonization and is a critical first step before considering renewable energy systems. ASHRAE's guidance and resources for improving the energy efficiency of buildings, developed and honed over the past decades, provide a strong foundation for strategic decarbonization efforts. The impact of carbon emissions is an essential consideration when evaluating energy efficiency measures.

3. Energy Efficiency Contributes to Resilience and Assurance⁴

Efficiency lowers or eliminates the energy demands of buildings. Doing so improves resilience by minimizing or eliminating the loads that must be met by the supply grids or emergency systems. This approach minimizes the need for backup, storage, and redundant systems and reduces the necessary capacity and costs of those systems. Electrification without building efficiency will delay the transition to green electricity significantly.

4. Energy Efficiency Provides Good, Local Jobs and is an Economic Catalyst

Energy efficiency contributes to local economies, including the creation of jobs that cannot be

³ Per the International Energy Agency's report on the 7th Annual Global Conference on Energy Efficiency (June 2022): "The cleanest, cheapest, most reliable source of energy is what countries can avoid using, while still providing full energy services for citizens. That is why the IEA refers to energy efficiency as the "first fuel"."
<https://www.iea.org/reports/the-value-of-urgent-action-on-energy-efficiency>

⁴ Energy assurance refers to the reliability of energy transmission from one site to another. Energy efficiency and resilience should not only look at facility-level use, but also transmission and other grid factors that can benefit from energy efficiency measures.

Commented [WB12]: Emissions includes particulate matter, SOx, NOx, and other things that affect health. This should not ALL be about climate change. Health is addressed farther down. This item should either add discussion of health or be changed to "Reducing building GHG emissions is..."

Commented [B13R12]: Makes sense to clarify the title sentence to "GHG Emissions" and address the other emissions/health impacts in the subsequent section on health.

exported. According to the United Nations Development Program, transitions in energy infrastructure are predicted to increase job demand by 1% annually.⁵ Investments in new building technologies must be accompanied by similar investments in a technically trained workforce.

5. Operational Efficiency is a Continuous Improvement Process
Building operating systems deviate significantly from optimal performance leading to significant and frequent loss in energy efficiency. Ongoing commissioning is essential to keep the building operating efficiently.

6. ASHRAE Standards Should Provide Guidance for Energy Efficiency while Maintaining Healthy Buildings

Energy efficiency strategies must consider impacts on indoor environmental quality, including thermal comfort, indoor air quality, lighting, and acoustics. ASHRAE Standards and Guidelines can continue to protect public health by maintaining healthy indoor environmental quality while reducing energy consumption.

7. Energy Efficiency Must be Maintained Throughout the Building Life Cycle

Bridging the gap between design and construction and continued efficient operation of buildings is critical. In current practice there is a frequent disconnect between teams responsible for development, design, and construction of efficient new buildings; the commissioning of those buildings; subsequent post-occupancy operation. This gap results in buildings that do not or cannot meet performance expectations when new and then deteriorate significantly in only a few years. We need to continue to promote practices that improve the transition from design and construction to operational teams so that buildings may better achieve their high-performance objectives.

8. Energy Efficiency Must be Considered Using Holistic Approaches

Improving energy efficiency often involves the replacement of equipment with higher efficiency versions. As such there can be significant energy embodied in the manufacture and installation of this new equipment that also carries with it consumption of natural resources and associated GHG emissions. The life-cycle environmental impacts including the embodied energy of manufacture and installation of new equipment, continuing throughout its life cycle (including end-of-life), should be considered in the decisions to design or redesign a building. The building's entire life cycle and associated emissions should be considered in the evaluation of overall GHG emissions.

Energy efficiency and water efficiency are linked and should be evaluated in parallel as there can be positive or negative interaction depending on building types and needs.

Commented [WB14]: Unclear

Commented [B15R14]: Agreed, needs rewording.

Commented [WB16]: Bad word choice. "Actual building performance deviates significantly from..."

Commented [B17R16]: Agreed, needs rewording.

Commented [WB18]: This is an assertion with which I disagree and not a proper position.

Commented [B19R18]: Good point. Could we change this to "should provide guidance for EE while maintaining healthy buildings"?

Commented [B20]: This position is making a particular point about the transition from design/construction to operations. The edits are not appropriate. The end of life point is addressed in the following position 8 below.

Commented [WC21R20]: I would say that the codes cover efficiency - to the low level- but barely cover Commissioning and none cover the Operation.

We have Guidelines....but not standards.

This is a real issue about Building Operation aligning with Building Design Intent to achieve the energy targets.

⁵ Öunmaa, L. 2021. "What are the socio-economic impacts of an energy transition?" United Nations Development Programme. <https://www.undp.org/eurasia/blog/what-are-socio-economic-impacts-energy-transition>.

ASHRAE Recommends

Policymakers, Government Agencies and Regulators

We recommend that policymakers adopt:

- ASHRAE energy-related Standards, particularly those Standards listed in Annex 1, and regularly update reference to the most current version of these Standards.
- Policies that encourage transparency of building performance, including regular publicly reported energy and water benchmarking, and policies that enforce consistent means for expressing and labeling performance of buildings.
- Policies that support quality standards for building performance assessments, such as energy audits, to identify energy efficiency opportunities and provide analytical foundations for decarbonization.
- Building performance standards as described in the ASHRAE Technical Resource Guide on Building Performance Standards.⁶
- Funding programs for research, development and demonstration of energy-efficient technologies and practices.
- Policies and regulations that provide financial resources for implementation of energy efficiency measures and energy equity through tax incentives, utility-sponsored incentives, and other mechanisms to improve the building's energy consumption while not impacting indoor environmental quality.
- Programs to provide publicly available databases and tools for energy performance benchmarking, such as the US Department of Energy's Commercial Building Energy Consumption Survey and the US Environmental Protection Agency's ENERGY STAR Portfolio Manager.
- Regulations that require professionals with appropriate credentials and experience such as those cited in ASHRAE Standard 211 to ensure the desired energy savings outcomes.

New Buildings

We recommend that owners and design professionals in new buildings:

- Maximize energy efficiency in new building design to support the goal that all new buildings achieve net zero GHG emissions in operation by 2030⁷.
- Ensure that energy efficiency design practices also enhance indoor environmental quality.
- Review and apply Advanced Energy Design Guides, stretch codes and other forward-thinking guidance for energy-efficient buildings.
- Evaluate investment in energy efficiency alternatives based on life-cycle GHG emissions and costs.
- Employ designs that:
 - Optimize building envelope, orientation, and geometry to reduce energy use.

⁶ ASHRAE Technical Resources. <https://www.ashrae.org/about/tfbd-technical-resources>

⁷ ASHRAE Position Document on Building Decarbonization, 6/26/2022.

https://www.ashrae.org/file%20library/about/ashrae_building_decarbonization_pd_2022rev.pdf

Commented [WB22]: Despite some claims made above, there is nothing here that addresses the connection between energy efficiency and IEQ/healthy buildings.

Commented [B23R22]: The claims made above should be changed to imperatives.

Commented [WB24]: Missing a position that supports the necessity of ensuring that energy, environment, and IEQ goals all are met.

Commented [B25R24]: Agreed. We should edit position 6 above to address this, and also add a bullet on this under each of the subheadings in this section.

Commented [WC26R24]: WADE - Not sure that this was edited as I do not see IEQ in this list.

Commented [JMC27R24]: Focus should be energy efficiency goals, but I agree that IEQ should not be impacted.

- Implement passive and active energy-efficiency measures.
- Apply energy-efficient decarbonization of space and water heating.
- Select energy-efficient equipment, and use low GWP refrigerants as an integrated design choice.
- Provide for effective long-term operations & maintenance, including ongoing tracking of building energy performance post-occupancy.
- Apply water efficient design to reduce energy and water use.
- Select equipment to maximize expected service life and minimize life-cycle GHG emissions.
- Commission the buildings so that they operate optimally.

Existing Buildings

We recommend that owners and operators in existing buildings:

- Maximize implementation of energy efficiency measures in existing buildings to support the goals that
 - By 2030, existing buildings halve their emissions, with widespread energy efficiency retrofit of existing assets well underway.
 - By 2050, all existing assets achieve net zero GHG emissions in operation.⁸
- Ensure that energy efficiency practices enhance or maintain indoor environmental quality.
- Establish comprehensive energy management programs including setting energy goals, monitoring ongoing performance, engaging all stakeholders, and recognizing success.
- Conduct energy audits performed by qualified professionals using the approaches developed within ASHRAE Standard 211 as a proven analytical foundation for decarbonization plans.
- Evaluate implementation of energy efficiency measures based on life-cycle costs and GHG emission impacts.
- Prioritize energy efficiency measures that reduce loads prior to meeting those loads with supply-side approaches.
- Conduct periodic ongoing commissioning practices to ensure efficient operation over time.
- Support operations & maintenance staff with appropriate training and resources to operate buildings in the most energy-efficient manner, while maintaining occupant comfort, health and safety.
- Use water efficient technologies and operational practices to reduce energy and water consumption.
- When equipment is replaced, select new equipment to maximize expected service life and minimize life-cycle GHG emissions.

Commented [WB28]: This is not sufficient. Does not acknowledge that standards for minimum IEQ ought to be higher.

Commented [B29R28]: This PD is not a PD on IEQ standards. It appropriately addresses the potential impact of energy efficiency on IEQ, but going any further than that would be out of scope.

ASHRAE

We also recommend that ASHRAE continue its important work in energy efficiency codes and standards development and:

⁸ ASHRAE Position Document on Building Decarbonization, 6/26/2022.

- Build tools and infrastructure so that decarbonization plans rely on strong analytical foundations.
- Consider the timing of energy savings and associated GHG emission impacts. Further develop energy efficiency tools and reporting to reflect the value of those savings in supporting the transition to grid-interactive efficient buildings.
- Continue to support policy makers through timely updates to standards and guidelines such as those shown in Annex 1.
- Fund and conduct research to support these energy efficiency policy objectives.

Annex 1: ASHRAE Standards related to Energy Efficiency in Buildings

We recommend that policymakers, government agencies and regulators adopt and regularly update to reference the most current versions of ASHRAE Standards, including:

- **ANSI/ASHRAE/IES Standard 90.1**, *Energy Standard for Buildings Except Low-Rise Residential Buildings*
- **ANSI/ASHRAE/IES Standard 90.2**, *High-Performance Energy Design of Residential Buildings*
- **ANSI/ASHRAE Standard 90.4**, *Energy Standard for Data Centers*
- **ANSI/ASHRAE/IES Standard 100**, *Energy Efficiency in Existing Buildings*
- **ANSI/ASHRAE Standard 105**, *Standard Methods of Determining, Expressing, and Comparing Building Energy Performance and Greenhouse Gas Emissions*
- **International Green Construction Code®** and **ANSI/ASHRAE/ICC/USGBC/ IES Standard 189.1**, *Standard for the Design of High- Performance Green Buildings Except Low-Rise Residential Buildings*
- **ANSI/ASHRAE/ASHE Standard 189.3**, *Design, Construction, and Operation of Sustainable High-Performance Health Care Facilities*
- **ANSI/ASHRAE/IES Standard 202**, *Commissioning Process for Buildings and Systems*
- **ANSI/ASHRAE/ACCA Standard 211**, *Standard for Commercial Building Energy Audits*
- **ANSI/ASHRAE Standard 228**, *Standard Method of Evaluating Net Zero Energy and Net Zero Carbon Building Performance*

Annex 2: ASHRAE Guidelines

- **ASHRAE Guideline 14**, Measurement of Energy, Demand and Water Savings
- **ASHRAE Guideline 36**, *High Performance Sequence of Operation for HVAC Systems*

Annex 3: ASHRAE Guides

- **ASHRAE Advanced Energy Design Guides⁹**
ASHRAE and its partners create free guidelines on how to achieve net zero buildings in specific building constructions such as K-12, office buildings, multifamily buildings and others.
- **ASHRAE Building Performance Standards: A Technical Resource Guide**, building performance standards developed in collaboration with the US Department of Energy.
- **ASHRAE Grid-Interactive Buildings for Decarbonization: Design and Operation Resource Guide**

DOCUMENT REVISION COMMITTEE ROSTER

The ASHRAE Position Document on Energy Efficiency in Buildings was developed by the Society's Energy Efficiency in Buildings Position Document Committee, with Jim Kelsey as its chair.

Jim Kelsey kW Engineering Oakland, CA, USA	Kajen Singham Enerlife Consulting Toronto, Ontario, Canada
Barry Abramson Servidyne Atlanta, GA, USA	Adam Hinge Sustainable Energy Partnerships Tarrytown, NY, USA
David Eldridge Grumman Butkus Associates Evanston, IL USA	Fredric Goldner Energy Management & Research Associates East Meadow, NY, USA
Eric Yang Vantage Data Center Ashburn, VA, USA	John Constantinide Mechanical Engineer Merritt Island, FL, USA

⁹ AEDG's are found here www.ashrae.org/technical-resources/aedgs.

Dennis Landsberg L&S Energy Las Vegas, NV, USA	Rafael Pérez-Cortines Daikin Europe NV Seville, Spain
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Cognizant Committees

The chair of Technical Committee 7.6 and the chair of the ASHRAE Standing Committee also served as ex-officio members.

Amanda Webb TC 7.6 Committee Chair University of Cincinnati	Adrienne Thomle DRSC Liaison, Vice-Chair Standards Committee
	Douglas Fick Chair of Standards DRSC Liaison

DOCUMENT HISTORY

Background

The prior ASHRAE Position Document on Energy Efficiency in Buildings was approved by Board of Directors on November 15, 2019 and was reaffirmed by Technology Council on February 8, 2023.



MINUTES

BOARD OF DIRECTORS MEETING

Wednesday, December 4, 2024

Note: These draft minutes have not been approved and are not the official record until approved by the Board of Directors.

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Wednesday, December 4, 2024

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PRINCIPAL APPROVED MOTIONS

Board of Directors Meeting
Wednesday, December 4, 2024

No. - Pg.	Motion
1 – 2	The Planning Committee recommends to the Board of Directors that the revised goals, objectives, and initiatives, as proposed for the 2025-28 ASHRAE Strategic Plan be approved as presented in ATTACHMENT A.
3 – 4	There be no change to Full Member dues for Society Year 2025-2026.



MINUTES

BOARD OF DIRECTORS MEETING

Wednesday, December 4, 2024

MEMBERS PRESENT:

Dennis Knight, President
Bill McQuade, President-Elect
Sarah Maston, Treasurer
Devin Abellon, Vice President
Wade Conlan, Vice President
Ken Fulk, Vice President
Chandra Sekhar, Vice President
Jeff Littleton, Secretary
Charles Bertuch, Region I DRC
Genevieve Lussier, Region II DRC
Sherry Abbott-Adkins, Region III DRC
Bryan Holcomb, Region IV DRC
Jim Arnold, Region V DRC
Susanna Hanson, Region VI DRC
Scott Peach, Region VII DRC
Joe Sanders, Region VIII DRC

Jonathan Smith, Region IX DRC
Buzz Wright, Region X DRC
Rob Craddock, Region XI DRC
John Constantine, Region XII DRC
Cheng Wee Leong, Region XIII DRC
Mahroo Eftekhari, Region XIV DRC
Richie Mittal, Region XV DRC
Bassel Anbari, RAL DRC
Carrie Brown, DAL
Blake Ellis, DAL
Luke Leung, DAL
Patrick Marks, DAL
Corey Metzger, DAL
Heather Schopplein, DAL
Wei Sun, DAL
David Yashar, DAL

GUESTS PRESENT:

Andres Sepulveda
Trent Hunt

STAFF PRESENT:

Candace Denton, Sr. Manager - Board Services
Chandrias Jolly, Manager - Board Services
Vanita Gupta, Director – Marketing
Lizzy Seymour – Director – Member Services
Mark Owen, Director - Publications & Education
Kirstin Pilot, Director - Development
Stephanie Reiniche, Director - Technology
Alice Yates, Director - Government Affairs
Craig Wright, Director of Finance

Daniel Gurley, Sr. Manager - Membership
Rhiannon Masterson, Mgr. – Chapter Programs
Ragan McHan, Mgr. – Conference Services

CALL TO ORDER

The meeting was called to order at 9:01 am.

VALUE STATEMENT

Mr. Knight read the value statement and advised that the full code of ethics, core values and diversity statements were available online.

ROLL CALL/INTRODUCTIONS

Roll call was conducted; members, guests, and staff were in attendance as noted above.

REVIEW OF MEETING AGENDA

Mr. Knight reviewed the meeting agenda. *RAC Updates* was added to 'New Business.'

2025-28 STRATEGIC PLAN REVIEW AND APPROVAL

Mr. Abellon reported on behalf of the Planning Committee. The full report was attached to the agenda.

Mr. Abellon moved that

1. The Planning Committee recommends to the Board of Directors that the revised goals, objectives, and initiatives, as proposed for the 2025-28 ASHRAE Strategic Plan be approved as presented in ATTACHMENT A.

Mr. Abellon reported that the proposed plan addressed all comments from the BOD. The proposed plan also included minor edits from the previous BOD meeting. He thanked the BOD for their comments and feedback and reported that there were no outstanding comments that still needed to be addressed.

Mr. Knight thanked Mr. Abellon and the Planning Committee for their work and for revising the plan to address all comments and concerns from the BOD.

MOTION 1 PASSED (Unanimous Vote, CNV).

Mr. Knight thanked the BOD for their comments. He stated that the approved strategic plan was great and now an operational plan and implementation can begin.

2025-26 SOCIETY DUES

Ms. Maston reported on behalf of the Finance Committee. The full report was attached to the agenda.

Ms. Maston moved that

2. Finance Committee recommends to the Board of Directors (BOD) a proposed dues increase in Society Year 2025-2026 to \$295 for Full Members and includes all other membership dues grades that are calculated based on a percentage of Full Member dues. Refer to ATTACHMENT B which outlines the recommended Fiscal Year 2025-2026 dues by membership grade.

Ms. Maston reported that the recommendation represents a \$10 increase in Full Member dues. The full background was included in the report.

The floor was opened for discussion and a summary of that discussion is below.

Spoke against the motion. When compared with 33 other allied associations, ASHRAE is in the top 5 as it relates to cost. Dues have increased almost 24% in the past several years. Expressed fear that members may throw their hands up and not renew. Society has a lot of money in reserves and members know that; suggested that the BOD should take that into consideration.

Ms. Maston stated that she shared the concerns expressed. She stated that the proposed motion would bridge the gap for next year and Finance Committee would continue to look at the dues model. Until this point, dues are the biggest revenue, and staff is the biggest expense; until another revenue stream can offset expenses, this is Finance's recommendation. Finance Committee hopes to have other ideas to the BOD to slow the dues increase projection.

Undecided on the motion. Understand all the points raised. Stated that subsidizing reserves is not sustainable. Should Society have an annual surplus budget so that dues can be lowered? Recommended that additional investment opportunities be explored.

Spoke against the motion. Stated that the increase would be a financial burden to members in Region XIII and could result in lost members.

Dues were kept constant for a few years following the COVID pandemic, even when there was 4% and 8% inflation. Stated that dues increased more significantly the previous year, but that was only to account for inflation. Dues bridge the gap between revenue and expenses. Last year, the Society budget was balanced but that was after years of deficit budgets. What is the BOD doing to increase revenue or decrease costs? If revenue is not increased nor costs decreased, the budget gap must be bridged with dues. Spoke in favor of the motion until revenue is increased or costs are decreased.

Spoke against the motion. Suggested that Society was facing tough competition from other associations and that membership was declining because of increasing dues.

Spoke against the motion. In Canadian Dollars, Society dues are close to the cost of professional order dues; it is becoming difficult to sell ASHRAE Membership to Canadians and the proposed increase would make it more difficult.

Spoke in favor of the motion. Suggested that value to members is critical to Society's growth and overall survival. Cutting services would have a greater negative impact on membership.

Mr. Littleton reported that in the past, when there hasn't been a dues increase or a very small dues increase, there is a much larger "catch up" increase in subsequent years. Appreciate all the points related to trimming costs. If the BOD agrees that dues will have to increase by some percentage every year, suggest that Society would be better served by consistent dues increases as opposed to no increase with a greater increase down the road.

It was stated that Society can't do 1960's business in 2024. Until Society changes the way it does business, the BOD will have this same conversation every year.

Ms. Maston stated that Finance was working to change the discussion and the dynamic. She stated that Finance did not want to cut offerings as there was consensus that would be an even worse situation. Reported that the conversation was tied to the Futures Fund and more time is needed to see how that performs. Hope to present the BOD with additional recommendations in

Orlando. A decision has to be made today as dues renewal notices have gone out and rates will be implemented in January.

MOTION 2 FAILED (12:16:1, CNV).

Mr. Knight thanked Ms. Maston for the report. He stated that deciding dues is one of the more important things that the BOD votes on each year. He thanked the BOD for their good comments. He stated that the Membership Model Ad Hoc was doing a deep dive and there was great anticipation of their report.

Mr. Peach moved and it was seconded that

3. There be no change to Full Member dues for Society Year 2025-2026.

Mr. McQuade stated that the BOD has a fiscal responsibility to have a balanced budget. He stated that all motions with a fiscal impact should also include a way for them to be funded if dues will not serve as that bridge in the upcoming Society Year.

MOTION 3 PASSED (17:12:1, CNV).

EXECUTIVE SESSION

Executive session was called at 9:44 am.

The open session meeting reconvened at 11:27 am.

NEW BUSINESS

RAC UPDATES

Mr. Conlan reported that, historically, RAC developed a research strategic plan that follows the Society strategic plan. RAC will, hopefully, get started on the new research strategic plan in Orlando.

He asked that BOD members send him names of members that are strategic and active in the technical side of Society so a team can be organized to begin working on the research strategic plan.

Mr. Knight thanked Mr. Conlan for the update. He stated that it was important that the councils and committees begin looking at the new Society strategic plan and stay current and on top of the issues of the day.

UPCOMING MEETINGS

Mr. Knight reviewed the BOD meeting schedule at the Orlando meeting.

ADJOURNMENT

The meeting adjourned at 11:29 am.

Jeff Littleton

Jeff H. Littleton, Secretary

ATTACHMENTS:

A. Strategic Plan Presentation

B. Recommended Fiscal Year 2025-2026 Dues

ASHRAE Strategic Planning: Strategic Plan & Initiatives

December 2024

Draft Strategic Plan



MISSION STATEMENT | 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.

ORGANIZATIONAL VALUES | Collaboration, Commitment, Diversity, Excellence, Integrity, Volunteerism

2025 – 2028 Strategic Goals

Objectives

1. ASHRAE leads globally in advancing solutions to improve IEQ and address climate change

- a. Lead the development of widely adopted standards to support indoor environmental quality, decarbonization, and resilience.
- b. 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.
- c. Develop resources based on member needs and industry trends.

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

- a. Tailor and target engagement and resources to ASHRAE members and defined key stakeholders
- b. Provide guidance to targeted stakeholders on impactful ways to maximize the positive downstream effect of their engagement on the built environment
- c. 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.

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

- a. Identify and address structural, content, and financial barriers to access
- b. 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

Outcomes

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.

Key Enablers

Research: The value of ASHRAE's resources is grounded in unbiased data, developed through rigorous research methods.

AI: The use of AI 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.

Draft Strategic Initiatives

Strategic Initiatives

Healthy, Sustainable and Resilient Communities

Empowered Workforce

Organizational Agility

Emerging Technologies



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.

Membership Dues

	FY 2024-25		FY 2025-26	
	(Current)		(Calculated)	
<u>Full/Associate/Fellow Grade</u>				
Regular	\$ 285	\$	295	
Developing Economy	\$ 170	\$	175	60.0% of Full Member Dues
<u>Affiliate Grade</u>				
Regular				
Year 1	\$ 70	\$	75	25.0% of Full Member Dues
Year 2	\$ 105	\$	110	37.5% of Full Member Dues
Year 3	\$ 145	\$	150	50.0% of Full Member Dues
Developing Economy				
Year 1	\$ 45	\$	45	25.0% of Dev. Eco. Member Dues
Year 2	\$ 65	\$	65	37.5% of Dev. Eco. Member Dues
Year 3	\$ 85	\$	90	50.0% of Dev. Eco. Member Dues
<u>Student Grade</u>				
Regular	\$ 30	\$	30	10.0% of Full Member Dues
Developing Economy	\$ 15	\$	15	50.0% of Student Member Dues
<u>Student Transfer Program (SmartStart)</u>				
Regular				
Year 1	\$ 30	\$	30	100.0% of Student Member Dues
Year 2	\$ 105	\$	110	37.5% of Full Member Dues
Year 3	\$ 145	\$	150	50.0% of Full Member Dues
Developing Economy				
Year 1	\$ 15	\$	15	100.0% of DE Student Grade Member Dues
Year 2	\$ 65	\$	65	37.5% of Dev. Eco. Member Dues
Year 3	\$ 85	\$	90	50.0% of Dev. Eco. Member Dues
<u>Retired</u>				
Regular	\$ 45	\$	45	15.0% of Full Member Dues
Developing Economy	\$ 25	\$	25	50.0% of Retired Member Dues
Life	\$ -			

****Rounded up/down to closest 0 or 5**

ACTION ITEMS
Board of Directors
As of November 6, 2024

Number	Responsibility	Summary of Action	Status	Goal Date
1	Knight	Work with AASA to review and provide recommendations on external actionable items from the Global HVAC Summit. (Assigned February 5, 2023)	Ongoing	



RESOLUTION

Richard (Dick) Browning Hayter

Presidential Member, Fellow ASHRAE, Life Member

Whereas:

It is with deep respect and admiration that we honor the memory of *Richard (Dick) Browning Hayter*;

Who, through his presidential theme of “*Sharing the Vision*” in 1995-96, stated that “commitment unlocks the doors of imagination and allows us to embrace our vision and develop new, innovative ideas;” and

Who, during his presidency, championed the importance of membership growth, internationalism and total building design, preparing the HVAC&R industry for the challenges of the 21st century; and

Who, played a pivotal role in fostering international collaboration within ASHRAE, strengthening relationships with allied organizations around the world and elevating the Society’s influence in shaping global standards; and

Whose commitment to education was evident in his efforts to expand professional development opportunities, encouraging student engagement and supporting initiatives to develop new markets in a consumer-driven economy; and

Whereas, throughout his career, was a tireless advocate for the profession, holding distinguished positions as director of Kansas State University’s Energy Extension program for 20 years and Associate Dean of Engineering for External Affairs until his retirement in 2009, inspiring countless students and professionals; and

Whereas, he was a prolific contributor to technical research and publications, earning numerous honors and recognitions, including ASHRAE’s Distinguished Service Award, Distinguished 50-Year Member Award and the Andrew T. Boggs Service Award; and

Whereas, he embodied the spirit of mentorship and service, earning the respect and admiration of his peers for his unwavering dedication, humility and ability to inspire others to excel;

Be It Therefore Resolved, that ASHRAE extends its deepest gratitude to the family of Richard (Dick) Browning Hayter for supporting his lifelong service to the Society and his profession, and that his memory will continue to inspire future generations of ASHRAE members and leaders.

Be It Further Resolved that the Board of Directors of ASHRAE at its meeting of February 9, 2025, observes the passing of Richard (Dick) Browning Hayter with great sorrow and that this official resolution be placed in the records of this Board of Directors’ meeting and that a copy of the resolution be forwarded to his immediate family.



Ronald E. Jarnagin
Presidential Member, Fellow ASHRAE

Whereas:

It is with deep respect and admiration that we honor the memory of *Ronald E. Jarnagin, Presidential Member, Fellow ASHRAE*;

Who, through his presidential theme of “*Sustaining ASHRAE Through Leadership*” during the 2011-12 Society Year emphasized the importance of long-term organizational sustainability, focusing not only on technical advancements but also on the development of future leaders and the strengthening of ASHRAE’s global presence; and

Who, during his presidency, demonstrated a commitment to fostering leadership by advocating for initiatives such as the development of advanced HVAC courses, a Leadership University for Young Engineers in ASHRAE (YEA), and creating opportunities for the next generation of members to engage and lead within the Society; and

Whose, efforts to engage and mentor younger generations have set a lasting example of leadership, courage, and collaboration, reflecting his belief that leadership must be demonstrated through action and inclusivity; and

Who, during his distinguished career, served as a staff scientist at the U.S. Department of Energy’s Pacific Northwest National Laboratory, chaired the ASHRAE Standard 90.1 committee, and led a multi-disciplinary team in the creation of Advanced Energy Design Guides, showcasing his expert knowledge and dedication to energy efficiency and innovation; and

Who, was a prolific contributor to technical research and publications, earning numerous honors and recognitions, including ASHRAE’s Distinguished Service Award and the Exceptional Service Award; and

Whose, dedication to ASHRAE’s values, his exceptional communication skills, and his ability to bring people together for a common cause have left an indelible mark on the Society and its members;

Be It Therefore Resolved, that ASHRAE extends its deepest gratitude to the family of Ronald E. Jarnagin for supporting his outstanding service to the Society and his profession, and that his memory will continue to inspire future generations of ASHRAE members and leaders.

Be It Further Resolved that the Board of Directors of ASHRAE at its meeting of February 9, 2025, observes the passing of Ronald E. Jarnagin with great sorrow and that this official resolution be placed in the records of this Board of Directors’ meeting and that a copy of the resolution be forwarded to his immediate family.



Financial Update

Board of Directors

Sarah E. Maston, Treasurer

February 9, 2025

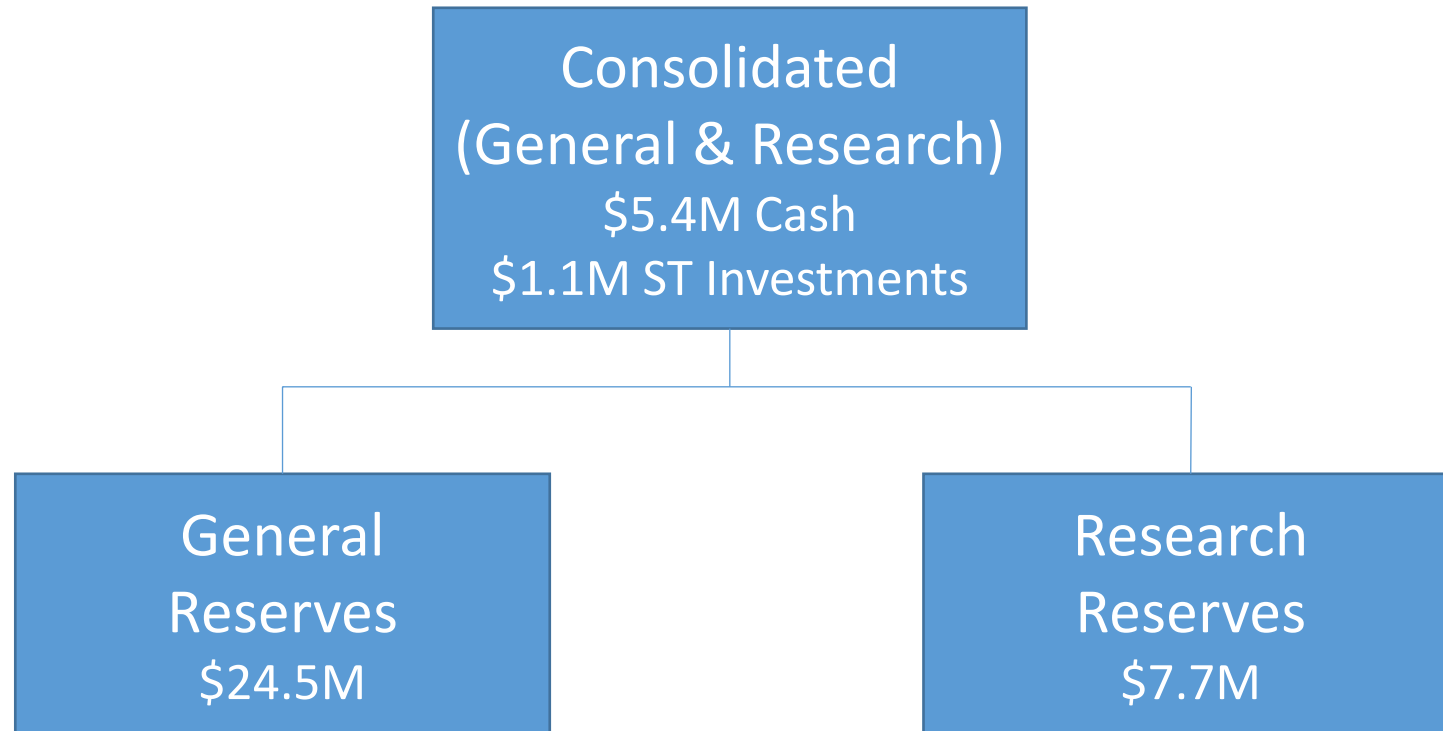
Winter Meeting – Orlando

Financial Status

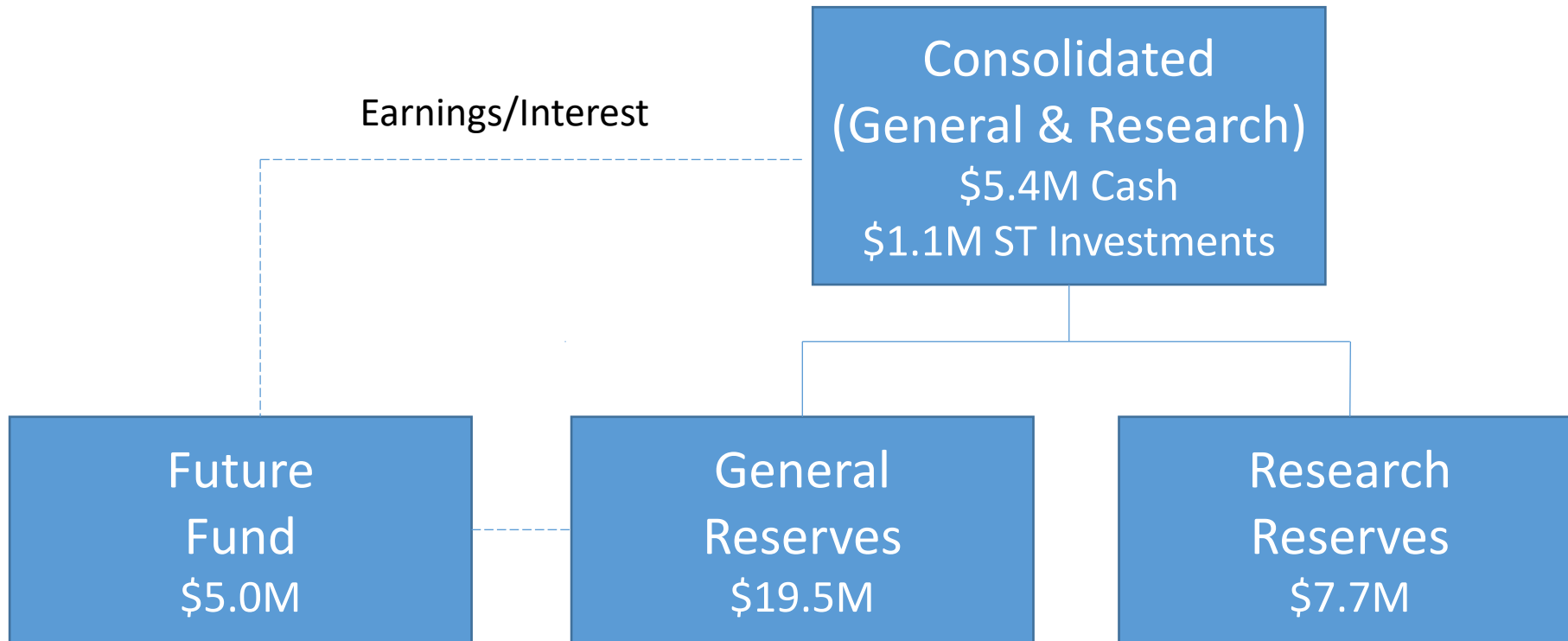
As of December 31, 2024



Fund Structure – as of 12/31/24



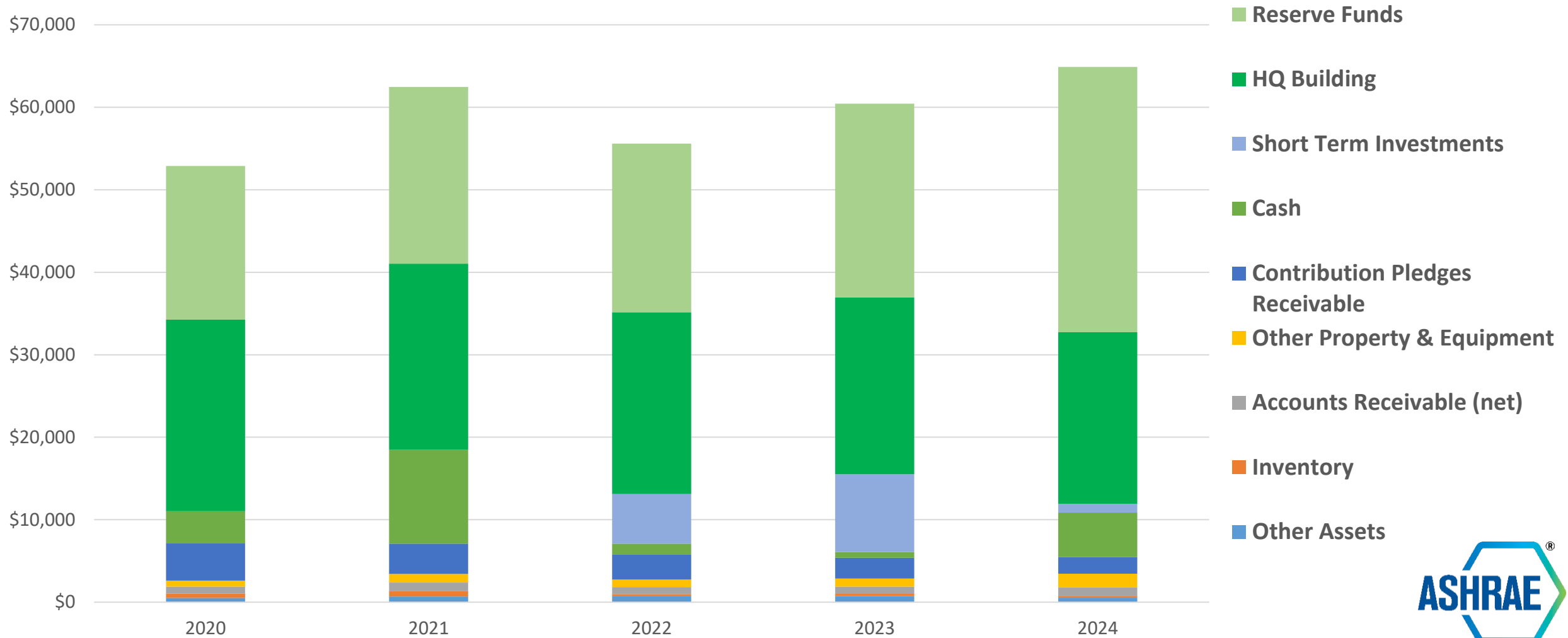
Fund Structure – as of 12/31/24 (adding Future Fund)



General and Research Funds (Consolidated)

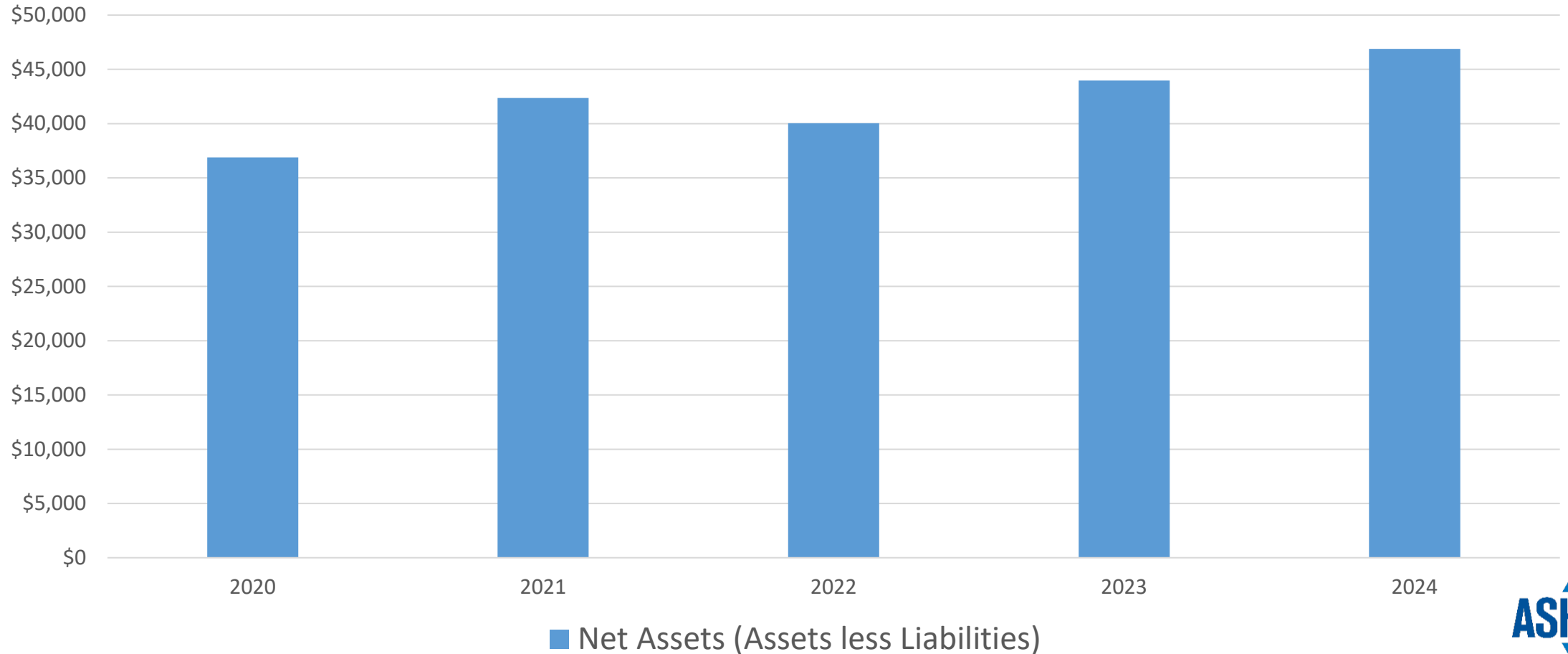
Composition of Assets

As of December 31 (in Thousands)



General and Research Funds (Consolidated) Cumulative Net Assets As of December 31

(in Thousands)



General Fund Revenue and Expenses

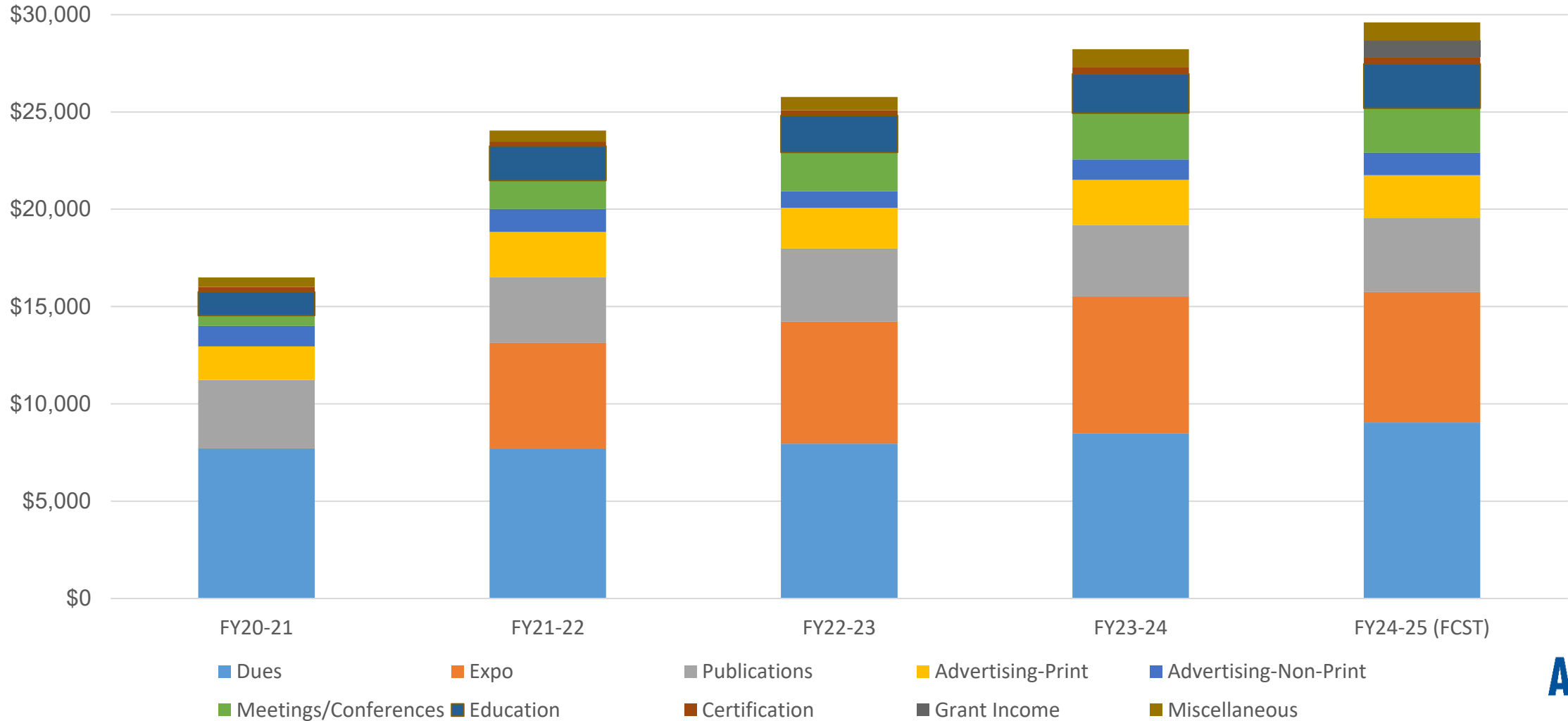
Forecast vs. Budget
Society Year 2024-25

(in Thousands)	SY 24-25 Forecast	SY 24-25 Budget
Revenues	\$28,635.8	\$28,449.8
Expenses	\$28,586.7	\$28,440.7
Surplus/(Deficit)	\$49.1	\$9.1



Revenue Trends – General Fund

(in Thousands)



Major Variations (Forecast vs. Budget) Revenue - General Fund

	12 Months Ended		Difference		Explanation
	Forecast FY 2025	Budget FY 2025	\$\$	%	
31 Membership Dues	\$9,044.3	\$8,844.3	\$ 200.0	2%	Actual Dues are trending higher through December
32 Publication Sales	3,818.6	4,063.6	(245.0)	-6%	New editions of major standards (90.1, 62.1) won't be published until late 2025 and the 2nd edition of Handbook of Smoke Control Engineering was delayed.
34 Advertising Income - Print	2,192.4	2,343.0	(150.6)	-6%	Sales were very slow starting the fiscal year but have picked up since the election. Advertising sales since the pandemic continue to reshape themselves annually. The Journal continues to be strong which will hopefully somewhat offset the early part of the fiscal year.
34 Advertising Income - Non-Print	1,150.0	1,250.0	(100.0)	-8%	Webinar Ad sales are down dramatically from last fiscal year. The webinar features have been modified to encourage future sales along with more offerings, including ads alongside the read-only standards on the website and new topical newsletters.
35.1 Meetings/Conferences Registration	2,289.7	2,217.9	71.8	3%	Higher attendance than expected for topical conferences (Decarb and WIA)
35.2 Certification Registration	350.0	350.0	0.0	0%	
35.3 Education Registration	2,275.0	2,040.0	235.0	12%	Very strong HVAC Design Training registrations along with eLearning and In-Company/Chapter trainings.
36 Grant Income	839.2	939.2	(100.0)	-11%	Final Approval of RECI Grant wasn't approved until August 2024 (Budget assumed approval on or before 7/1/2025). Subrecipients also behind on their activities/responsibilities. DOE is currently not communicating but barring any further disruption at the Federal level, impact shouldn't be too significant.
38 Contribution Income	34.4	43.8	(9.4)	-21%	
41.1 AHR Exposition Income	6,700.0	6,500.0	200.0	3%	Original Estimate NSF - 500,000; Latest NSF confirmation - 515,000
41.2 Contributions and Matching Gifts	(1,169.8)	(1,178.0)	8.2	-1%	
41.3 Exposition Income - Other Countries	0.0	0.0	0.0	0%	No AHR Expo Mexico in FY24-25
44 Reserve Transfers	171.1	130.0	41.1	32%	CEBD and TFBD Reserve Transfers (approved by BOD)
46 Miscellaneous Income	940.9	906.0	34.9	4%	Actual sponsorship income for Topical Meetings more than budgeted
TOTAL REVENUES	28,635.8	28,449.8			



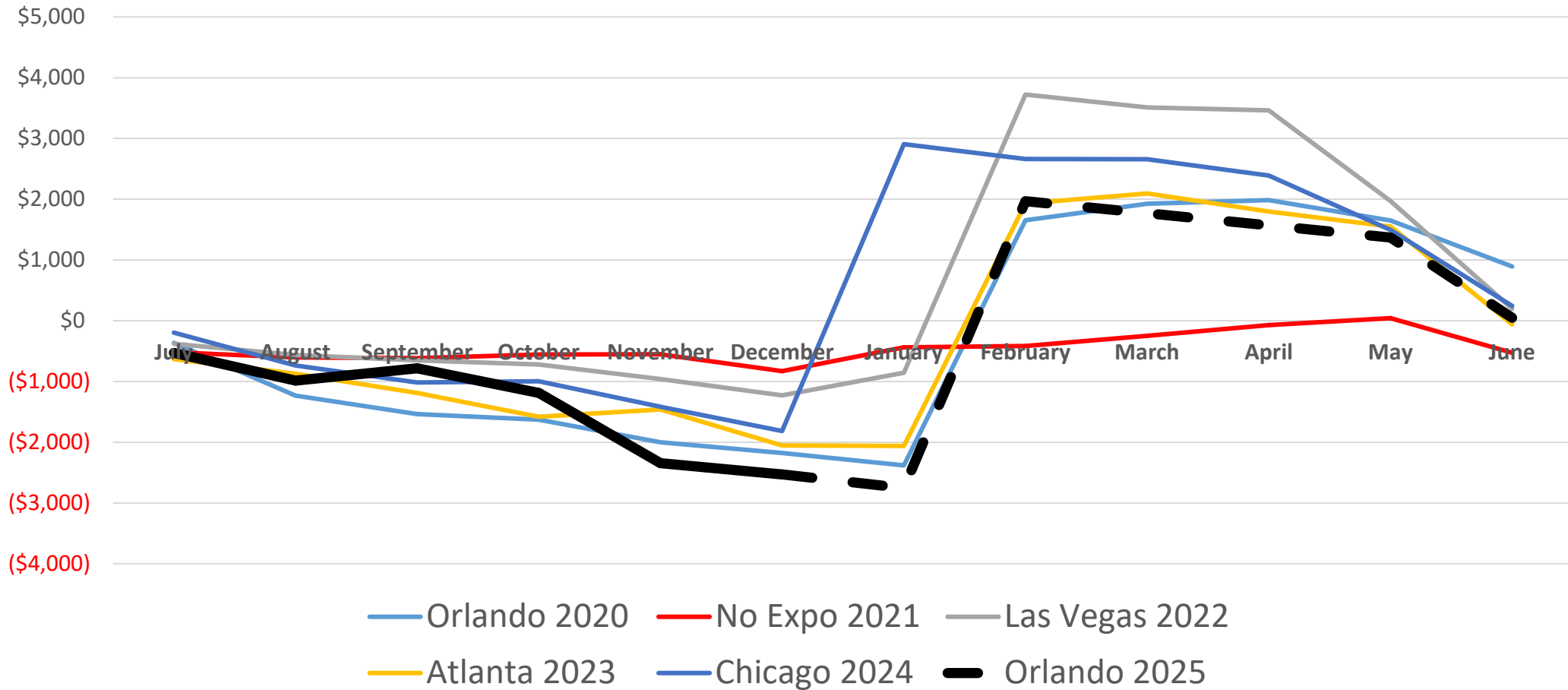
Major Variations (Forecast vs. Budget) Expenses - General Fund

	12 Months Ended		Difference		Explanation
	Forecast FY 2025	Budget FY 2025	\$\$	%	
51 Salaries	10,768.8	10,768.8	0.0	0%	
52 Payroll Taxes, Benefits, Personnel	3,371.9	3,371.9	0.0	0%	
61 Publishing	1,325.4	1,273.8	51.6	4%	
62 Promotion (All Depts)	1,278.7	1,286.7	(8.0)	-1%	
64 Meetings/Conferences	2,725.6	2,644.9	80.7	3%	Topical Meeting Costs higher due primarily to greater than expected attendance
64 Education Courses/Trainings	700.5	700.5	0.0	0%	
66 Travel	2,261.8	2,247.4	14.4	1%	
68 Awards, Certif, Logo Cost of Goods Sold	131.1	140.6	(9.5)	-7%	
71 Research Projects & Grants	174.7	174.7	0.0	0%	
73 Special Projects	0.0	0.0	0.0	100%	
76 Public Relations	70.5	70.5	0.0	0%	
78 Occupancy & Insurance	928.1	912.2	15.9	2%	
82 Office Expense and Organizational Dues	1,492.5	1,432.6	59.9	4%	Postage expenses higher than budgeted.
84 Outside Services	2,771.9	2,764.0	7.9	0%	
88 Other Expenses	668.3	653.8	14.5	2%	
90 Depreciation	816.3	897.7	(81.4)	-9%	Greater number of assets fully depreciated than budgeted
91 Allocation of Overhead & BOD	(899.4)	(899.4)			
TOTAL EXPENSES	28,586.7	28,440.7			



Cumulative Net Revenue and Expenses (General Fund)

(in Thousands)

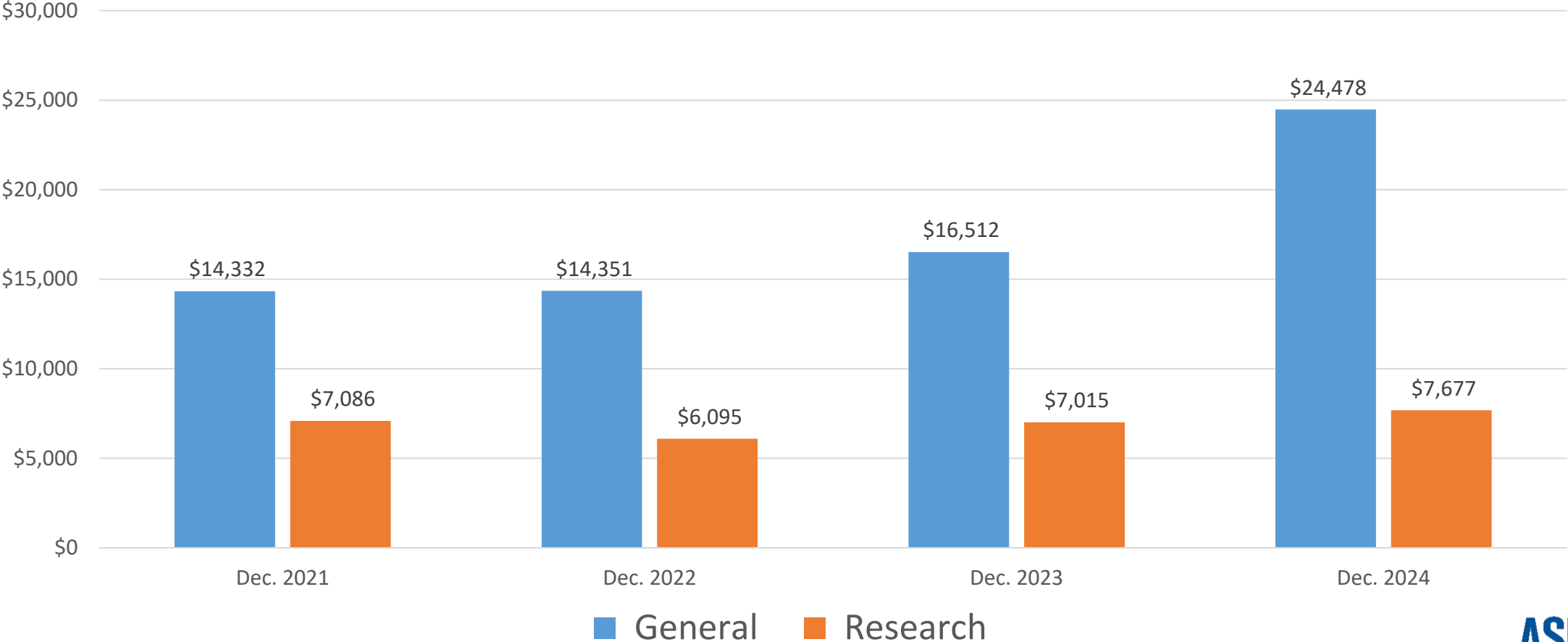


Investments



Investment Reserves

Reserve Fund Balances (in thousands)



Questions?



ASHRAE
Major Variations - FY24-FY25 Forecast vs. Budget
General Fund

	12 Months Ended		Difference		Explanation
	Forecast FY 2025	Budget FY 2025	\$	%	
REVENUES					
31 Membership Dues	\$9,044.3	\$8,844.3	\$ 200.0	2%	Actual Dues are trending higher through December
32 Publication Sales	3,818.6	4,063.6	(245.0)	-6%	New editions of major standards (90.1, 62.1) won't be published until late 2025 and the 2nd edition of Handbook of Smoke Control Engineering was delayed.
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35.1 Meetings/Conferences Registration	2,289.7	2,217.9	71.8	3%	Higher attendance than expected for topical conferences (Decarb and WIA)
35.2 Certification Registration	350.0	350.0	0.0	0%	
35.3 Education Registration	2,275.0	2,040.0	235.0	12%	Very strong HVAC Design Training registrations along with eLearning and In-Company/Chapter trainings.
36 Grant Income	839.2	939.2	(100.0)	-11%	Final Approval of RECI Grant wasn't approved until August 2025 (Budget assumed approval on or before 7/1/2025). Subrecipients also behind on their activities/responsibilities. DOE is currently not communicating but barring any further disruption at the Federal level, impact shouldn't be too significant.
38 Contribution Income	34.4	43.8	(9.4)	-21%	
41.1 AHR Exposition Income	6,700.0	6,500.0	200.0	3%	Original Estimate NSF - 500,000; Lastest NSF confirmation - 515,000
41.2 Contributions and Matching Gifts	(1,169.8)	(1,178.0)	8.2	-1%	
41.3 Exposition Income - Other Countries	0.0	0.0	0.0		No AHR Expo Mexico in FY24-25
44 Reserve Transfers	171.1	130.0	41.1	100%	CEBD and TFBF Reserve Transfers (approved by BOD)
46 Miscellaneous Income	940.9	906.0	34.9	4%	Actual sponsorship income for Topical Meetings more than budgeted
TOTAL REVENUES	28,635.8	28,449.8			
EXPENSES:					
51 Salaries	10,768.8	10,768.8	0.0	0%	
52 Payroll Taxes, Benefits, Personnel	3,371.9	3,371.9	0.0	0%	
61 Publishing	1,325.4	1,273.8	51.6	4%	
62 Promotion (All Depts)	1,278.7	1,286.7	(8.0)	-1%	
64 Meetings/Conferences	2,725.6	2,644.9	80.7	3%	Topical Meeting Costs higher due primarily to greater than expected attendance
64 Education Courses/Trainings	700.5	700.5	0.0	0%	
66 Travel	2,261.8	2,247.4	14.4	1%	
68 Awards, Certif, Logo Cost of Goods Sold	131.1	140.6	(9.5)	-7%	
71 Research Projects & Grants	174.7	174.7	0.0	0%	
73 Special Projects	0.0	0.0	0.0	100%	
76 Public Relations	70.5	70.5	0.0	0%	
78 Occupancy & Insurance	928.1	912.2	15.9	2%	
82 Office Expense and Organizational Dues	1,492.5	1,432.6	59.9	4%	Postage expenses higher than budgeted.
84 Outside Services	2,771.9	2,764.0	7.9	0%	
88 Other Expenses	668.3	653.8	14.5	2%	
90 Depreciation	816.3	897.7			
91 Allocation of Overhead & BOD	(899.4)	(899.4)			
TOTAL EXPENSES	28,586.7	28,440.7			
SURPLUS (DEFICIT) before reserve income	49.1	9.1			

ASHRAE
GENERAL, RESEARCH FUNDS
STATEMENT OF FINANCIAL POSITION - COMPARATIVE
Tuesday, December 31, 2024

	12/31/2024	One Year Ago 12/31/2023	Two Years Ago 12/31/2022	Three Years Ago 12/31/2021	Four Years Ago 12/31/2020
Cash	\$5,395.4	\$727.0	\$1,331.2	\$10,210.2	\$3,613.2
Cash Equivalents	1,073.7	9,398.9	6,020.5		
Marketable Securities at Market Value	32,154.6	23,527.0	20,446.0	21,418.6	18,607.0
Accounts Receivable	1,235.2	1,156.1	1,070.7	1,322.2	1,012.3
Less: Allowance for Uncollectable Accounts	(171.4)	(277.4)	(219.0)	(277.8)	(180.8)
Contribution Pledge Receivables	2,000.0	2,500.0	3,018.3	3,681.1	4,503.9
Miscellaneous Receivables & Deposits	17.5	28.9	1.6	10.0	11.5
Inventory	215.1	266.8	261.9	631.7	531.2
Prepaid Expense	517.0	704.1	718.3	680.1	22,488.1
Property and Equipment-Remaining Value	22,445.3	22,420.2	22,953.4	23,617.9	1,714.1
Due To (From) Other Funds				5.0	2.5
TOTAL ASSETS	64,882.4	60,451.6	55,602.9	61,299.0	52,303.0
Accounts Payable & Accrued Expenses	4,953.1	3,784.0	4,117.3	3,840.6	4,336.6
Refundable Advances	21.6	18.1	11.0	21.4	15.0
Loans				4,270.3	6,191.4
Deferred Income	13,006.7	12,684.0	11,431.9	10,803.4	4,881.7
TOTAL LIABILITIES	17,981.4	16,486.1	15,560.2	18,935.7	15,424.7
Net Assets Beginning of Year	49,343.3	45,490.9	42,547.7	41,204.9	35,580.5
Net Assets -Surplus/(Deficit) for Current Yr	(2,442.3)	(1,525.4)	(2,505.0)	1,158.4	1,297.8
TOTAL LIABILITIES & NET ASSETS	64,882.4	60,451.6	55,602.9	61,299.0	52,303.0
NET ASSETS TO DATE	46,901.0	43,965.5	40,042.7	42,363.3	36,878.3

ASHRAE
ASHRAE CONSOLIDATED (excl Foundation)
For the Six Months Ending Tuesday, December 31, 2024

Fiscal YTD Through Month of Dec				TWELVE MONTHS ENDING JUNE 30				DRAFT	DRAFT	
Actual	Budget	Actual	Budget	Actual	Actual	Forecast	Budget	Budget	Budget	
FY 2024	FY 2024	FY 2025	FY 2025	FY 2023	FY 2024	FY 2025	FY 2025	FY 2026	FY 2027	
REVENUES										
\$4,215.7	\$4,113.4	\$4,581.4	\$4,492.1	31 Membership Dues	\$8,108.7	\$8,642.7	\$9,224.6	\$9,024.6	\$9,520.0	\$9,700.0
1,789.3	1,659.9	1,673.9	1,618.7	32 Publication Sales	3,757.8	3,680.4	3,818.6	4,063.6	3,950.5	3,950.5
1,189.1	1,186.3	1,027.0	1,112.0	34 Advertising Income - Print	2,084.3	2,315.5	2,192.4	2,343.0	2,267.2	2,267.2
499.2	500.0	366.6	579.5	34 Advertising Income - Non-Print	849.3	1,049.0	1,150.0	1,250.0	1,190.5	1,190.5
361.8	265.3	431.2	309.2	35.1 Meetings/Conferences Registration	2,005.8	2,368.0	2,289.7	2,217.9	2,357.8	2,357.8
142.9	119.1	168.2	164.9	35.2 Certification Registration	276.0	356.7	350.0	350.0	360.5	360.5
848.8	964.2	991.4	863.0	35.3 Education Registration	1,889.7	2,018.2	2,275.0	2,040.0	2,343.2	2,343.2
		173.7	469.6	36 Grant Income			839.2	939.2	940.1	940.1
				37 Special Project Income	20.0	75.0				
574.1	586.2	545.1	571.2	38 Contribution Income	2,108.2	2,170.4	2,002.1	2,011.5	2,067.9	2,131.1
				41.1 AHR Exposition Income	6,179.8	6,817.3	6,700.0	6,500.0	6,600.0	6,800.0
45.0	130.4	355.9	311.7	41.2 Contributions and Matching Gifts	136.9	165.4	330.2	322.0	340.7	340.7
232.0	225.0			41.3 Exposition Income - Other Countries	102.2	232.0			440.0	60.0
143.0		122.9	65.0	44 Reserve Transfers	155.1	266.7	451.1	410.0	288.4	288.4
512.0	469.3	640.3	556.2	46 Miscellaneous Income	675.8	918.4	940.9	906.0	933.2	933.2
10,552.9	10,219.1	11,077.6	11,113.1	TOTAL REVENUES	28,349.6	31,075.7	32,563.8	32,377.8	33,600.0	33,663.2
EXPENSES:										
5,122.4	5,312.4	5,743.8	5,701.1	51 Salaries	9,834.9	10,554.2	11,402.1	11,402.1	11,744.2	12,096.5
1,508.7	1,483.7	1,733.5	1,756.4	52 Payroll Taxes, Benefits, Personnel	2,906.2	3,151.6	3,556.4	3,556.4	3,676.9	3,824.7
492.2	507.3	544.6	595.9	61 Publishing	1,356.4	1,194.1	1,332.2	1,280.6	1,375.4	1,375.4
586.6	599.9	498.1	475.9	62 Promotion (All Depts)	1,041.6	1,215.0	1,289.2	1,297.2	1,331.3	1,331.3
630.9	479.9	969.2	740.1	64 Meetings/Conferences	2,203.1	2,837.5	2,746.6	2,665.9	2,828.9	2,828.9
241.3	301.8	276.5	291.9	64 Education Courses/Trainings	614.9	621.8	700.5	700.5	721.5	721.5
1,079.7	896.1	928.3	992.8	66 Travel	2,186.6	2,585.4	2,359.1	2,344.8	2,450.2	2,430.2
105.1	82.6	116.2	71.7	68 Awards, Certif, Logo Cost of Goods Sold	233.7	205.8	147.3	156.8	152.4	152.4
609.8	892.1	1,027.0	682.5	71 Research Projects & Grants	1,100.1	938.2	2,083.7	2,083.7	2,146.2	2,146.2
102.4				73 Special Projects	149.8	244.6				
32.0	36.8	14.1	22.1	76 Public Relations	53.2	67.2	70.8	70.8	72.9	72.9
432.7	443.2	457.6	432.5	78 Occupancy & Insurance	803.4	918.8	928.1	912.2	822.1	822.1
550.9	614.8	686.8	695.9	82 Office Expense and Organizational Dues	1,224.7	1,233.9	1,562.6	1,502.7	1,609.6	1,609.6
1,053.0	984.7	1,130.3	1,164.5	84 Outside Services	1,848.7	2,378.1	2,771.9	2,764.0	2,805.8	2,805.8
273.1	306.7	129.6	319.8	88 Other Expenses	787.9	697.0	748.1	733.6	823.0	823.0
403.5	436.6	385.0	435.5	90 Depreciation	888.8	786.2	816.3	897.7	770.0	730.0
	35.3			91 Allocation of Overhead & BOD						
13,224.3	13,413.9	14,640.6	14,378.6	TOTAL EXPENSES	27,234.0	29,629.4	32,514.9	32,369.0	33,330.4	33,770.5
(2,671.4)	(3,194.8)	(3,563.0)	(3,265.5)	SURPLUS (DEFICIT) before reserve income	1,115.6	1,446.3	48.9	8.8	269.6	(107.3)
				91.5 Contributions - HQ Building	2.0		500.0	500.0	500.0	500.0
				91.6 Interest Expense - HQ						
				91.8 PPP Loan Forgiveness						
				92 Non-Recurring Expenses			450.0	450.0		
				Reserve Investment Income:						
1,289.0	137.4	1,243.7	437.4	95 Investmt Income - Reserves (net of exp)	1,980.8	2,672.9	874.7	874.7	901.0	901.0
(143.0)	(120.0)	(122.9)		96 Transfer Reserves Portion Used Currently	(155.1)	(266.7)	(280.0)	(280.0)	(288.4)	(288.4)
1,146.0	17.4	1,120.8	437.4	Remaining Reserve Investment Income	1,825.7	2,406.2	594.7	594.7	612.6	612.6
(1,525.4)	(3,177.4)	(2,442.2)	(2,828.1)	OVERALL SURPLUS (DEFICIT)	2,943.3	3,852.5	693.6	653.5	1,382.2	1,005.3

ASHRAE
GENERAL (Fund 2)
For the Six Months Ending Tuesday, December 31, 2024

Fiscal YTD Through Month of Dec				TWELVE MONTHS ENDING JUNE 30				DRAFT	DRAFT	
Actual	Budget	Actual	Budget	Actual	Actual	Forecast	Budget	Budget	Budget	
FY 2024	FY 2024	FY 2025	FY 2025	FY 2023	FY 2024	FY 2025	FY 2025	FY 2026	FY 2027	
\$4,131.3	\$4,031.3	\$4,489.8	\$4,402.5							
1,789.3	1,659.9	1,673.9	1,618.7	31 Membership Dues	\$7,946.8	\$8,469.8	\$9,044.3	\$8,844.3	\$9,329.6	\$9,506.0
1,189.1	1,186.3	1,027.0	1,112.0	32 Publication Sales	3,757.8	3,680.4	3,818.6	4,063.6	3,950.5	3,950.5
499.2	500.0	366.6	579.5	34 Advertising Income - Print	2,084.3	2,315.5	2,192.4	2,343.0	2,267.2	2,267.2
361.8	265.3	431.2	309.2	34 Advertising Income - Non-Print	849.3	1,049.0	1,150.0	1,250.0	1,190.5	1,190.5
142.9	119.1	168.2	164.9	35.1 Meetings/Conferences Registration	2,005.8	2,368.0	2,289.7	2,217.9	2,357.8	2,357.8
848.8	964.2	991.4	863.0	35.2 Certification Registration	276.0	356.7	350.0	350.0	360.5	360.5
		173.7	469.6	35.3 Education Registration	1,889.7	2,018.2	2,275.0	2,040.0	2,343.2	2,343.2
				36 Grant Income			839.2	939.2	940.1	940.1
68.6	23.0	22.3	19.0	37 Special Project Income	20.0	75.0				
				38 Contribution Income	92.7	83.1	34.4	43.8	36.0	36.0
45.0	130.4	355.9	311.7	41.1 AHR Exposition Income	6,179.8	6,817.3	6,700.0	6,500.0	6,600.0	6,800.0
232.0	225.0			41.2 Contributions and Matching Gifts	(1,363.1)	(1,334.6)	(1,169.8)	(1,178.0)	(1,159.3)	(1,159.3)
143.0		122.9	65.0	41.3 Exposition Income - Other Countries	102.2	232.0			440.0	60.0
512.0	469.3	640.3	556.2	44 Reserve Transfers	155.1	266.7	171.1	130.0		
9,963.0	9,573.8	10,463.2	10,471.3	46 Miscellaneous Income	675.8	918.6	940.9	906.0	933.2	933.2
				TOTAL REVENUES	24,672.2	27,315.7	28,635.8	28,449.8	29,589.3	29,585.7
4,874.1	4,998.4	5,496.3	5,384.4	EXPENSES:						
1,437.4	1,390.1	1,659.6	1,664.2	51 Salaries	9,261.7	10,067.9	10,768.8	10,768.8	11,091.8	11,424.6
484.3	502.7	539.7	590.3	52 Payroll Taxes, Benefits, Personnel	2,747.7	3,013.8	3,371.9	3,371.9	3,492.1	3,631.6
585.0	599.9	495.7	471.7	61 Publishing	1,345.5	1,178.5	1,325.4	1,273.8	1,368.4	1,368.4
599.0	470.1	960.0	727.8	62 Promotion (All Depts)	1,040.7	1,211.8	1,278.7	1,286.7	1,320.5	1,320.5
241.3	301.8	276.5	291.9	64 Meetings/Conferences	2,186.1	2,788.8	2,725.6	2,644.9	2,807.4	2,807.4
1,006.6	805.8	867.1	934.9	64 Education Courses/Trainings	614.9	621.8	700.5	700.5	721.5	721.5
44.1	45.6	62.3	56.0	66 Travel	2,089.2	2,452.4	2,261.8	2,247.4	2,350.0	2,330.0
(9.9)	4.7	154.3	166.2	68 Awards, Certif, Logo Cost of Goods Sold	152.0	108.2	131.1	140.6	135.8	135.8
102.4				71 Research Projects & Grants	332.9	2.2	174.7	174.7	180.0	180.0
32.0	36.8	14.1	22.0	73 Special Projects	149.8	244.6				
432.7	443.2	457.6	432.5	76 Public Relations	53.1	67.0	70.5	70.5	72.6	72.6
550.4	582.7	678.9	660.7	78 Occupancy & Insurance	803.4	918.8	928.1	912.2	822.1	822.1
1,053.0	984.7	1,130.3	1,164.5	82 Office Expense and Organizational Dues	1,212.7	1,220.0	1,492.5	1,432.6	1,537.5	1,537.5
252.0	280.9	108.9	293.0	84 Outside Services	1,848.7	2,378.1	2,771.9	2,764.0	2,805.8	2,805.8
403.5	436.6	385.0	435.5	88 Other Expenses	738.6	633.7	668.3	653.8	740.8	740.8
(308.8)	(360.8)	(292.3)	(449.7)	90 Depreciation	888.8	786.2	816.3	897.7	770.0	730.0
11,779.1	11,523.2	12,994.0	12,845.9	91 Allocation of Overhead & BOD	(733.8)	(623.7)	(899.4)	(899.4)	(896.3)	(935.3)
(1,816.1)	(1,949.4)	(2,530.8)	(2,374.6)	TOTAL EXPENSES	24,732.0	27,070.1	28,586.7	28,440.7	29,320.0	29,693.3
				SURPLUS (DEFICIT) before reserve income	(59.8)	245.6	49.1	9.1	269.3	(107.6)
				91.5 Contributions - HQ Building	2.0		500.0	500.0	500.0	500.0
				91.6 Interest Expense - HQ						
				91.8 PPP Loan Forgiveness						
				92 Non-Recurring Expenses			450.0	450.0		
				Reserve Investment Income:						
905.1	159.0	944.0	281.2	95 Investmt Income - Reserves (net of exp)	1,395.2	1,922.3	562.3	562.3	579.2	579.2
(143.0)		(122.9)		96 Transfer Reserves Portion Used Currently	(155.1)	(266.7)				
762.1	159.0	821.1	281.2	Remaining Reserve Investment Income	1,240.1	1,655.6	562.3	562.3	579.2	579.2
(1,054.0)	(1,790.4)	(1,709.7)	(2,093.4)	OVERALL SURPLUS (DEFICIT)	1,182.3	1,901.2	661.4	621.4	1,348.5	971.6

ASHRAE
BOARD OF DIRECTORS 2-5nn
For the Six Months Ending Tuesday, December 31, 2024

Fiscal YTD Through Month of Dec				TWELVE MONTHS ENDING JUNE 30						DRAFT	DRAFT
Actual	Budget	Actual	Budget	Actual	Actual	Forecast	Budget	Budget	Budget		
FY 2024	FY 2024	FY 2025	FY 2025	FY 2023	FY 2024	FY 2025	FY 2025	FY 2026	FY 2027		
\$50.0	\$4.6	\$4.6	\$4.8	38 Contribution Income	\$11.7	\$40.5	\$9.5	\$9.5	\$9.8	\$9.8	
10.0		80.0	80.0	41.2 Contributions and Matching Gifts		10.0	80.0	80.0	82.4	82.4	
		91.8	65.0	44 Reserve Transfers			130.0	130.0			
		0.1		46 Miscellaneous Income	0.2	0.1					
60.0	4.6	176.5	149.8	TOTAL REVENUES	11.9	50.6	219.5	219.5	92.2	92.2	
558.3	597.2	673.1	643.9	EXPENSES:							
162.7	178.6	196.9	187.9	51 Salaries	1,133.1	1,161.4	1,287.8	1,287.8	1,326.4	1,366.2	
2.1	2.8	0.0	2.9	52 Payroll Taxes, Benefits, Personnel	307.9	323.3	375.8	375.8	375.8	392.5	
3.9	34.5	1.3		61 Publishing	1.9	2.4	4.0	4.0	4.1	4.1	
15.1	24.8	35.2	23.8	62 Promotion (All Depts)	1.6	5.6	45.6	45.6	47.0	47.0	
403.2	300.6	357.9	336.1	64 Meetings/Conferences	87.7	154.3	71.8	71.8	74.0	74.0	
9.1	2.8	9.4	3.5	66 Travel	979.7	1,028.1	928.6	928.6	956.5	956.5	
	4.7		4.9	68 Awards, Certif, Logo Cost of Goods Sold	18.7	15.1	13.6	13.6	14.0	14.0	
4.0	25.5	2.2	14.6	71 Research Projects & Grants			9.7	9.7	10.0	10.0	
8.7	63.3	85.9	97.1	82 Office Expense and Organizational Dues	10.6	9.3	44.2	44.2	45.5	45.5	
2.9	7.2	5.7	7.5	84 Outside Services	113.5	247.2	218.8	218.8	225.4	225.4	
				88 Other Expenses	6.3	6.8	19.9	19.9	20.5	20.5	
				90 Depreciation			25.0				
(1,200.2)	(1,305.1)	(1,324.5)	(1,509.9)	91 Allocation of Overhead & BOD	(2,685.9)	(2,953.6)	(3,019.8)	(3,019.8)	(3,099.1)	(3,155.6)	
(30.2)	(63.1)	43.1	(187.7)	TOTAL EXPENSES			0.0	0.0	0.1	0.1	
90.2	67.7	133.4	337.5	SURPLUS (DEFICIT) before reserve income	11.9	50.6	219.5	219.5	92.1	92.1	

ASHRAE
OVERHEAD 2-9nn
For the Six Months Ending Tuesday, December 31, 2024

Fiscal YTD Through Month of Dec				TWELVE MONTHS ENDING JUNE 30					
Actual	Budget	Actual	Budget	Actual	Actual	Forecast	Budget	Budget	Budget
FY 2024	FY 2024	FY 2025	FY 2025	FY 2023	FY 2024	FY 2025	FY 2025	FY 2026	FY 2027
		\$18.3							
232.0	225.0								
261.3	266.4	125.9	80.2						
493.3	491.4	144.2	80.2						
				REVENUES					
				36 Grant Income					
				41.1 AHR Exposition Income					
				41.2 Contributions and Matching Gifts					
				41.3 Exposition Income - Other Countries					
				44 Reserve Transfers					
				46 Miscellaneous Income					
				5,140.4	5,931.7	5,395.2	5,160.3	5,705.1	5,525.1
				TOTAL REVENUES					
				EXPENSES:					
				51 Salaries					
				52 Payroll Taxes, Benefits, Personnel					
				61 Publishing					
				62 Promotion (All Depts)					
				64 Meetings/Conferences					
				66 Travel					
				68 Awards, Certif, Logo Cost of Goods Sold					
				76 Public Relations					
				78 Occupancy & Insurance					
				82 Office Expense and Organizational Dues					
				84 Outside Services					
				88 Other Expenses					
				90 Depreciation					
				91 Allocation of Overhead & BOD					
				(1.3)	67.5	105.0	72.2	300.0	0.0
				TOTAL EXPENSES					
				SURPLUS (DEFICIT) before reserve income					
1,139.1	1,260.3	1,281.4	1,451.6	5,141.7	5,864.2	5,290.2	5,088.1	5,405.1	5,525.1
359.3	265.0	400.2	509.9						
1.2	10.9	2.5	1.9						
10.7	12.8	4.7	12.6						
3.4	6.9	6.7	4.9						
105.9	68.4	59.3	55.8						
9.9	8.5	13.3	18.0						
32.0	36.8	14.1	22.0						
407.5	407.9	417.4	403.4						
101.0	141.0	131.1	187.5						
417.8	468.1	367.8	417.0						
29.0	48.2	36.3	25.6						
396.0	397.1	385.0	394.8						
(3,012.8)	(3,123.3)	(3,119.7)	(3,602.1)						
	8.6	0.1	(97.1)						
493.3	482.8	144.1	177.3						

ASHRAE
MEMBERS COUNCIL (2-2nn & 2-8nn)
For the Six Months Ending Tuesday, December 31, 2024

Fiscal YTD Through Month of Dec			
Actual	Budget	Actual	Budget
FY 2024	FY 2024	FY 2025	FY 2025
\$4,131.3	\$4,031.3	\$4,489.8	\$4,402.5
361.8	265.3	431.2	309.2
10.1	15.1	6.5	9.4
35.0	10.0	168.0	137.0
196.6	129.7	494.1	436.6
4,734.8	4,451.4	5,589.6	5,294.7
995.0	944.0	1,104.8	994.5
284.6	281.7	328.7	289.2
6.9	15.9	8.9	17.1
190.2	138.9	161.5	153.9
570.5	422.9	912.1	694.1
419.5	335.1	358.1	421.5
25.2	32.9	39.6	34.4
(9.9)		154.3	161.3
155.4	147.6	123.0	83.2
55.1	67.0	81.8	45.7
199.2	153.5	202.0	194.5
1,230.4	1,216.2	1,296.7	1,404.5
4,122.1	3,755.7	4,771.5	4,493.9
612.7	695.7	818.1	800.8

TWELVE MONTHS ENDING JUNE 30				DRAFT	DRAFT	
Actual	Actual	Forecast	Budget	Budget	Budget	
FY 2023	FY 2024	FY 2025	FY 2025	FY 2026	FY 2027	
REVENUES						
31 Membership Dues	\$7,946.8	\$8,469.8	\$9,044.3	\$8,844.3	\$9,329.6	\$9,506.0
35.1 Meetings/Conferences Registration	2,005.8	2,368.0	2,289.7	2,217.9	2,357.8	2,357.8
35.3 Education Registration						
38 Contribution Income	51.7	19.8	13.0	22.4	14.0	14.0
41.2 Contributions and Matching Gifts	4.5	35.0	137.0	147.3	141.7	141.7
46 Miscellaneous Income	262.6	412.9	561.0	561.0	577.9	577.9
TOTAL REVENUES	10,271.4	11,305.5	12,045.0	11,792.9	12,421.0	12,597.4
EXPENSES:						
51 Salaries	1,883.7	2,053.5	1,989.1	1,989.1	2,048.8	2,110.2
52 Payroll Taxes, Benefits, Personnel	540.0	577.8	578.5	578.5	580.5	606.3
61 Publishing	22.1	17.9	29.3	29.3	30.2	30.2
62 Promotion (All Depts)	314.4	387.4	348.6	341.6	359.1	359.1
64 Meetings/Conferences	2,068.3	2,598.8	2,608.8	2,528.2	2,687.1	2,687.1
66 Travel	814.2	900.1	882.5	868.2	909.6	909.6
68 Awards, Certif, Logo Cost of Goods Sold	105.0	70.4	83.0	92.5	86.2	86.2
71 Research Projects & Grants	332.9	2.2	165.0	165.0	170.0	170.0
82 Office Expense and Organizational Dues	273.0	315.5	305.2	245.8	314.5	314.5
84 Outside Services	159.5	177.0	204.3	177.3	210.4	210.4
88 Other Expenses	391.7	484.8	388.0	388.0	399.6	399.6
91 Allocation of Overhead & BOD	2,411.3	2,630.2	2,809.1	2,809.1	2,799.3	2,921.2
TOTAL EXPENSES	9,316.1	10,215.6	10,391.4	10,212.6	10,595.3	10,804.4
SURPLUS (DEFICIT) before reserve income	955.3	1,089.9	1,653.6	1,580.3	1,825.7	1,793.0

ASHRAE
PUBLISHING & EDUCATION COUNCIL (2-4nn & 5-5nn)
For the Six Months Ending Tuesday, December 31, 2024

Fiscal YTD Through Month of Dec				TWELVE MONTHS ENDING JUNE 30				DRAFT	DRAFT	
Actual	Budget	Actual	Budget	Actual	Actual	Forecast	Budget	Budget	Budget	
FY 2024	FY 2024	FY 2025	FY 2025	FY 2023	FY 2024	FY 2025	FY 2025	FY 2026	FY 2027	
\$1,789.3	\$1,659.9	\$1,673.9	\$1,618.7	32 Publication Sales	\$3,757.8	\$3,680.4	\$3,818.6	\$4,063.6	\$3,950.5	\$3,950.5
1,189.1	1,186.3	1,027.0	1,112.0	34 Advertising Income - Print	2,084.3	2,315.5	2,192.4	2,343.0	2,267.2	2,267.2
499.2	500.0	366.6	579.5	34 Advertising Income - Non-Print	849.3	1,049.0	1,150.0	1,250.0	1,190.5	1,190.5
142.9	119.1	168.2	164.9	35.2 Certification Registration	276.0	356.7	350.0	350.0	360.5	360.5
848.8	964.2	991.4	863.0	35.3 Education Registration	1,889.7	2,018.2	2,275.0	2,040.0	2,343.2	2,343.2
		155.4	455.4	36 Grant Income			810.8	910.8	910.8	910.8
8.5	3.2	11.3	4.9	38 Contribution Income	29.2	22.9	11.9	11.9	12.2	12.2
	120.4	95.4	82.2	41.2 Contributions and Matching Gifts	132.4	120.4	100.7	82.2	103.7	103.7
21.0		31.1		44 Reserve Transfers		36.0	31.1			
38.9	42.2	15.3	14.9	46 Miscellaneous Income	145.7	105.8	144.0	144.0	148.3	148.3
4,537.7	4,595.3	4,535.6	4,895.5	TOTAL REVENUES	9,164.4	9,704.9	10,884.5	11,195.5	11,286.9	11,286.9
				EXPENSES:						
1,452.5	1,426.2	1,621.5	1,485.3	51 Salaries	2,699.2	3,038.3	2,970.6	2,970.6	3,059.7	3,151.5
422.3	435.0	490.8	442.0	52 Payroll Taxes, Benefits, Personnel	771.2	882.8	885.5	885.5	888.8	927.3
474.1	473.1	528.2	568.3	61 Publishing	1,310.8	1,154.4	1,288.2	1,236.6	1,330.0	1,330.0
378.4	408.6	328.1	299.9	62 Promotion (All Depts)	669.6	769.4	785.9	800.9	812.9	812.9
	11.5		0.6	64 Meetings/Conferences	10.1	19.3	23.7	23.7	24.5	24.5
241.3	301.8	276.5	291.9	64 Education Courses/Trainings	614.9	621.8	700.5	700.5	721.5	721.5
37.1	57.7	34.2	38.5	66 Travel	95.5	131.3	120.1	120.1	123.4	123.4
	0.6		0.1	68 Awards, Certif, Logo Cost of Goods Sold			1.2	1.2	1.3	1.3
25.3	35.2	40.2	29.1	78 Occupancy & Insurance	52.2	59.2	81.6	63.6	63.6	63.6
290.0	267.4	315.9	251.3	82 Office Expense and Organizational Dues	562.5	582.4	618.3	617.8	636.9	636.9
381.5	361.7	413.9	595.3	84 Outside Services	818.6	876.4	1,461.3	1,515.3	1,491.8	1,491.8
19.6	71.9	(139.0)	65.3	88 Other Expenses	318.1	101.4	180.2	165.7	238.1	238.1
				90 Depreciation	0.3					
1,796.7	1,842.7	1,885.4	2,122.8	91 Allocation of Overhead & BOD	3,450.7	3,900.2	4,245.6	4,245.6	4,230.8	4,415.1
5,518.8	5,693.4	5,795.7	6,190.4	TOTAL EXPENSES	11,373.7	12,136.9	13,362.7	13,347.1	13,623.3	13,937.9
(981.1)	(1,098.1)	(1,260.1)	(1,294.9)	SURPLUS (DEFICIT) before reserve income	(2,209.3)	(2,432.0)	(2,478.2)	(2,151.6)	(2,336.4)	(2,651.0)

**ASHRAE
TECHNOLOGY COUNCIL
For the Six Months Ending Tuesday, December 31, 2024**

Fiscal YTD Through Month of Dec				TWELVE MONTHS ENDING JUNE 30				DRAFT	DRAFT	
Actual	Budget	Actual	Budget	Actual	Actual	Forecast	Budget	Budget	Budget	
FY 2024	FY 2024	FY 2025	FY 2025	FY 2023	FY 2024	FY 2025	FY 2025	FY 2026	FY 2027	
				REVENUES						
			\$14.2				\$28.4	\$28.4	\$29.3	\$29.3
					20.0	75.0				
		12.5	12.5				12.5	12.5	12.9	12.9
122.0										
15.1	30.9	5.0	24.6			214.8				
137.1	30.9	17.5	51.3	64.0	33.3	40.7	40.7	41.9	41.9	
				TOTAL REVENUES						
				84.0	323.1	81.6	81.6	84.1	84.1	
				EXPENSES:						
729.2	770.6	815.6	809.0	51 Salaries	1,362.1	1,497.1	1,618.1	1,618.1	1,666.6	1,716.6
208.6	229.8	243.0	235.1	52 Payroll Taxes, Benefits, Personnel	399.3	415.0	470.3	470.3	472.2	493.2
0.0		0.1		61 Publishing	0.1	0.2				
1.7	5.1		5.3	62 Promotion (All Depts)		1.7	10.5	10.5	10.8	10.8
10.1	4.0	6.1	4.3	64 Meetings/Conferences	10.1	10.4	7.3	7.3	7.5	7.5
40.9	44.1	57.7	83.1	66 Travel	115.2	167.8	203.6	203.6	229.7	209.7
	0.8			68 Awards, Certif, Logo Cost of Goods Sold	0.2	0.2	2.0	2.0	2.0	2.0
102.4				73 Special Projects	149.8	244.6				
0.0	1.3	106.7	124.0	82 Office Expense and Organizational Dues	102.2	104.4	124.8	124.8	128.5	128.5
189.8	24.6	180.8	9.4	84 Outside Services	115.9	329.5	21.3	21.3	22.0	22.0
1.2	0.1	4.0	0.1	88 Other Expenses	9.0	1.6	0.2	0.2	0.2	0.2
7.4	39.5		40.7	90 Depreciation	35.5	7.4		81.4		
877.0	1,008.7	969.8	1,135.0	91 Allocation of Overhead & BOD	1,743.7	1,870.3	2,269.9	2,269.9	2,262.0	2,360.5
2,168.3	2,128.6	2,383.8	2,446.0	TOTAL EXPENSES	4,043.1	4,650.2	4,728.0	4,809.4	4,801.5	4,951.0
(2,031.2)	(2,097.7)	(2,366.3)	(2,394.7)	SURPLUS (DEFICIT) before reserve income	(3,959.1)	(4,327.1)	(4,646.4)	(4,727.8)	(4,717.4)	(4,866.9)

ASHRAE
RESEARCH (funds 3 & 4)
For the Six Months Ending Tuesday, December 31, 2024

Fiscal YTD Through Month of Dec				TWELVE MONTHS ENDING JUNE 30				DRAFT	DRAFT
Actual	Budget	Actual	Budget	Actual	Actual	Forecast	Budget	Budget	Budget
FY 2024	FY 2024	FY 2025	FY 2025	FY 2023	FY 2024	FY 2025	FY 2025	FY 2026	FY 2027
\$84.3	\$82.1	\$91.6	\$89.6	\$161.9	\$172.9	\$180.3	\$180.3	\$190.4	\$194.0
459.2	563.2	489.3	552.2	1,960.0	2,029.2	1,967.7	1,967.7	2,031.9	2,095.1
				1,500.0	1,500.0	1,500.0	1,500.0	1,500.0	1,500.0
						280.0	280.0	288.4	288.4
						(0.1)			
543.5	645.3	580.9	641.8	3,621.9	3,702.0	3,928.0	3,928.0	4,010.7	4,077.5
REVENUES				EXPENSES:					
				573.2	486.3	633.4	633.4	652.4	672.0
				158.5	137.8	184.4	184.4	184.8	193.1
				10.9	15.6	6.8	6.8	7.0	7.0
				0.9	3.2	10.5	10.5	10.8	10.8
				17.0	48.6	21.0	21.0	21.6	21.6
				97.4	131.1	97.3	97.3	100.3	100.3
				46.7	56.8	16.2	16.2	16.6	16.6
				767.2	936.0	1,908.9	1,908.9	1,966.2	1,966.2
				0.1	0.2	0.3	0.3	0.3	0.3
				12.0	13.9	70.1	70.1	72.2	72.2
				49.3	63.3	79.8	79.8	82.2	82.2
				733.8	623.7	899.4	899.4	896.3	935.3
1,430.3	1,890.5	1,635.2	1,532.8	2,467.0	2,516.5	3,928.1	3,928.1	4,010.7	4,077.6
(886.8)	(1,245.2)	(1,054.3)	(891.0)	1,154.9	1,185.5	(0.1)	(0.1)	0.0	(0.1)
SURPLUS (DEFICIT) before reserve income									

**REPORT TO BOARD OF DIRECTORS
From the Finance Committee
Meeting as of Friday, February 7, 2025**

RECOMMENDATIONS FOR BOARD APPROVAL:

1. Motion: Finance Committee recommends to the Board of Directors approve the following changes to the Rules of the Board related to the creation of the Future Fund:

2.102.002.12 Future Fund

The Future Fund is a fund outside the General Fund and Research Fund to be used for unique projects or strategic initiatives the BOD deems appropriate to ensure ASHRAE's long-term global leadership and sustainability. -The goals of the Future Fund are to provide additional operating revenue for the Society from its annual investment returns or from the programs and/or initiatives funded from the Future Fund. Additionally, the Future Fund is the preferred location for holding unrestricted donations... All returns not utilized annually shall become principal. The principal value of the fund, other than donor-specified funds, shall not be distributed without a vote from the board per section 2.104.006. -General Reserve Fund balances in excess of the upper reserve limit per the Finance Reference Manual should be considered for transfer into the Future Fund on an annual basis.

2.102.002.13 Future Fund Portfolio Value Budgeted as Income

Prior year earnings from the Future Fund can be budgeted as income annually and included in the annual operating budget.

Background: The Board of Directors approved the creation of the Future Fund at the 2024 Annual Meeting. The Rules of the Board need to reflect this.

Fiscal Impact: None

Staff Impact: Time to update the ROB is estimated to be less than 1 hour.

2. Motion: Finance Committee recommends to the Board of Directors to approve the revisions to the Investment Policy (Attachment A) to incorporate language addressing the Future Fund.

Background: The Board of Directors approved the creation of the Future Fund at the 2024 Annual Meeting and the ASHRAE Investment Policy needs to be updated to reflect the addition of this new fund.

Fiscal Impact: None

Staff Impact: Time to update the Investment Policy and provide updates to the ASHRAE Investment Advisor; estimated to be less than 1 hour.

3. Motion: Finance Committee recommends to the Board of Directors to approve creating the Future Fund with \$5 million transferring \$5 million from the General Reserve Fund.

Background: An initial investment is needed to establish the Future Fund.

Fiscal Impact: None

INFORMATION ITEMS:

1. The Finance Investment Subcommittee presented their report to the Finance Committee and included reserve investment results.

The General Reserve Fund as of December 31, 2024, had total assets of \$24.5 million. The General Reserve Fund represents 85% of the forecasted General Fund total expenses for FY24-25. The ROB targets a General Reserve Fund balance that is between 1/3 and 2/3 of typical annual General Fund total expenses.

The Research Reserve Fund as of December 31, 2024, had total assets of \$7.7 million. There is no ROB target range established for the Research Reserve Fund.

The General and Research Reserve Funds have increased in total value by 48.5% and 9.6% over the last 12 months. There was a transfer of \$5 million last February 2024 into the General Reserve Fund from our Short-Term Investments that was invested by Fiducient over a multi-month period.

2. The Consolidated Audited Financial Statements for FY2023-24 were presented to the Finance Committee for informational purposes only as they were previously approved by the Audit Committee in their November 21, 2024 meeting (will be presented to the BOD from the Audit Committee as an information item at the February 9, 2025 BOD meeting).
3. Finance Committee discussed the CEBD FY25-26 Budget that was presented by CEBD Vice Chair Blake Ellis. Mr. Ellis presented a detailed report showing TFBD/CEBD accomplishments, savings from original TFBD, and a new budget proposal that will be presented to ExCom. Finance Committee is in full support of the CEBD efforts and the proposed budget.
4. Finance Committee also reviewed and discussed MBOs for FY24-25:
 - 1) Review new BOD member financial training – assess if further training is warranted. – Ongoing
 - 2) Provide training to the Council members as well as their standing committee chairs on how to read the financial dashboards, use the project valuation tools and compose committee/council budgets prior to the 2024 Winter Meeting. – Ongoing.
 - 3) Training for Chapter Treasurers- realize there are differences between countries and regions, but some best practices would be a good start (e.g. audits for chapters and regions, scholarship creation opportunities, tax implications – there was discussion about the how this training would occur and what Council/group owns this. Staff was asked to investigate a online dropbox where Chapters could store their sensitive documents for safe recordkeeping. – Ongoing
 - 4) Create a sustainable dues calculation method to support global growth – Ongoing.
 - 5) Revisit: Require DL / CRC travel utilize ASHRAE's travel platform service to book travel. Create 1–2 minute training videos so more user friendly – This was discussed and determined there is already a PowerPoint presentation that addresses this so no video needed. But, there was mention of some travel exceptions that ASHRAE's travel platform can't handle so staff is going to try to get a list of airline carriers that don't subscribe to the travel platform or don't accept U.S. based credit cards. – Ongoing.

- 6) Work with Fiducient Advisors to define Future Fund investment strategy and document Future Fund intent for BOD. – Complete
 - 7) Work with the Planning Committee to budget for Strategic Plan Initiative Rollout for the next three years. – Ongoing
5. Finance Committee discussed revisiting the results of the Ad-Hoc Committee in charge of performing a program review and voted on recommendations to increase revenue and/or decrease expenses as certain items needed more investigation or didn't pass the Council or BOD vote. Staff will first review these again to update dollar impacts, assess validity, etc. The Committee agreed there should be a program review such as this annually.

Sarah E. Maston

Date: February 7, 2025

Sarah E. Maston, Chair

REPORT TO THE BOARD OF DIRECTORS
From the ASHRAE Board of Directors Diversity, Equity and Inclusion Advisory Subcommittee
As of January 16, 2025

Recommendations for Board Approval:

1. None.

Information Items:

1. The BOD DEI Committee has established several ad hoc groups to focus on key initiatives: Rebranding/Messaging, Survey, Chapter Resources, and the Cultural Appreciation Event.
 - **Rebranding/Messaging:** This ad hoc is working on launching the IMPACT (Inclusivity for Maximizing Positive Action and Change) program. While details are still under discussion, the program is expected to be launched by the 2025 Annual Meeting. We also expect to have minor edits to the value statement as well as an aspirational mission statement with a clear call to action.
 - **Survey:** A survey has been distributed to targeted demographics, including Technical Committees, Project Committees, the Young Engineers in ASHRAE (YEA) Committee, and the Student Activities Committee. The goal is to establish a baseline understanding of how ASHRAE members perceive DEI within the Society.
 - **Chapter Resources:** This group is updating and reorganizing the DEI Resources Spreadsheet. They have also created a short questionnaire for Chapter Chairs to use when planning events or forums. The group has resumed Regional DEI Chairs calls to facilitate discussions on how to better support Chapters and has made significant progress in collaborating with the Members Promotion Committee.
 - **Cultural Appreciation Event:** This event, held in Phoenix, will celebrate Spanish/Chicano heritage at the Arizona Latino Arts and Cultural Center on a Monday night. It will be a low-cost ticketed event featuring live local entertainment, guest speakers, artwork, hor d'oeuvres, and much more . The venue accommodates up to 150 attendees and is conveniently located two blocks from the hotel. Chapter members that volunteer will assist with on-site logistics. Additional details will be finalized after the current conference.

Date

Chair

**REPORT TO THE BOARD OF DIRECTORS
From the Executive Committee
As of February 8, 2025**

Recommendations for Board Approval:

1. **MOTION:** ExCom recommends that the Board of Directors approve the CEBD Rules of the Board (ROB) as shown in ATTACHMENT A.

BACKGROUND: The CEBD was approved as a new standing committee reporting to the BOD ExCom at the 2024 Annual meeting. At that time, the CEBD provided a summary of items that needed to be placed in the ROB. In addition, the CEBD has created its Manual of Procedures (MOP). SRC has reviewed the proposed ROB and is reviewing the MOP.

CEBD Vote: 9:0:0, CV
ExCom Vote 6:0:0, CNV

FISCAL IMPACT: None.

STAFF IMPACT: Minimal

2. **MOTION:** ExCom recommends that the Board of Directors approve the CEBD budget for February 1, 2025, through June 30, 2026, in the amount of \$1,411,000 as shown in ATTACHMENT B, with a reallocation of the original budget savings of \$1,122,355 and a new request of \$288,645.

BACKGROUND: The BOD unanimously approved a reallocation of the CEBD's original budget savings of \$1,122,355. Additional funding, in the amount of \$288,645, is being requested to keep ASHRAE's decarbonization initiatives moving forward. The requested CEBD budget will further ASHRAE's decarbonization efforts that coordinate internal and external activities, prioritize member and industry needs, further establish ASHRAE as a global leader, and support ASHRAE's Strategic Plan.

The CEBD was able to realize significant savings for several reasons. First, ASHRAE volunteers volunteered their time and hiring contractors was not necessary; also, DOE funding was received on multiple initiatives.

A list and summary of prioritized decarbonization projects is included in ATTACHMENT C.

This request was discussed by Finance Committee and there were no concerns.

FISCAL IMPACT: \$288,645 - \$55,000 from SY 2025-26 Operating Budget and \$233,645 from Reserves

STAFF IMPACT: Staff time for all activities is estimated at 150 hours. This does not include the previously authorized Manager of Building Decarbonization and 20% of the Staff Director of Technology's time.

3. **MOTION:** ExCom recommends that the Board of Directors approve the MOU and work plan with NSBE (National Society of Black Engineers), as shown in ATTACHMENT D.

BACKGROUND: The BOD DEI Advisory Subcommittee was tasked with developing MOUs with organizations that work with and advocate for minority groups.

There was consensus that NSBE's mission aligned with Society.

FISCAL IMPACT: Minimal. The MOU allows for reciprocation of member rates for publications and conferences.

STAFF IMPACT: Minimal.

4. **MOTION:** ExCom recommends to the Board of Directors that the Society AI Policy, as shown in ATTACHMENT E, be approved.

BACKGROUND: The draft policy was developed by a group of volunteers and staff. The policy addresses recommendations and concerns raised by the BOD and ExCom.

Society legal counsel confirmed that it is best practice to not record Society meetings using audio recordings or AI bots. The draft policy follows this recommendation and does not allow for the recording of Society meetings.

ExCom Vote: 7:0:0, CV.

FISCAL IMPACT: None.

STAFF IMPACT: Minimal. Staff will update the webpage, manuals, and distribute the new policy throughout Society.

Information Items:

1. ExCom, acting on behalf of the BOD, was asked to approve a withdrawal of \$19,470 in funding from reserves for additional support for the Chapter Decarbonization Challenge. The Chapter Decarbonization Challenge was initially budgeted for \$50,000. Additional funding was requested by YEA to fund applications that were, in their opinion, clear standouts.

ExCom defeated the motion (1:6:0, CV) but reached consensus to approve one additional chapter project. The additional expense will be pulled from the current budget.

2. ExCom reviewed preliminary recommendations from the Meetings Team regarding the *Future of ASHRAE Conferences*. Detailed data on conference attendance, TC participation, and conference expenses were presented. The recommendations presented also took into account feedback from the March BOD meeting as well as brainstorming sessions with other staff.

Staff reported that after looking at the data, there was a strong feeling that changes to the Annual Conference are needed. The way conferences are currently scheduled and organized has been the same for nearly 50 years.

There was consensus that a deeper dive was needed. Staff will draft a charge for a Presidential Ad Hoc and ExCom will continue the discussion at the spring ExCom meeting.

3. In addition to the proposed new MOUs recommended to the BOD above, the following actions regarding MOUs were also taken:

- A draft MOU with IFHE (International Federation of Healthcare Engineers) was presented for ExCom approval. However, ExCom chose to defer discussion and vote of the new MOU until a work plan is drafted.
- A renewed MOU and work plan with APPA (Association of Physical Plant Administrators) was approved. The approved renewals are included in ATTACHMENT F.

- A renewed MOU and work plan with AABC/ACG/EMA (Associated Air Balance Council/Energy Management Association/AABC Commissioning Group) was approved. The approved renewals are included in ATTACHMENT G.
- A renewed MOU with REHVA (Federation of European Heating, Ventilation and Air Conditioning Associations) was approved. The approved renewal is included in ATTACHMENT H.
- A new work plan with ASHE (American Society for Health Care Engineering) was developed. The ASHE MOU was previously approved by ExCom and subsequently the BOD. The new work plan is included in ATTACHMENT I.

4. A progress update on Society's DOE RECI Grant was provided to ExCom. The update is also being shared with the BOD in ATTACHMENT J. The purpose of the update is to provide a snapshot update of work performed on the grant thus far, including year-to-date spending.

Subcontractors doing work on the grant have indicated that additional work will not be done on any RECI grants until it is clear what direction the new administration will be taking.

5. The R3C presented a summary report to ExCom of the industry roundtables conducted in 2024 (ATTACHMENT K). The summary report is the first from the newly formed R3C and aims to present the wealth of information collected at the CRC industry roundtables in a way that is beneficial to the councils and committees.

The report includes recommendations to the councils on items to be considered moving forward and incorporated into their MOUs. The goal of the R3C is to create a living document.

There was consensus that CRC industry roundtables would be continued in 2025. The R3C will ensure that there is consistency with roundtable questions and will develop the new questions for 2025 in conjunction with the President and the President-Elect.

An action item was assigned to staff to send the R3C report to everyone involved in last year's roundtables.

February 8, 2025
Date

M. Dennis Knight
Chair

2.413 CENTER OF EXCELLENCE FOR BUILDING DECARBONIZATION**2.413.001 SCOPE AND PURPOSE**

The Center of Excellence for Building Decarbonization (CEBD) is focused on strategy, thought-leadership, industry collaboration, and public advocacy related to building decarbonization. The CEBD works with ASHRAE councils and committees that will provide operational execution of decarbonization activities.

The CEBD defines ASHRAE's strategy/roadmap for decarbonization. It will define the annual priority of all of ASHRAE's decarbonization projects aligned with that strategy and will work with ASHRAE Councils and subcommittees, to request/secure the funding to accomplish those projects from the Executive Committee. ASHRAE Councils and their subcommittees, standing committees, and technical committees will manage the funded projects.

2.413.002 MEMBERSHIP2.413.002.1 Composition

The members of this committee shall be as follows:

- A. Eight (8) voting members, the Chair (voting member) and the Vice Chair (voting member) for a total of ten (10) voting members.
- B. Non-voting members include the Treasurer of the Society, who shall serve as Coordinating Officer, and a liaison appointed from each of the Councils (Members Council, Technology Council and Publishing and Education Council), and up to three (3) members of other organizations collaborating with the CEBD.

2.413.002.2 Qualifications

- A. The Chair and Vice Chair shall hold the grade of Full Member or higher in the Society.
- B. Voting members of the committee shall hold an Associate Grade or higher in the Society.
- C. Liaisons from the Councils must be members of the Council they represent.

2.413.002.3 Term of Service

The term of service is intended to be one (1) year for the Chair, one (1) year for the Vice Chair and two (2) years for other voting members, subject to ROB 3.300 Election and Appointment Procedures.

2.413.003 OPERATION2.413.003.1 Primary Responsibilities

The CEBD will take a leading role in strategic and operational activities related to building decarbonization. The following is a summary of these primary activities.

- A. Strategy. Provide strategic direction for ASHRAE building decarbonization activities and work with the Planning Committee to incorporate appropriate goals into the Society strategic plan. ASHRAE's building decarbonization strategy shall be updated annually. Develop, prioritize, lead and/or participate in strategic initiatives, generally with partner organizations, that accelerate and advance building decarbonization on a global basis.
- B. Thought Leadership. Monitor future issues and trends and publicize ASHRAE's global decarbonization work to establish ASHRAE's leadership position in partnership with ASHRAE Marketing.
- C. Collaboration. Coordinate joint initiatives, events, and projects with other organizations whose work complements ASHRAE's building decarbonization activities.
- D. Public Advocacy. Work with the Government Affairs Committee to provide reliable and scientifically based technical information on decarbonization to policymakers, media, and the public.

2.413.003.2 Supporting Activities

The CEBD shall take a supporting role in a number of operational activities and may lead an operational activity if it so chooses. Where the CEBD takes a supporting role, these activities shall be led by one or more relevant councils or committees across the global ASHRAE organization. These activities shall be coordinated by ASHRAE staff, with assistance provided by CEBD members as needed. The following is a summary of these activities.

- A. Technical Resources. Expedite the delivery of technical resources that help design engineers and other industry professionals deliver and operate low-carbon buildings. Develop additional technical resources, system design, and operations guides related to building decarbonization.
- B. Technical Review. Review technical content related to building decarbonization submitted to ASHRAE for comment and approval.
- C. Standards Coordination. Coordination of ASHRAE and other industry standards for consistency in decarbonization related terminology, definitions and guidance.
- D. Training Development. Develop on-demand and in-person building decarbonization related training seminar materials for society and chapter level audiences.
- E. Resource Internationalization. Tailor existing technical resources and training materials for application outside of the United States and Canada.
- F. Member Engagement. Encourage ASHRAE membership to embrace decarbonization-related practices and provide appropriate opportunities for volunteer engagement.
- G. Development. Work with the Development Committee to help secure funding from industry partners, foundations, governments, and other external sources for the activities of the CEBD.

2.413.004 STRATEGIC PLAN

2.413.004.1 The committee shall develop procedures in coordination with the Planning Committee for recommending updates to the ASHRAE Strategic Plan and Research Strategic Plan on a continuous basis.

2.413.004.2 At a minimum, the committee shall submit a report or roadmap to the Executive Committee prior to the Annual Meeting that includes the status of each activity that supports the fulfillment of the committee's assignments under the strategic plan.

2.413.004.3 Prior to each Annual Meeting, the committee shall report to the Executive Committee all recommendations for changes to the strategic plan as reported by the Councils reporting to the committee at the Annual Meeting.

CEBD Budget

February 1, 2025 - June 30, 2026

Item	Amount	Funding Request Timing		Potential Funding Source		
		Feb-25	Jun-25	General R	Research R	Operating
CEBD Led Activities						
Projects						
Evaluating Global ASHRAE Member Needs for Building Decarbonization Education	\$ 10,000	\$ 10,000	\$ -	\$ 10,000		
Streamlined, Flexible International Building Code Framework	\$ 60,000	\$ 60,000	\$ -	\$ 60,000		
	\$ 70,000	\$ 70,000	\$ -	\$ 70,000	\$ -	\$ -
Tech Council Led Activities						
Projects						
Refrigerant Emissions Management, Tracking and Compliance	\$ 270,000	\$ 270,000	\$ -	\$ 270,000		
Update HVAC Equipment Service Life Data		\$ -	\$ -	\$ -		
Whole Life Carbon Gap Analysis	\$ 80,000	\$ 80,000	\$ -	\$ 80,000		
Standardizing Whole Life Carbon Calculations for Building Systems	\$ 250,000	\$ 250,000	\$ -	\$ 250,000		
Whole Building/MEP Benchmarking Data Research Project	\$ 150,000	\$ 150,000	\$ -	\$ 150,000		
Decarbonization Framework for Data Centers	\$ 50,000	\$ 50,000	\$ -	\$ 50,000		
Residential Retrofits: A Summary of Existing Resources			\$ -			
Decarbonization Strategies for Supermarket Industry Archetypes	\$ 100,000	\$ 100,000	\$ -	\$ 100,000		
	\$ 900,000	\$ 900,000	\$ -	\$ 150,000	\$ 750,000	\$ -
Decarbonization Standard Development						
Expediting Carbon Related Standards	\$ 50,000	\$ 50,000	\$ -	\$ 50,000		
	\$ 50,000	\$ 50,000	\$ -	\$ 50,000	\$ -	\$ -
	\$ 950,000	\$ 950,000	\$ -	\$ 200,000	\$ 750,000	\$ -

CEBD Budget

February 1, 2025 - June 30, 2026

Item	Amount	Funding Request Timing		Potential Funding Source		
		Feb-25	Jun-25	General R	Research R	Operating
PubEd Council Led Activities						
Training & Education						
eLearning Course Adjustments	\$ 10,000		\$ 10,000	\$ 10,000		
Heat Pump Application and Operation Course	\$ 20,000		\$ 20,000	\$ 20,000		
Building Decarbonization Retrofits for Existing Buildings	\$ 20,000		\$ 20,000	\$ 20,000		
Building Decarbonization Audit Course	\$ 20,000		\$ 20,000	\$ 20,000		
Whole Life Carbon ALI Course	\$ 20,000		\$ 20,000	\$ 20,000		
Additional Course Material TBD	\$ 20,000		\$ 20,000	\$ 20,000		
	\$ 100,000	\$ -	\$ 100,000	\$ 100,000	\$ -	\$ -
Publications						
Decarbonizing Building Thermal Systems - Version 2	\$ 10,000		\$ 10,000	\$ 10,000		
	\$ 10,000	\$ -	\$ 10,000	\$ 10,000	\$ -	\$ -
Certification						
Decarbonization Certification			\$ -			
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	\$ 110,000	\$ -	\$ 110,000	\$ 110,000	\$ -	\$ -
Website and Marketing						
Updates to CEBD Website	\$ -		\$ -			
External Content Development			\$ -			
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Administrative Items						
Travel Expenses (SY 2025-2026)	\$ 55,000	\$ 24,500	\$ 30,500			\$ 55,000
Contingency	\$ 226,000	\$ 204,000	\$ 22,000	\$ 76,000	\$ 150,000	\$ -
Totals	\$ 1,411,000	\$ 1,248,500	\$ 162,500	\$ 456,000	\$ 900,000	\$ 55,000

CENTER OF EXCELLENCE FOR BUILDING DECARBONIZATION (CEBD)
PROJECT SUMMARIES (2024/2025)

1. Evaluating Global ASHRAE Member Needs for Building Decarbonization Education

Abstract: This project aims to understand ASHRAE global member needs regarding decarbonization and the current abilities and interests of ASHRAE members in understanding, evaluating, and analyzing options for reducing the carbon footprint of buildings and their technical systems. It will also provide research-driven, needs-based member segmentation to assist in targeting and tailoring specific education and training deliverables.

Timeline: 2024-2025

Budget: \$10,000

2. Refrigerant Emissions Management, Tracking and Compliance

Abstract: This project focuses on collecting more current refrigerant leakage data for North American installed HVACR equipment to serve two main uses: 1) provide a current, consistent, peer-reviewed data set, agnostic of manufacturer-specific data, for ASHRAE standards to reference as part of their whole-life carbon calculations for annual leakage rate assumptions, and 2) Provide current data on most common leakage points for equipment to help direct future R&D around design, installation, or maintenance changes which could reduce future refrigerant leakage rates.

Timeline: 2025-2028

Budget: \$270,000 (Research Reserves)

3. Streamlined, Flexible-International Building Code Framework

Abstract: 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 along with supporting tools and training.

Timeline: 2024-2026

Budget: \$60,000

4. Update HVAC Equipment Service Life Data

Abstract: 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 and Life Cycle Assessments (LCAs). The source of equipment service life is Chapter 38 of the ASHRAE HVAC Applications Handbook and other relevant information. In 1978, ASHRAE published a research project RP-186, which contained service life data for HVAC equipment. In 2005, a research project, TRP-

1237, gathered updated data on equipment, but it was not as comprehensive as RP-186. Both data sets need updating due to new manufacturing processes and equipment categories.

Timeline: 2024-2026

Budget: \$180,000 – Funded through RAC

5. Whole Life Carbon Gap Analysis

Abstract: The goal of this project is to

Timeline: 2025-2026

Budget: \$80,000 (Research Reserves)

6. Whole Life Carbon Calculation Guide for Building Systems

Abstract: This project focuses on the whole life carbon impact of Mechanical, Electrical, and Plumbing (MEP) systems, which can contribute up to 50% of a building's total embodied carbon footprint. The goal is to develop a standardized methodology to calculate, report, and reduce carbon emissions associated with MEP systems throughout their lifecycle.

Timeline: 2025-2028

Budget: \$250,000 (Research Reserves)

7. Decarbonization Framework for Data Centers

Abstract: Data centers play a notable role in global carbon emissions, consuming about 1-1.5% of the world's electricity and contributing to 0.9% of energy-related GHG emissions. As their energy use is projected to rise sharply, a cohesive strategy for decarbonization becomes imperative. This initiative is designed to deliver practical strategies suited to the varied environments of data centers. The expected result is an all-encompassing framework that enables operators to cut carbon emissions substantially while maintaining operational effectiveness and dependability.

Timeline: 2025-2026

Budget: \$50,000

8. Residential Retrofits: A Summary of Existing Resources

Abstract: Residential retrofits will play a critical role in meeting decarbonization goals. This project will compile well-vetted resources on residential decarbonization retrofits so that ASHRAE members can easily reference them.

Timeline: 2025

Budget: \$0 (Staff time only)

9. Decarbonization Strategies for Supermarket Industry Archetypes

Abstract: The supermarket building needs air-conditioning, dehumidification, heating of air and water, potable and sanitary water, and significant refrigeration for food and beverage. Designers and engineers must meet competing goals while designing grocery stores – reduce energy and overall emissions (both

direct and indirect) and enable a store design that increases sales and customer satisfaction. There are very few resources that integrate all the different needs of supermarkets in order to design a sustainable holistic building that can help meet the supermarket's decarbonization goals. This project will begin by identifying and establishing a working group of experts focusing on decarbonization specifically for the supermarket industry. The working group's task will be ongoing, reviewing existing ASHRAE and industry content on decarbonization from a supermarket building design point of view and identifying the needs of future guideline documents that can help the practitioners.

Timeline: 2024-2026

Budget: \$100,000

10. Whole Building/MEP Benchmarking Data Research Project

Abstract: This project focuses on benchmarking the whole life carbon impact of Mechanical, Electrical, and Plumbing (MEP) systems across various commercial building typologies (e.g., offices, schools, hospitals, warehouses, retail). The goal is to develop a standardized methodology for assessing, reporting, and reducing MEP-related carbon emissions, supporting industry-wide decarbonization strategies. The research will focus on generating reliable data points for industry stakeholders and standardizing methods to enable scalable, global implementation while addressing regional nuances.

Timeline: 2025-2026

Budget: \$150,000 (Research Reserves)



Memorandum of Understanding ASHRAE and NSBE

Founded in 1894, ASHRAE, Atlanta, Georgia serves humanity by advancing the arts and sciences of heating, ventilation, air-conditioning, refrigeration and their allied fields. The ASHRAE vision is a healthy and sustainable built environment for all.

Founded in 1975, NSBE (National Society of Black Engineers) supports and promotes the aspirations of collegiate and pre-collegiate students and technical professional in engineering and technology. With more than 600 chapters and more than 24,000 active members in the U.S. and abroad, NSBE's mission is "to increase the number of culturally responsible black engineers who excel academically, succeed professionally and positively impact the community."

ASHRAE and NSBE agree to support the Memorandum of Understanding to advance and promote the mutual interests of their respective members. We are committed to working together toward on the following activities and goals:

ASHRAE shall take responsibility for initiating the first annual liaison meeting. Action items with assigned responsibilities shall be recorded at each meeting. The parties responsible for ensuring this MOU is actively pursued through the term of the agreement are:

For ASHRAE:

Jeff Littleton
Executive Vice President
ASHRAE
180 Technology Parkway
Peachtree Corners, GA 30092
Phone: 404-636-8400
Email: jlittleton@ashrae.org

For NSBE:

Danielle Mazzuchi
Manager, Collegiate and Professional Programs
National Society of Black Engineers
205 Daingerfield Road
Alexandria, VA 22314
Phone: 301-653-2762
Email: dmazzuchi@nsbe.org

CONFERENCES AND MEETINGS

Where mutually beneficial, each organization shall explore opportunities to publicize the other organization's conferences. .

ASHRAE and NSBE agree to meet virtually at least once a year to explore opportunities to provide speakers at the other organization's events, provide updates and perspectives on technologies and trends of mutual interest and connection between organizations.

LOGOs:

Both parties will acknowledge the partnership on their respective websites.

SCHOLARSHIPS

NSBE agrees to provide relevant information, ASHRAE including scholarships, updates, and resources, to the NSBE National Programs Chair. The National Programs Chair will then disseminate this information to the program chairs within NSBE's six regions.

PUBLICATIONS

ASHRAE agrees to provide NSBE Students with the current ASHRAE student discount to ASHRAE Publications, Handbooks (hard copy or digital copy).

TERMINATION

Either party may terminate this MOU, with or without stated cause, upon providing the other party with thirty (30) days written notice of intent to terminate.

TERM

This Memorandum of Understanding (MOU) will be effective on the Effective Date and will continue for a term of one (1) year. The MOU will be automatically renewed or extended by mutual written agreement of the Parties for additional one-year terms with an expiration of (3) years from the Effective date, unless either institution provides written notice of termination at least thirty (30) days prior to the end of the current term. This Memorandum of Understanding shall be effective commencing on April 1, 2024, and shall remain in effect through March 31, 2025, in accordance with NSBE's annual MOU cycle.

LEGAL STANDING

This MOU reflects a commitment by ASHRAE and NSBE to continue and enhance their working relationship and individual efforts toward achieving mutual objectives described above. It does not create a binding obligation or agreement between the two organizations, and neither organization has an obligation to negotiate toward or enter into a binding written agreement. In addition, this MOU does not create a partnership, joint venture, fiduciary relationship or similar relationship between ASHRAE and [ORG]. Furthermore, it is understood that this Memorandum of Understanding is conceived as a dynamic document, meant to change as circumstances and priorities warrant. It may be modified or amended by written agreement between both organizations.

FOR ASHRAE

Printed Name/Title

Signature

Date

FOR NSBE

Printed Name/Title

Signature

Date



ASHRAE and NSBE
2025-2028 Work Plan
to Support the
2025 Memorandum of Understanding

This MOU is an agreement to advance and promote the mutual interests of their respective members. This Work Plan outlines activities the organizations agree upon to implement the goals of the MOU. The organizations will review and update this Work Plan quarterly.

UPDATED WORKPLAN: 01.27.2025

ACTIVITY/TASK	RESPONSIBLE PARTY	TIMING	STATUS and COMMENTS
1. COMMUNICATION AND MEETINGS FOR THE MOU			
Main Liaison Meeting	Reps	Once a year	This virtual meeting shall be held outside of ASHRAE and NSBE conference schedule.
As appropriate and agreed upon, both parties will acknowledge the partnership on their respective websites.	ASHRAE: Gupta NSBE: Danielle		ASHRAE and NSBE will acknowledge the partnership on their respective websites.
2. STUDENT ACTIVITIES			
ASHRAE and NSBE will work together to explore opportunities to promote student membership at the local level. This will allow NSBE students to receive ASHRAE Student benefits.	ASHRAE: Katie Thompson NSBE: Danielle		ASHRAE and NSBE will investigate methods to increase awareness among members/students about each other's organizations. If NSBE students register as ASHRAE members they will receive the student rate for ASHRAE publications.
3. SCHOLARSHIPS			

ACTIVITY/TASK	RESPONSIBLE PARTY	TIMING	STATUS and COMMENTS
ASHRAE will inform NSBE of scholarship and grant opportunities to students who are registered as ASHRAE members. NSBE to provide information about ASHRAE scholarships and grants to their National Programs Chair to disperse amongst their six regions' program chairs.	ASHRAE: M. Smith NSBE: Danielle		https://www.ashrae.org/communities/student-zone/scholarships-and-grants https://www.ashrae.org/communities/student-zone/scholarships-and-grants/scholarship-program

KEY CONTACTS FOR WORKPLAN

NSBE Leads:					
MOU Executive Oversight	Danielle	Mazzuchi	Mgr. Collegiate Programs	dmazzuchi@nsbe.org	301-653-2762
MOU Project Manager					
Conferences and Meetings					
Publications, Communications, and Education					
Marketing and Promotion					
ASHRAE Staff Leads:					
Executive Oversight	Jeff	Littleton	Executive VP	jlittleton@ashrae.org	678-539-1100
DEI Advisory Subcommittee	Susanna	Hanson	DEI Chair	Susanna.hanson@honeywell.com	
DEI Advisory Subcommittee	Tanisha	Lisle	DEI Staff Liaison	tmlisle@ashrae.org	678-539-1111
Student Activities	Katie	Thompson	Asst. Manager, Student Activities	kthompson@ashrae.org	678-539-1212
Scholarships	Margaret	Smith	Manager of Development	msmith@ashrae.org	678-539-1201
Marketing and Promotion	Vanita	Gupta	Director of Marketing	vgupta@ashrae.org	678-539-1150



DRAFT

ASHRAE Policy for Use of Artificial Intelligence (AI)

Purpose:

The purpose of this Artificial Intelligence (AI) policy is to guide the ethical and effective use of AI technologies to serve ASHRAE members. As a publisher of technical guidelines and standards, organizer of conferences, provider of educational programs, and a research institution, ASHRAE strives to ensure that AI is used in ways that align with our mission, upholds intellectual property rights, and promotes fairness, transparency, and accountability.

Scope:

This policy applies to all employees, contractors, volunteers, and third-party partners involved in the development, use, or management of AI tools and technologies related to ASHRAE programs including publications, conferences, educational programs, and technical research.

1. Use Cases

AI is a powerful tool that can enhance ASHRAE's ability to create, share, and disseminate technical knowledge. However, it is crucial to ensure that AI is applied responsibly and within the scope of the following permissible use cases:

- **Research:** AI can be used for analyzing large datasets, identifying trends, and assisting in technical research. Outputs from AI systems should always be reviewed by ASHRAE experts for validity, accuracy, and relevance.
- **Content Editing:** AI can assist in editing content, such as improving grammar, suggesting alternative phrasing, or refining technical language. AI should **not** be used to independently generate technical guidelines, standards, or official publications.

- **Idea Generation:** AI can be used to generate ideas for new projects, innovations, or educational content. However, these ideas should always undergo human validation before implementation.
 - **Educational Programs:** AI can be integrated into educational tools, such as chatbots for interactive learning, personalized course recommendations, or automatic grading. The use of AI should aim to support, not replace, human interaction in educational contexts.
 - **Conference Management:** AI tools may be used to assist in tasks such as scheduling, organizing speaker sessions, or matching attendees with relevant content. AI tools used in the management of conferences must respect privacy and data security standards.
-

2. Understanding AI

Artificial Intelligence (AI) refers to the simulation of human intelligence processes by computers. These processes include learning (acquiring knowledge and rules for using it), reasoning (using the rules to reach conclusions), and self-correction. Machine Learning (ML), a subset of AI, involves the development of algorithms that allow systems to learn from and make predictions based on data. AI can support decision-making, automate repetitive tasks, and analyze vast amounts of data at speeds beyond human capability.

3. Definitions

- **Artificial Intelligence (AI):** A branch of computer science that focuses on creating systems capable of performing tasks that normally require human intelligence.
 - **Machine Learning (ML):** A technique in AI where algorithms are trained to recognize patterns in data and make predictions or decisions based on that data.
 - **Natural Language Processing (NLP):** A subfield of AI focused on enabling machines to understand and interpret human language, such as text and speech.
 - **Bias:** A systematic error in AI predictions or outputs due to biased data or flawed algorithms, often leading to unfair or discriminatory outcomes.
-

4. Recording Tools

To protect privacy and confidentiality and to protect ASHRAE and its members legally, the use of recording bots or AI-based transcription tools during conferences, webinars, or meetings is prohibited unless explicitly authorized. All recorded data must comply with privacy laws and be reviewed by a human for compliance.

5. Intellectual Property Rights and Risk Management

AI tools must be used in a way that protects the intellectual property (IP) of our organization and its stakeholders. This includes:

- **Respecting Copyright:** AI tools must not be used to infringe upon existing copyrights, whether by reproducing content verbatim or creating derivative works without appropriate permission. AI tools cannot be used to generate original content that is not validated
 - **Data Security:** AI systems must handle sensitive data, including proprietary research, member information, and conference content, securely. AI tools should not be used to extract, process, or store proprietary data without ensuring compliance with data protection regulations.
 - **Third-Party Content:** When using AI tools to generate or analyze content, users must ensure that they respect the ownership rights of third-party creators and sources.
-

6. Bias and Fairness in AI

AI systems can unintentionally perpetuate or exacerbate bias due to biased training data or flawed algorithmic design. To ensure fairness and accuracy:

- **Human Oversight:** All AI-generated content, reports, or recommendations must be reviewed by a qualified human before being used in official documents, presentations, or public releases.
- **Bias Detection and Mitigation:** AI systems used at ASHRAE must be regularly assessed for bias, particularly when they affect decisions in research, education, or event management. We will prioritize the use of tools that promote fairness and transparency.

- **Inclusive Development:** Efforts will be made to ensure that AI development and implementation consider the diversity of the populations we serve, including underrepresented groups.
-

7. Guidelines for AI Use in Content Creation

- **Technical Documents:** AI **cannot** be used to independently draft or finalize official technical guidelines, standards, or research papers published by ASHRAE. AI may be used to assist in research, gather preliminary information, or propose content structures, but all final content must be reviewed, validated, and approved by subject matter experts.
 - **Research:** AI tools can assist in data analysis, hypothesis generation, and literature reviews. However, all AI-assisted findings must undergo rigorous human validation to ensure they meet the standards of scientific integrity and accuracy.
 - **Idea Generation:** AI can support brainstorming and idea generation for new research initiatives or educational program development. However, human experts must critically assess these ideas before they are pursued or shared publicly.
 - **Human Validation:** For all content generated by AI, human review is essential to ensure the information is relevant, accurate, and aligned with our organizational values and standards.
 - **Meetings:** ASHRAE meetings at the Society, Regional or Chapter level should not be recorded using any means, including AI tools. AV Recordings of instructors or lecturers are allowed with permission as long as the recording does not take place at a meeting.
-

8. Prohibited Uses

- **Sensitive Documents:** AI tools must not be used to process, analyze, or read documents containing sensitive or proprietary information that is not intended for public dissemination, unless specifically authorized. This includes technical research documents, internal communications, and unpublished works.
- **Deceptive Content:** AI should not be used to generate misleading or deceptive content, including content that misrepresents research findings or misleads the public or our stakeholders.

9. Transparency and Accountability

We commit to being transparent about our use of AI technologies. Any AI systems used by ASHRAE and its volunteers must:

- **Provide Clear Disclosure:** Stakeholders, including conference participants, students, and research collaborators, should be informed when AI is used in processes that affect them (e.g., data analysis, content generation, automated feedback).
- **Accountability Mechanisms:** We will establish mechanisms to monitor and evaluate AI systems to ensure they are used in compliance with ethical standards, organizational policies, and applicable laws.

10. Compliance and Review

All volunteers, staff, contractors, and partners using AI tools must comply with this policy. Non-compliance with the AI policy may result in corrective actions or termination of contracts.

This policy will be reviewed and updated annually to reflect changes in technology, regulatory requirements, and best practices in AI use.

Conclusion

The responsible use of AI is integral to advancing ASHRAE's mission and vision. Through this AI policy, we aim to enhance the quality of our publications, research, educational offerings, and conferences while maintaining ethical standards and safeguarding the trust of our stakeholders.



Memorandum of Understanding ASHRAE and APPA

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Founded in 1914, APPA, "Leadership in Educational Facilities" supports educational excellence with quality leadership and professional management through education, research, and recognition. *APPA's vision is "Preparing for Every Future" by creating a future of continuous learning.*

ASHRAE and APPA agree to support the Memorandum of Understanding to advance and promote the mutual interests of their respective members. We are committed to working together on the following activities and goals for joint mutual benefit:

CONSISTENT LEADERSHIP COMMUNICATION

Recognizing the importance of communication in organizational collaboration, both organizations commit to hold a liaison meeting annually (either in person or via conference call) of designated ASHRAE/APPA senior representatives to:

- Ensure ongoing advancement of collaborative projects.
- Keep each respective organization informed of major initiatives.
- Discuss new opportunities for collaboration.

ASHRAE/APPA will appoint members to a joint MOU Coordinating Committee. This Committee will document action items with assigned responsibilities at each meeting and update the Work Plan.

Annex 1. The Coordinating Committee will be responsible for ensuring this MOU is actively pursued through the term of the agreement. The parties responsible for the ongoing management of this agreement are:

FOR ASHRAE:

Jeff Littleton
Executive Vice President, ASHRAE
~~1791 Tullie Circle, NE~~ 180 Technology Parkway, NW
—1643 Prince St.
~~Atlanta~~ Peachtree Corners, GA 30092-20
—Alexandria, VA 22314
Tel: 404-636-8400
Email: jlittleton@ashrae.org

FOR APPA:

~~E. Lander Medlin~~ Lalit Agarwal
~~Executive Vice President & CEO~~, APPA

Tel: 703-684-1446
Email: lander@appa.org

MEMBERSHIP

Each organization agrees to provide the other with complimentary reciprocal membership for up to two individuals at a time. The list of individuals will be reviewed and updated as needed on an annual basis.

CONFERENCES AND MEETINGS

Each organization agrees to provide the other with a meeting invitation and two complimentary VIP registrations to the primary annual meeting.

ASHRAE and APPA agree to explore opportunities to provide speakers at the other organization's meetings to help provide updates and perspectives on technologies and trends of mutual interest.

Where mutually beneficial, each organization shall help publicize the other organization's meetings and promote attendance.

CHAPTER COLLABORATION

ASHRAE and APPA agree to coordinate promotion of joint grassroots meetings of respective members. Exchange of Region/Chapter/Section leader contact information will be considered as one way to accomplish this objective.

ADVOCACY

Where mutually beneficial and to the extent allowed by laws and corporate policies, ASHRAE and APPA agree to work together on common public affairs goals and ideologies. During annual liaison meetings, public affairs strategies will be discussed, and common goals identified. Collaborative opportunities to be considered include:

- Joint promotion of codes and standards at the local, state, and federal levels.
- Promoting mutually beneficial positions during the development and passage of state and federal legislation.
- Education of legislators on issues important to the members of each organization.

PUBLICATIONS

Recognizing that electronic and print publications are a primary means of disseminating new technologies, trends, and practices, ASHRAE and APPA agree to:

- Provide at least one complimentary subscription for the primary membership periodical to be received at the headquarters location of the other organization.
- Explore opportunities to jointly produce publications of mutual benefit.
- Cross-market each organization's publications where appropriate and with industry standard distributor discounts.
- Use periodicals to promote the other organization's events, publications, and other activities.
- Explore mutually beneficial ways to translate ASHRAE publications into Spanish and French for distribution in Mexico and Canada, respectively.

EDUCATION

As leading providers of conventional and online educational services and in recognition of the vital role professional development has for our respective members, ASHRAE and APPA agree to:

- Cross-market educational offerings at the chapter, regional, national, and international levels.
- Explore opportunities to co-develop new courses or other training programs that take advantage of overlapping and complimentary expertise between ASHRAE and APPA.
- Discuss ways that certification programs can be promoted, jointly developed, or administered.

TECHNICAL ACTIVITIES COORDINATION

ASHRAE and APPA agree to foster technical cooperation in areas of common interest by:

- Encourage members in each organization to participate on technical committees and task forces.
- Provide opportunities to participate in and comment on proposed standards, guidelines, policies, and position statements developed on technical subjects as they relate to buildings and community developments.
- Establish liaison representatives to key technical committees where mutually beneficial to do so.

RESEARCH

Recognizing the importance research plays in accelerating the transformation to a more sustainable built environment, ASHRAE and APPA agree to:

- Identify opportunities for research funding from other sources.

ADMINISTRATIVE CONTACTS

The administrative contacts for actions tied to this MOU shall be:

FOR ASHRAE:

Jeff Littleton
 Executive Vice President
 ASHRAE
~~1791 Tullie Circle NE~~ 180 Technology Parkway, NW
 —1643 Prince St.
 Atlanta ~~Peachtree Corners~~, GA 3009220
 —Alexandria, VA 22314
 Tel: 404-636-8400
 Email: jlittleton@ashrae.org

FOR APPA:

~~E. Lander Medlin~~ Lallit Agarwal
~~Executive Vice President~~ & CEO
 APPA

 Tel: 703-684-1446
 Email: lander@appa.org

TERMINATION

Either party may terminate this MOU, with or without stated cause, upon providing the other party with thirty (30) days written notice of intent to terminate.

TERM

The term of this Memorandum of Understanding shall begin when signed by both parties and shall terminate at the end of three (3) years unless extended at that time by written agreement.

LEGAL STANDING

This MOU reflects a commitment by ASHRAE and APPA to continue and enhance their working relationship and individual efforts toward achieving mutual objectives described above. It does not create a binding obligation or agreement between the two organizations, and neither organization has an obligation to negotiate toward or enter into a binding written agreement. In addition, this MOU does not create a partnership, joint venture, fiduciary relationship, or similar relationship between ASHRAE and APPA. Furthermore, it is understood that this Memorandum of Understanding is conceived as a dynamic document, meant to change as circumstances and priorities warrant. It may be modified or amended by written agreement between both organizations.

FOR ASHRAE:

FOR APPA:

Printed Name / Title

Printed Name / Title

Signature

Signature

Date

Date

Printed Name / Title

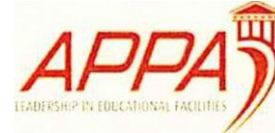
Printed Name / Title

Signature

Signature

Date

Date



ASHRAE and APPA
2025-2028 Work Plan
to Support the
2025 Memorandum of Understanding

These two organizations signed a Memorandum of Understanding (MOU) in the XXXXX of 2025 at the XXXXXXXX in XXXXXXXX, XX. This MOU is an agreement to advance and promote the mutual interests of their respective members. This Work Plan outlines specific activities the organizations agree upon to implement the goals of the MOU. The organizations will review and update this Work Plan quarterly.

UPDATED WORKPLAN: 02-04-2024

ACTIVITY/TASK	RESPONSIBLE PARTY	TIMING	STATUS and COMMENTS
COMMUNICATION AND MEETINGS FOR THE MOU			
Main Liaison Meeting	Liaisons	Semi -Annually – At ASHRAE Winter and Annual Conferences	These meetings should be scheduled a minimum of two weeks prior to the ASHRAE Winter and Annual Conferences.
1. CONFERENCES AND MEETINGS			
Provide meeting invitation and two complimentary VIP registrations to a primary annual meeting.	ASHRAE: TBD APPA: TBD	ASHRAE Winter Conference	MOU calls for each organization to provide meeting invitation and two complimentary VIP registrations to primary annual meeting.

ACTIVITY/TASK	RESPONSIBLE PARTY	TIMING	STATUS and COMMENTS
ASHRAE and APPA agree to explore opportunities to provide speakers at the other organization's meetings to help provide updates and perspectives on technologies and trends of mutual interest.	ASHRAE speakers: TBD ASHRAE Technical Program: Giometti APPA:	ASHRAE Meetings are generally held in January and June APPA Spring Conference will be held in April	<ol style="list-style-type: none"> 1. It will be the responsibility of the two liaisons to facilitate the implementation of the Work Plan within each organization. The implementation may involve forming work groups, task forces, or other vehicles to ensure opportunities are realized. 2. Share educational opportunities by announcements in each organization's publications (newsletter, webpage, Insights, etc.) 3. ASHRAE and APPA will share the list of APPA and ASHRAE chapters that may consider joint meetings with a local APPA /ASHRAE chapter/ASHRAEs
2. EDUCATION			
Cooperate to provide real-world education and experience for University students in an energy audit and assessment leading to a Building Energy Quotient (BuildingEQ) rating	ASHRAE: Student Activities Committee APPA:		
Share educational opportunities by announcements in each organization's publications (newsletter, webpage, Insights, etc.)	ASHRAE: Director of Marketing, Vanita Gupta APPA: Sr. Director of Learning & Certification, Michelle Frederick		Consider two one-hour educational sessions prepared by ASHRAE and one or two owner/operator sessions at the ASHRAE Annual Meeting.
Catalog of educational offerings reviewed by both organizations to find overlaps and potential gaps to be filled	ASHRAE: Director of Publishing and Education, Mark Owen APPA: Sr. Director of Learning & Certification, Michelle Frederick		

ACTIVITY/TASK	RESPONSIBLE PARTY	TIMING	STATUS and COMMENTS
HVAC Design Courses at APPA Meetings	ASHRAE: Director of Publishing and Education, Mark Owen APPA: Sr. Director of Learning & Certification, Michelle Frederick		
3. TECHNICAL ACTIVITIES COORDINATION			
Jointly develop a 'Living Labs' initiative to bring together campuses from around the country that are actively engaged in the development and implementation on new strategies on how buildings operate and interact with the electric grid and electrical utilities.	ASHRAE: ACG:		Examples of emerging trends include the Smart Grid, the Internet of Things (IoT), Distributed Energy Resources (DERS), renewable energy, batteries, etc. Living Lab initiative is designed to: <ul style="list-style-type: none"> • Share best practices • Data sharing, as appropriate • Expected results versus actual results • Implementation challenges Initial Living Lab participants identified <ul style="list-style-type: none"> • Montana State University • University of Arizona • Carleton University • Michigan State University • University of Iowa • Universities that have indicated interest but not yet confirmed include: <ul style="list-style-type: none"> ○ Stanford ○ Santa Fe Community College ○ Montclair in New Jersey ○ New Mexico State University Living Lab comparison matrix developed by APPA Recruiting additional campuses to be a part of the Living Lab Initiative

ACTIVITY/TASK	RESPONSIBLE PARTY	TIMING	STATUS and COMMENTS
4. RESEARCH			
Promote research in areas where research results will add to the body of knowledge in TCO	ASHRAE: APPA:		<ul style="list-style-type: none"> <li>• {Total Cost of Ownership), Energy & Sustainability, Key Performance Indicators & Metrics; and Facilities Management Standard

DRAFT

KEY CONTACTS FOR WORKPLAN

APPA Leads:					
MOU Executive Oversight	Lalit	Agarwal	President & CEO		
MOU Project Manager	Darryl	Boyce	APPA Liaison		
Conferences and Meetings					
Publications, Communications, and Education					
Technical Activities Coordination					
Policy, Government Affairs, and Advocacy					
RESEARCH					
Marketing and Promotion					
Grassroots/Chapter Outreach/Member Services					
Education/Publications					
Standards/Guidelines/Research					
ASHRAE Staff Leads:					
Executive Oversight	Jeff	Littleton	Executive VP	jlittleton@ashrae.org	678-539-1100
Board Liaison	Dunstan	Macauley	ASHRAE Liaison	dmacauley@gmail.com	202-494-0874
Conferences and Meetings	Lizzy	Seymour	Director of Member Services	lseymour@ashrae.org	
	Tony	Giometti	Senior Manager, Conference Programs	giometti@ashrae.org	
Publications and Education	Mark	Owen	Director of Publications and Education	mowen@ashrae.org	
Technical Activities Coordination	Stephanie	Reiniche	Director of Technology	sreiniche@ashrae.org	
Policy, Government Affairs, and Advocacy	Alice	Yates	Director of Government Affairs	ayates@ashrae.org	
Marketing and Promotion	Vanita	Gupta	Director of Marketing	vgupta@ashrae.org	678-539-1150
Grassroots/Chapter Outreach/Member Services	Lizzy	Seymour	Director of Member Services	lseymour@ashrae.org	678-539-1104



APPA LIAISON REPORT TO THE ASHRAE EXECUTIVE COMMITTEE

February 4, 2025

INFORMATIONAL ITEMS

1. Lalit Agarwal has recently been appointed the new CEO of APPA replacing Lander Medlin.
2. The ASHRAE-APPA MOU terminated in July of 2022. APPA would like to continue to foster the relationship with ASHRAE and sign a new MOU (see attached MOU and Work Plan).
 - a. The primary difference between the proposed MOU and the previous one is APPA is proposing that each organization provides complimentary reciprocal membership for up to two individuals.
3. The 2025 APPA Spring Conference will be in New Orleans from April 9-11, 2025.

Submitted By: _____

Dunstan L. Macauley

Attachments: Existing MOU
Proposed MOU
Proposed Workplan



Memorandum of Understanding ASHRAE and APPA

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Founded in 1914, APPA, "Leadership in Educational Facilities", mission is to support educational excellence with quality leadership and professional management through education, research, and recognition. APPA's vision is "*Preparing for Every Future*" by creating a future of continuous learning.

ASHRAE and APPA agree to support the Memorandum of Understanding to advance and promote the mutual interests of their respective members. We are committed to working together on the following activities and goals for joint mutual benefit:

CONSISTENT LEADERSHIP COMMUNICATION

Recognizing the importance of communication in organizational collaboration, both organizations commit to hold a liaison meeting annually (either in person or via conference call) of designated ASHRAE/APPA senior representatives to:

- Ensure ongoing advancement of collaborative projects.
- Keep each respective organization informed of major initiatives.
- Discuss new opportunities for collaboration.

ASHRAE/APPA will appoint members to a joint MOU Coordinating Committee. This Committee will document action items with assigned responsibilities at each meeting and update the Work Plan. Annex 1. The Coordination Committee will be responsible for ensuring this MOU is actively pursued through the term of the agreement. The parties responsible for the ongoing management of this agreement are:

For ASHRAE:

Jeff Littleton
Executive Vice President ASHRAE
1791 Tullie Circle, NE
Atlanta, GA 30320
Tel: 404-636-8400
Email: jlittleton@ashrae.org

For APPA:

E. Lander Medlin
Executive Vice President, APPA
1643 Prince St.
Alexandria, VA 223134
Tel: 703-684-1446
Email: lander@appa.org

CONFERENCES AND MEETINGS

Each organization agrees to provide the other with a meeting invitation and two complimentary VIP registrations to the primary annual meeting.

ASHRAE and APPA agree to explore opportunities to provide speakers at the other organization's meetings to help provide updates and perspectives on technologies and trends of mutual interest.

Where mutually beneficial, each organization shall help publicize the other organization's meetings and promote attendance.

CHAPTER COLLABORATION

ASHRAE and APPA agree to coordinate promotion of joint grassroots meetings of respective members. Exchange of Region/Chapter/Section leader contact information will be considered as one way to accomplish this objective.

ADVOCACY

Where mutually beneficial and to the extent allowed by laws and corporate policies, ASHRAE and APPA agree to work together on common public affairs goals and ideologies. During annual liaison meetings, public affairs strategies will be discussed and common goals identified. Collaborative opportunities to be considered include:

- Joint promotion of codes and standards at the local, state and federal levels.
- Promoting mutually beneficial positions during the development and passage of state and federal legislation.
- Education of legislators on issues important to the members of each organization.

PUBLICATIONS

Recognizing that electronic and print publications are a primary means of disseminating new technologies, trends and practices, ASHRAE and APPA agree to:

- Provide at least one complimentary subscription the primary membership periodical to be received at the headquarters location of the other organization.
- Explore opportunities to jointly produce publications of mutual benefit.
- Cross-market each organization's publications where appropriate and with industry standard distributor discounts.
- Use periodicals to promote the other organization's events, publications and other activities.
- Explore mutually beneficial ways to translate ASHRAE publications into Spanish and French for distribution in Mexico and Canada, respectively.

EDUCATION

As leading providers of conventional and online educational services and in recognition of the vital role professional development has for our respective members, ASHRAE and APPA agree to:

- Cross-market educational offerings at the chapter, regional, national and international levels.
- Explore opportunities to co-develop new courses or other training programs that take advantage of overlapping and complimentary expertise between ASHRAE and APPA.
- Discuss ways that certification programs can be promoted, jointly developed, or administered.

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- Providing opportunities to participate in and comment on proposed standards, guidelines, policies, and position statements developed on technical subjects as they relate to buildings and community developments.
- Establishing liaison representatives to key technical committees where mutually beneficial to do so.

RESEARCH

Recognizing the importance research plays in accelerating the transformation to a more sustainable built environment, ASHRAE and APPA agree to:

- Disseminate research results quickly, focusing on high-impact findings.
- Identify opportunities for research funding from other sources.

ADMINISTRATIVE CONTACTS

The administrative contacts for actions tied to this MOU shall be:

For ASHRAE:

Jeff Littleton
Executive Vice President
ASHRAE
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Atlanta, GA 30320
Tel: 404-636-8400
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LEGAL STANDING

This MOU reflects a commitment by ASHRAE and APPA to continue and enhance their working relationship and individual efforts toward achieving mutual objectives described above. It does not create a binding obligation or agreement between the two organizations, and neither organization has an obligation to negotiate toward or enter into a binding written agreement. In addition, this MOU does not create a partnership, joint venture, fiduciary relationship or similar relationship between ASHRAE and APPA. Furthermore, it is understood that this Memorandum of Understanding is conceived as a dynamic document, meant to change as circumstances and priorities warrant. It may be modified or amended by written agreement between both organizations.

FOR ASHRAE

DARRYL K. BOYCE, PRESIDENT
Printed Name/Title

[Signature]
Signature

July 16, 2019.
Date

FOR APPA

Christopher M. Koppal, AVT
Printed Name/Title

[Signature]
Signature

7-16-19
Date

Jeff Littleton, EVP
Printed Name/Title

[Signature]
Signature

July 30, 2019
Date

E. Lander Medlin, EVP
Printed Name/Title

[Signature]
Signature

7/16/19
Date



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—Alexandria, VA 22314
Tel: 404-636-8400
Email: jlittleton@ashrae.org

FOR APPA:

E. Lander Medlin Lalit Agarwal
Executive Vice President & CEO, APPA

Tel: 703-684-1446
Email: lander@appa.org

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- Explore opportunities to co-develop new courses or other training programs that take advantage of overlapping and complimentary expertise between ASHRAE and APPA.
- Discuss ways that certification programs can be promoted, jointly developed, or administered.

TECHNICAL ACTIVITIES COORDINATION

ASHRAE and APPA agree to foster technical cooperation in areas of common interest by:

- Encourage members in each organization to participate on technical committees and task forces.
- Provide opportunities to participate in and comment on proposed standards, guidelines, policies, and position statements developed on technical subjects as they relate to buildings and community developments.
- Establish liaison representatives to key technical committees where mutually beneficial to do so.

RESEARCH

Recognizing the importance research plays in accelerating the transformation to a more sustainable built environment, ASHRAE and APPA agree to:

- Identify opportunities for research funding from other sources.

ADMINISTRATIVE CONTACTS

The administrative contacts for actions tied to this MOU shall be:

FOR ASHRAE:

Jeff Littleton
 Executive Vice President
 ASHRAE
 1791 Tullie Circle NE 180 Technology Parkway, NW
 — 1643 Prince St.
 Atlanta Peachtree Corners, GA 30092-20
 — Alexandria, VA 22314
 Tel: 404-636-8400
 Email: jlittleton@ashrae.org

FOR APPA:

~~E. Lander Medlin~~ Lallit Agarwal
~~Executive Vice-President & CEO~~
 APPA

 Tel: 703-684-1446
 Email: lander@appa.org

TERMINATION

Either party may terminate this MOU, with or without stated cause, upon providing the other party with thirty (30) days written notice of intent to terminate.

TERM

The term of this Memorandum of Understanding shall begin when signed by both parties and shall terminate at the end of three (3) years unless extended at that time by written agreement.

LEGAL STANDING

This MOU reflects a commitment by ASHRAE and APPA to continue and enhance their working relationship and individual efforts toward achieving mutual objectives described above. It does not create a binding obligation or agreement between the two organizations, and neither organization has an obligation to negotiate toward or enter into a binding written agreement. In addition, this MOU does not create a partnership, joint venture, fiduciary relationship, or similar relationship between ASHRAE and APPA. Furthermore, it is understood that this Memorandum of Understanding is conceived as a dynamic document, meant to change as circumstances and priorities warrant. It may be modified or amended by written agreement between both organizations.

FOR ASHRAE:

FOR APPA:

Printed Name / Title

Printed Name / Title

Signature

Signature

Date

Date

Printed Name / Title

Printed Name / Title

Signature

Signature

Date

Date



Memorandum of Understanding ASHRAE and APPA

Founded in 1894, ASHRAE, Atlanta, Georgia advances the arts and sciences of heating ventilating, air-conditioning and refrigeration to serve humanity and promote a sustainable world.

Founded in 1914, APPA, "Leadership in Educational Facilities" supports educational excellence with quality leadership and professional management through education, research, and recognition.

ASHRAE and APPA agree to support the Memorandum of Understanding to advance and promote the mutual interests of their respective members. We are committed to working together on the following activities and goals for joint mutual benefit:

CONSISTENT LEADERSHIP COMMUNICATION

Recognizing the importance of communication in organizational collaboration, both organizations commit to hold a liaison meeting annually (either in person or via conference call) of designated ASHRAE/APPA senior representatives to:

- Ensure ongoing advancement of collaborative projects.
- Keep each respective organization informed of major initiatives.
- Discuss new opportunities for collaboration.

ASHRAE/APPA will appoint members to a joint MOU Coordinating Committee. This Committee will document action items with assigned responsibilities at each meeting and update the Work Plan.

Annex 1. The Coordinating Committee will be responsible for ensuring this MOU is actively pursued through the term of the agreement. The parties responsible for the ongoing management of this agreement are:

FOR ASHRAE:

Jeff Littleton
Executive Vice President, ASHRAE
180 Technology Parkway, NW
Peachtree Corners, GA 30092
Tel: 404-636-8400
Email: jlittleton@ashrae.org

FOR APPA:

Lalit Agarwal
President & CEO, APPA
1643 Prince St.
Alexandria, VA 22314
Tel: 703-684-1446
Email:

MEMBERSHIP

Each organization agrees to provide the other with complimentary reciprocal membership for up to two individuals at a time. The list of individuals will be reviewed and updated as needed on an annual basis.

CONFERENCES AND MEETINGS

Each organization agrees to provide the other with a meeting invitation and two complimentary VIP registrations to the primary annual meeting.

ASHRAE and APPA agree to explore opportunities to provide speakers at the other organization's meetings to help provide updates and perspectives on technologies and trends of mutual interest.

Where mutually beneficial, each organization shall help publicize the other organization's meetings and promote attendance.

CHAPTER COLLABORATION

ASHRAE and APPA agree to coordinate promotion of joint grassroots meetings of respective members. Exchange of Region/Chapter/Section leader contact information will be considered as one way to accomplish this objective.

ADVOCACY

Where mutually beneficial and to the extent allowed by laws and corporate policies, ASHRAE and APPA agree to work together on common public affairs goals and ideologies. During annual liaison meetings, public affairs strategies will be discussed, and common goals identified. Collaborative opportunities to be considered include:

- Joint promotion of codes and standards at the local, state, and federal levels.
- Promoting mutually beneficial positions during the development and passage of state and federal legislation.
- Education of legislators on issues important to the members of each organization.

PUBLICATIONS

Recognizing that electronic and print publications are a primary means of disseminating new technologies, trends, and practices, ASHRAE and APPA agree to:

- Provide at least one complimentary subscription for the primary membership periodical to be received at the headquarters location of the other organization.
- Explore opportunities to jointly produce publications of mutual benefit.
- Cross-market each organization's publications where appropriate and with industry standard distributor discounts.
- Use periodicals to promote the other organization's events, publications, and other activities.
- Explore mutually beneficial ways to translate ASHRAE publications into Spanish and French for distribution in Mexico and Canada, respectively.

EDUCATION

As leading providers of conventional and online educational services and in recognition of the vital role professional development has for our respective members, ASHRAE and APPA agree to:

- Cross-market educational offerings at the chapter, regional, national, and international levels.
- Explore opportunities to co-develop new courses or other training programs that take advantage of overlapping and complimentary expertise between ASHRAE and APPA.
- Discuss ways that certification programs can be promoted, jointly developed, or administered.

TECHNICAL ACTIVITIES COORDINATION

ASHRAE and APPA agree to foster technical cooperation in areas of common interest by:

- Encourage members in each organization to participate on technical committees and task forces.
- Provide opportunities to participate in and comment on proposed standards, guidelines, policies, and position statements developed on technical subjects as they relate to buildings and community developments.
- Establish liaison representatives to key technical committees where mutually beneficial to do so.

RESEARCH

Recognizing the importance research plays in accelerating the transformation to a more sustainable built environment, ASHRAE and APPA agree to:

- Identify opportunities for research funding from other sources.

ADMINISTRATIVE CONTACTS

The administrative contacts for actions tied to this MOU shall be:

FOR ASHRAE:

Jeff Littleton
Executive Vice President
ASHRAE
180 Technology Parkway, NW
Peachtree Corners, GA 30092
Tel: 404-636-8400
Email: jlittleton@ashrae.org

FOR APPA:

Lallit Agarwal
President & CEO
APPA
1643 Prince St.
Alexandria, VA 22314
Tel: 703-684-1446
Email:

TERMINATION

Either party may terminate this MOU, with or without stated cause, upon providing the other party with thirty (30) days written notice of intent to terminate.

TERM

The term of this Memorandum of Understanding shall begin when signed by both parties and shall terminate at the end of three (3) years unless extended at that time by written agreement.

LEGAL STANDING

This MOU reflects a commitment by ASHRAE and APPA to continue and enhance their working relationship and individual efforts toward achieving mutual objectives described above. It does not create a binding obligation or agreement between the two organizations, and neither organization has an obligation to negotiate toward or enter into a binding written agreement. In addition, this MOU does not create a partnership, joint venture, fiduciary relationship, or similar relationship between ASHRAE and APPA. Furthermore, it is understood that this Memorandum of Understanding is conceived as a dynamic document, meant to change as circumstances and priorities warrant. It may be modified or amended by written agreement between both organizations.

FOR ASHRAE:

FOR APPA:

Printed Name / Title

Printed Name / Title

Signature

Signature

Date

Date

Printed Name / Title

Printed Name / Title

Signature

Signature

Date

Date



ASHRAE and APPA
 2025-2028 Work Plan
 to Support the
 2025 Memorandum of Understanding

These two organizations signed a Memorandum of Understanding (MOU) in the XXXXX of 2025 at the XXXXXXXX in XXXXXXXX, XX. This MOU is an agreement to advance and promote the mutual interests of their respective members. This Work Plan outlines specific activities the organizations agree upon to implement the goals of the MOU. The organizations will review and update this Work Plan quarterly.

UPDATED WORKPLAN: 02-04-2024

ACTIVITY/TASK	RESPONSIBLE PARTY	TIMING	STATUS and COMMENTS
COMMUNICATION AND MEETINGS FOR THE MOU			
Main Liaison Meeting	Liaisons	Semi -Annually – At ASHRAE Winter and Annual Conferences	These meetings should be scheduled a minimum of two weeks prior to the ASHRAE Winter and Annual Conferences.
1. CONFERENCES AND MEETINGS			
Provide meeting invitation and two complimentary VIP registrations to a primary annual meeting.	ASHRAE: TBD APPA: TBD	ASHRAE Winter Conference	MOU calls for each organization to provide meeting invitation and two complimentary VIP registrations to primary annual meeting.

ACTIVITY/TASK	RESPONSIBLE PARTY	TIMING	STATUS and COMMENTS
ASHRAE and APPA agree to explore opportunities to provide speakers at the other organization's meetings to help provide updates and perspectives on technologies and trends of mutual interest.	ASHRAE speakers: TBD ASHRAE Technical Program: Giometti APPA:	ASHRAE Meetings are generally held in January and June APPA Spring Conference will be held in April	<ol style="list-style-type: none"> 1. It will be the responsibility of the two liaisons to facilitate the implementation of the Work Plan within each organization. The implementation may involve forming work groups, task forces, or other vehicles to ensure opportunities are realized. 2. Share educational opportunities by announcements in each organization's publications (newsletter, webpage, Insights, etc.) 3. ASHRAE and APPA will share the list of APPA and ASHRAE chapters that may consider joint meetings with a local APPA /ASHRAE chapter/ASHRAEs
2. EDUCATION			
Cooperate to provide real-world education and experience for University students in an energy audit and assessment leading to a Building Energy Quotient (BuildingEQ) rating	ASHRAE: Student Activities Committee APPA:		
Share educational opportunities by announcements in each organization's publications (newsletter, webpage, Insights, etc.)	ASHRAE: Director of Marketing, Vanita Gupta APPA: Sr. Director of Learning & Certification, Michelle Frederick		Consider two one-hour educational sessions prepared by ASHRAE and one or two owner/operator sessions at the ASHRAE Annual Meeting.
Catalog of educational offerings reviewed by both organizations to find overlaps and potential gaps to be filled	ASHRAE: Director of Publishing and Education, Mark Owen APPA: Sr. Director of Learning & Certification, Michelle Frederick		

ACTIVITY/TASK	RESPONSIBLE PARTY	TIMING	STATUS and COMMENTS
HVAC Design Courses at APPA Meetings	ASHRAE: Director of Publishing and Education, Mark Owen APPA: Sr. Director of Learning & Certification, Michelle Frederick		
3. TECHNICAL ACTIVITIES COORDINATION			
Jointly develop a 'Living Labs' initiative to bring together campuses from around the country that are actively engaged in the development and implementation on new strategies on how buildings operate and interact with the electric grid and electrical utilities.	ASHRAE: ACG:		Examples of emerging trends include the Smart Grid, the Internet of Things (IoT), Distributed Energy Resources (DERS), renewable energy, batteries, etc. Living Lab initiative is designed to: <ul style="list-style-type: none"> • Share best practices • Data sharing, as appropriate • Expected results versus actual results • Implementation challenges Initial Living Lab participants identified <ul style="list-style-type: none"> • Montana State University • University of Arizona • Carleton University • Michigan State University • University of Iowa • Universities that have indicated interest but not yet confirmed include: <ul style="list-style-type: none"> ○ Stanford ○ Santa Fe Community College ○ Montclair in New Jersey ○ New Mexico State University Living Lab comparison matrix developed by APPA Recruiting additional campuses to be a part of the Living Lab Initiative

ACTIVITY/TASK	RESPONSIBLE PARTY	TIMING	STATUS and COMMENTS
4. RESEARCH			
Promote research in areas where research results will add to the body of knowledge in TCO	ASHRAE: APPA:		<ul style="list-style-type: none"> <li>• {Total Cost of Ownership), Energy & Sustainability, Key Performance Indicators & Metrics; and Facilities Management Standard

DRAFT

KEY CONTACTS FOR WORKPLAN

APPA Leads:					
MOU Executive Oversight	Lalit	Agarwal	President & CEO		
MOU Project Manager	Darryl	Boyce	APPA Liaison		
Conferences and Meetings					
Publications, Communications, and Education					
Technical Activities Coordination					
Policy, Government Affairs, and Advocacy					
RESEARCH					
Marketing and Promotion					
Grassroots/Chapter Outreach/Member Services					
Education/Publications					
Standards/Guidelines/Research					
ASHRAE Staff Leads:					
Executive Oversight	Jeff	Littleton	Executive VP	jlittleton@ashrae.org	678-539-1100
Board Liaison	Dunstan	Macauley	ASHRAE Liaison	dmacauley@gmail.com	202-494-0874
Conferences and Meetings	Lizzy	Seymour	Director of Member Services	lseymour@ashrae.org	
	Tony	Giometti	Senior Manager, Conference Programs	giometti@ashrae.org	
Publications and Education	Mark	Owen	Director of Publications and Education	mowen@ashrae.org	
Technical Activities Coordination	Stephanie	Reiniche	Director of Technology	sreiniche@ashrae.org	
Policy, Government Affairs, and Advocacy	Alice	Yates	Director of Government Affairs	ayates@ashrae.org	
Marketing and Promotion	Vanita	Gupta	Director of Marketing	vgupta@ashrae.org	678-539-1150
Grassroots/Chapter Outreach/Member Services	Lizzy	Seymour	Director of Member Services	lseymour@ashrae.org	678-539-1104



Memorandum of Understanding ASHRAE and AABC/ACG/EMA

Founded in 1894, **ASHRAE**, Atlanta, Georgia serves humanity by advancing the arts and sciences of heating, ventilation, air-conditioning, refrigeration and their allied fields. The ASHRAE vision is a healthy and sustainable built environment for all.

Founded in 1965, the **Associated Air Balance Council (AABC)** establishes industry standards for total system balance of building environments and is the only Association that exclusively certifies independent agencies. Members receive certification, technical training, continuing education, marketing, business resources, professional networking, and industry advocacy.

The **AABC Commissioning Group (ACG)**, founded in 2005, and the **Energy Management Association (EMA)**, founded in 2014, promote independent, third party, building systems commissioning and energy management services by providing members with industry leading certification, technical guidelines, education, training, advocacy, and networking opportunities.

ASHRAE and AABC, ACG and EMA agree to support the Memorandum of Understanding to advance and promote the mutual interests of their respective members. We are committed to working together toward the following activities and goals:

[Note : When necessary or convenient to reference collectively, AABC, ACG and EMA-which are interrelated organizations with common management staff-will be referred to as "the Groups" for the remainder of this document.]

CONSISTENT LEADERSHIP COMMUNICATION

Recognizing the importance of communication in organizational collaboration, both organizations commit to hold a liaison meeting annually (either in person or via conference call) of designated ASHRAE/AABC/ACG/EMA senior representatives to:

- Ensure ongoing advancement of collaborative projects.
- Keep each respective organization informed of major initiatives.
- Discuss new opportunities for collaboration.

ASHRAE and AABC/ACG/EMA shall take responsibility for initiating the first annual liaison meeting. Action items with assigned responsibilities shall be recorded at each meeting. The parties responsible for ensuring this MOU is actively pursued through the term of the agreement are :

For ASHRAE:

Jeff Littleton
Executive Vice President
180 Technology Parkway
Peachtree Corners, GA
30092 Phone: 404-636-8400
Email : jlittleton@ashrae.org

For AABC/ACG/EMA:

Raymond Bert
Executive Director AABC &ACG
1015 18th Street N, Suite 603
Washington, DC 20036
Phone: 202-737-0202
Email: ray@.aabc.com

CONFERENCES AND MEETINGS

Each organization agrees to provide the other with a meeting invitation and two complimentary VIP registrations to the primary annual meeting.

ASHRAE and the GROUPS agree to explore opportunities to provide speakers at the other organization's meetings to help provide updates and perspectives on technologies and trends of mutual interest.

Where mutually beneficial, each organization shall help publicize the other organization's meetings and promote attendance.

ADVOCACY

Where mutually beneficial and to the extent allowed by laws and corporate policies, ASHRAE and the GROUPS agree to work together on common public affairs goals and ideologies. During annual liaison meetings, public affairs strategies will be discussed and common goals identified. Collaborative opportunities to be considered include:

- Joint promotion of codes and standards at the local, state and federal levels.
- Promoting mutually beneficial positions during the development and passage of state and federal legislation.
- Education of legislators on issues important to the members of each organization.

PUBLICATIONS

Recognizing that electronic and print publications are a primary means of disseminating new technologies, trends and practices, ASHRAE and the GROUPS agree to:

- Provide at least one complimentary subscription to the primary membership periodical to be received at the headquarters location of the other organization.
- Explore opportunities to jointly produce publications of mutual benefit.
- Cross-market each organization's publications where appropriate and with industry standard distributor discounts.
- Use periodicals including electronic newsletters to promote the other organization's events, publications and other activities.
- Explore mutually beneficial ways to translate publications for member benefit.

EDUCATION

As leading providers of conventional and online educational services and in recognition of the vital role professional development has for our respective members, ASHRAE and the GROUPS agree to:

- Cross-market educational offerings at the regional, national and international levels.

- Explore opportunities to co-develop new courses or other training programs that take advantage of overlapping and complimentary expertise between ASHRAE and the GROUPS.

TECHNICAL ACTIVITIES COORDINATION

ASHRAE and the GROUPS agree to foster technical cooperation in areas of common interest by:

- Encouraging members in each organization to participate on technical committees and task forces.
- Provide opportunities to participate in and comment on proposed standards, guidelines, policies, and position statements developed on technical subjects as they relate to buildings and community developments.
- Establish liaison representatives to key technical committees where mutually beneficial to do so.

RESEARCH

Recognizing the importance research plays in accelerating the transformation to a more sustainable built environment, ASHRAE and the GROUPS agree to:

- Promote research in areas where research results will add to the body of knowledge and support respective Society initiatives.
- Disseminate research results quickly, focusing on high-impact findings.
- Identify opportunities for research funding from other sources.

TERMINATION

Either party may terminate this MOU, with or without stated cause, upon providing the other party with thirty (30) days written notice of intent to terminate.

TERM

The term of this Memorandum of Understanding shall begin when signed by both parties and shall terminate at the end of three (3) years unless extended at that time by written agreement.

LEGAL STANDING

This MOU reflects a commitment by ASHRAE and the GROUPS to continue and enhance their working relationship and individual efforts toward achieving mutual objectives described above. It does not create a binding obligation or agreement between the two organizations, and neither organization has an obligation to negotiate toward or enter into a binding written agreement. In addition, this MOU does not create a partnership, joint venture, fiduciary relationship or similar relationship between ASHRAE and the GROUPS. Furthermore, it is understood that this Memorandum of Understanding is conceived as a dynamic document, meant to change as circumstances and priorities warrant. It may be modified or amended by written agreement between both organizations.

FOR ASHRAE

M. Dennis Knight
ASHRAE President 2024-2025

Signature

Date

Jeff Littleton
Executive Vice President

Signature

Date

FOR AABC/ACG/EMA

Doug Meacham
AABC President

Signature

Date

Troy Byers
ACG President

Signature

Date

Tim Gilbert
EMA President

Signature

Date

Raymond Bert
Executive Director, AABC and ACG

Signature

Date



AABC, ACG, EMA and ASHRAE
2025-2028 Work Plan
to Support the
2025 Memorandum of Understanding

These four organizations signed a renewed Memorandum of Understanding (MOU) in February 2025 at the ASHRAE Winter Conference in Orlando, FL. This MOU is an agreement to advance and promote the mutual interests of their respective members. This Work Plan outlines specific activities the organizations agree upon to implement the goals of the MOU. The organizations will review and update this Work Plan quarterly.

ACTIVITY/TASK	RESPONSIBLE PARTY	TIMING	STATUS and COMMENTS
COMMUNICATION AND MEETINGS FOR THE MOU			
Main Liaison Meeting	Senior Reps	Semi - Annually – At ASHRAE Winter or At the AABC Annual or CxEnergy Annual Conference Or Virtual	These meetings should be scheduled a minimum of two weeks prior to meeting times <u>Action Item:</u> Ray Bert to set up meetings to align with AABC/EMA/ACG meetings. <u>Action Item:</u> ASHRAE Liaison to set up meeting to align with ASHRAE Winter Conference

ACTIVITY/TASK	RESPONSIBLE PARTY	TIMING	STATUS and COMMENTS
Quarterly Check-In Meetings (communications and technical components of workplan)	ASHRAE: Liaison and Staff Director AABC / ACG /EMA: Staff Directors	March, September	Agendas will be developed for each call, and appropriate members/staff invited to each call. Action items and responsibilities assigned at the end of each meeting. Annual and Winter Conference meetings serve as the other two quarterly meetings.
1. CONFERENCES AND MEETINGS			
Provide meeting invitation and two complimentary VIP registrations to a primary annual meeting	ASHRAE: Seymour AABC / ACG / EMA: Kosova / Bert	ASHRAE Winter Conference AABC: October ACG/EMA: CxEnergy - Spring	MOU calls for each organization to provide meeting invitation and two complimentary VIP registrations to primary annual meeting. ASHRAE hosts a VIP luncheon at each Winter Conference. <u>Action Item</u> : Invitations to be sent for the VIP luncheon.
AABC/ACG/EMA to promote ASHRAE annual and winter conferences/meetings, when mutually beneficial	ASHRAE: Gupta AABC / ACG / EMA: Kosova	ASHRAE meetings are generally held in January and June	MOU calls for each organization to promote, when mutually beneficial. ACG reaches out to local Chapters to become Supporting Organizations of CxEnergy and lists their logo/description on the website. ACG promotes ASHRAE-member CxEnergy speakers on social media.
ASHRAE to promote AABC/ACG/EMA conferences/meetings, when mutually beneficial	ASHRAE: Gupta AABC / ACG / EMA: Kosova		MOU calls for each organization to promote, when mutually beneficial. ASHRAE can add conference information on their EVENTS section of the website.

ACTIVITY/TASK	RESPONSIBLE PARTY	TIMING	STATUS and COMMENTS
<p>As appropriate and agreed upon, ASHRAE and AABC/ACG/EMA will</p> <ul style="list-style-type: none"> • Provide speakers or panelists at the other organization’s meetings to help provide updates and perspectives on testing, adjusting, and balancing • Participate in or endorse a topical conference on topic(s) that cover issues of relevance to both organizations’ constituencies; a project plan will be created and approved by both organizations for each conference <p>(each activity requires approval through the relevant organization’s regular processes)</p>	<p>ASHRAE speakers: Liaison and Staff Director</p> <p>ASHRAE technical program: ASHRAE CEC Staff Liaison</p> <p>AABC: Kosova / Bert</p>		<p>https://www.ashrae.org/conferences</p> <p>Action Item: All parties should review the relevant websites for listings of upcoming meetings or conferences.</p> <p>These conference dates should be discussed during the quarterly meetings.</p>
2. PUBLICATIONS, COMMUNICATIONS and EDUCATION			
<p>When mutually beneficial, ASHRAE and AABC/ACG/EMA will co-author a Conference Paper or other published vehicle on the importance and benefits to building performance of using TAB/commissioning/energy management “best practices”</p>	<p>ASHRAE: Owen/CEC Liaison</p> <p>AABC/ACG/EMA:</p>		<p>Concepts or ideas for articles should be discussed and the established processes to be used at the quarterly meetings.</p>
<p>Remind ASHRAE Chapters about benefits of holding joint meetings with other industry organizations, including AABC, ACG, and EMA</p>	<p>ASHRAE: Seymour</p> <p>AABC: Bert/ACG: Kosova/Bert EMA: A: Kosova</p>		<p>This could include AABC, ACG, and EMA offering lunch and learns at the chapter meetings potentially sent to Chapter CTTC Chairs.</p> <p>If content is provided ASHRAE could include announcement annual in Chapter Notes.</p>

ACTIVITY/TASK	RESPONSIBLE PARTY	TIMING	STATUS and COMMENTS
Offer 20% discount to ASHRAE members on <i>CxEnergy</i> conference registration, the <i>AABC TAB & Cx Seminar</i> , and <i>AABC TAB Talk</i> webinars, <i>ACG Essential Cx Webinar</i> series, and EMA's EMP Seminar & O&M Training (<i>note: EMA webinars are free to all</i>)	ASHRAE: Gupta AABC/ACG/EMA: Kosova		ASHRAE will include one blurb in our newsletter that goes to 90K+ recipients (members and industry professionals).
ASHRAE/AABC/ACG/EMA to explore opportunities to create joint training programs where mutually beneficial	ASHRAE: Owen		Opportunities must not create competition with any organization's existing programs.
3. TECHNICAL ACTIVITIES COORDINATION			
Explore synergies between ASHRAE Commissioning Standard 202 and ACG's newly revised <i>Commissioning Guideline</i> , which relies on ASHRAE's document as the clear industry consensus standard.	ASHRAE: Reiniche ACG:		There is a natural synergy between these documents with having people as members to both the ACG document and ASHRAE documents. Goal is to determine if there is a pathway to promote the nexus between these documents through the quarterly meetings.
Explore opportunities to promote ASHRAE Standard 211 for energy audits, which EMA supports.	ASHRAE: Reiniche/Yates EMA: Shunk		Confirm if the new EMA course is using Std 211.
Explore opportunities to promote ASHRAE's Building EQ for use with energy audits	ASHRAE: Reiniche EMA:		
ASHRAE to provide an opportunity for at least one AABC, ACG, or EMA representative (as appropriate) to participate on relevant technical Committees.	ASHRAE: Reiniche AABC/ACG/EMA: Kosova		Reiniche to provide the link to the ASHRAE Technical Committees and Project Committees to AABC, ACG and EMA to review and provide guidance on participation annually. Reiniche to provide cover rosters where appropriate for relevant technical committees and project committees annually. Check on participation by AABC, ACG and EMA representatives during quarterly meetings.

ACTIVITY/TASK	RESPONSIBLE PARTY	TIMING	STATUS and COMMENTS
4. POLICY AND ADVOCACY			
Identify policy and advocacy priorities.	ASHRAE: Yates AABC: ACG: EMA:	Q1-2025	Share existing policy priorities and determine where there is alignment.
When appropriate, promote adoption and use of select codes and technical standards of mutual interest.	ASHRAE: Yates AABC: ACG: EMA:		
Advocate / educate on public policy priorities	ASHRAE: Yates AABC: ACG: EMA:		Joint advocacy be encouraged where public policy priorities align. Share letters for joint signatures where interests align.

KEY CONTACTS FOR WORKPLAN

AABC/EMA/ACG Leads:					
MOU Executive Oversight	Ray	Bert	Chief Executive Officer	ray@commissioning.org	
MOU Project Manager					
Conferences and Meetings	Anna	Kosova	Director of Operations	anna@commissioning.org	
Publications, Communications, and Education	Cassie	LaJeunesse	Publications Specialist	publications@commissioning.org	
Technical Activities Coordination					
Policy, Government Affairs, and Advocacy	Ray	Bert	Chief Executive Officer	ray@commissioning.org	
RESEARCH					
Marketing and Promotion	Anna	Kosova	Director of Operations	anna@commissioning.org	
Grassroots/Chapter Outreach/Member Services					
Education/Publications					
Standards/Guidelines/Research	Ray	Bert	Chief Executive Officer	ray@commissioning.org	
ASHRAE Staff Leads:					
Executive Oversight	Jeff	Littleton	Executive VP	jlittleton@ashrae.org	678-539-1100

Board Liaison	Wade	Conlan	Director-at-Large	wconlan@hanson-inc.com	407-716-9997
Conferences and Meetings	Lizzy Ragan	Seymour McChan	Director of Member Services Senior Manager, Conference Programs	lseymour@ashrae.org rmchan@ashrae.org	678-539-1104 678-539-1219
Publications and Education	Mark	Owen	Director of Publications and Education	mowen@ashrae.org	678-539-1187
Technical Activities Coordination	Stephanie	Reiniche	Director of Technology	sreiniche@ashrae.org	678-539-1143
Policy, Government Affairs, and Advocacy	Alice	Yates	Director of Government Affairs	ayates@ashrae.org	(202) 833-1830
Marketing and Promotion	Vanita	Gupta	Director of Marketing	vgupta@ashrae.org	678-539-1150
Grassroots/Chapter Outreach/Member Services	Lizzy	Seymour	Director of Member Services	lseymour@ashrae.org	678-539-1104



Memorandum of Understanding on Co-operation Matters

1. Parties

This Memorandum of Understanding (MoU) is made between:

- **The Federation of European Heating, Ventilation and Air-conditioning Associations (REHVA)**, which represents 24 member associations in Europe, encompassing more than 120.000 professionals in heating, air-conditioning, ventilation, refrigeration, energy performance of buildings, decarbonization and other related topics; REHVA is officially registered as a Not-for-Profit Entity under Belgian Law, headquartered at 40 Rue Washington, Brussels, Belgium
- and
- **The American Society of Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE)** which is an international in-person membership organization (with about 54,000 members), dedicated to serving humanity by advancing the arts and sciences of heating, ventilation, air-conditioning, refrigeration and their allied fields, engaging input from its members worldwide and others to support research and develop standards for international application; ASHRAE is headquartered at 180 Technology Parkway, Peachtree Corners, Georgia 30092 USA

2. Preamble

- 2.1. REHVA and ASHRAE have had a long relationship of cooperation for over 50 years. ASHRAE has always had members in Europe, and few were integrated in the REHVA governance. Similarly, REHVA has had individual members of their national associations who were integrated into ASHRAE governance.
- 2.2. REHVA and ASHRAE have had joint task forces on different topics of worldwide interest like COVID19, decarbonization etc.
- 2.3. REHVA and ASHRAE had been participating actively many times to their respective conferences (CLIMA, CLIMAMED, ASHRAE Winter and Summer conferences etc.) with presentations, workshops, courses etc.
- 2.4. Both organizations enter this MoU with a positive and constructive attitude, understanding that a favorable outcome will strengthen both parties and ultimately lead to technological advancements for the benefit of humanity.

3. Purpose

- 3.1. The strong foundation of this MoU is the parties' common belief that, by working together, both organizations can amplify their abilities to better serve their members and the entire society while simultaneously eliminating duplication and conflicts.

3.2. The purpose of this MoU is to strengthen the partnership between the REHVA and ASHRAE, by promoting consistent and tangible actions to enhance cooperation.

3.3. This MoU will also encourage both organizations to better address major issues facing our industry worldwide, including adaptation to a rapidly evolving climate condition and technology in the framework of mutual information exchange.

4. Objectives

4.1. The primary objectives of this MoU are to:

4.1.1. start a new era of potential cooperation, by investigating first collaborative activities and by agreeing to build their cooperation scheme with mutual benefit

4.1.2. promote mutual information exchange and eliminate duplication of efforts

4.1.3. address major global industry issues collaboratively

4.1.4. explore and enhance communication, cooperation, and, where applicable, coordination between REHVA and ASHRAE at the following levels:

a. globally, between ASHRAE and REHVA at the Society and Board levels

b. at European level, between ASHRAE Region XIV and REHVA

c. at a country level, between REHVA member association (MA) and the relevant ASHRAE Chapter(s)

d. individually, among members of the REHVA MA and ASHRAE members, in the frame of working groups, task forces etc.

5. Cooperation principles

5.1. The principles listed here below are essential to ensure a clear, mutual understanding of the expectations, commitments, and goals of the partnership at all levels, helping to establish a solid foundation for a productive and harmonious partnership and ensuring that both parties are aligned in their approach and committed to achieving mutual benefits.

5.2. Mutual Respect and Trust

Both parties agree to conduct their relationship based on mutual respect and trust, by acknowledge each other's strengths, expertise, and contributions.

5.3. Equity and Reciprocity

Both parties agree to ensure that the benefits and responsibilities of the cooperation are shared fairly, and to commit to reciprocal contributions and exchanges of knowledge and resources.

5.4. Transparency

Both parties agree to commit to open and honest communication regarding all aspects of the cooperation and to share relevant and non-confidential information promptly and accurately to facilitate collaboration.

5.5. Shared Goals and Objectives

Both parties agree to establish common goals and objectives that both parties aim to achieve through the cooperation, by aligning activities and initiatives with these shared objectives.

5.6. Complementarity

Both parties agree to leverage the complementary strengths and capabilities of each party to achieve better outcomes, by avoiding duplication of efforts by clearly defining roles and responsibilities.

5.7. Flexibility and Adaptability

Both parties agree to be flexible and adaptable in responding to changing circumstances and needs, by allowing always room for adjustments in plans and activities as necessary.

5.8. Commitment to Excellence

Both parties agree to strive for high standards of quality and excellence in all joint activities and initiatives, by encourage continuous improvement and innovation.

5.9. Accountability

Both parties agree to hold each party accountable for fulfilling their commitments and responsibilities, establishing mechanisms for monitoring progress and addressing any issues that arise.

5.10. Sustainability

Both parties agree to ensure that cooperative efforts contribute to sustainable development and long-term benefits, considering environmental, social, and economic impacts in planning and implementation.

5.11. Cultural Sensitivity and Inclusion

Both parties agree to respect and value the cultural diversity and perspectives of each party, by promoting inclusive practices that encourage broad participation and engagement.

5.12. Legal and Ethical Standards

Both parties agree to adhere to all applicable laws, regulations, and ethical standards, by ensuring that all activities are conducted with integrity and in accordance with best practices.

5.13. Innovation and Creativity

Both parties agree to encourage innovative thinking and creative solutions to address shared challenges, by supporting joint research, development, and dissemination of new ideas and technologies.

5.14. Periodic Review and Evaluation

Both parties agree to regularly review and evaluate the progress and outcomes of the cooperation, by using feedback to make improvements and adapt strategies as needed.

5.15. Resource Sharing

Both parties agree to share resources, expertise, and knowledge to maximize the impact of the cooperation, ensuring fair and equitable access to shared resources. face-to-face or electronically, as conditions warrant.

6. Areas of cooperation and potential activities

6.1. ASHRAE and REHVA agree to cooperate in the areas listed in **ANNEX 1**, where potential activities are also proposed.

6.2. For 2024-2026, priority areas of cooperation and collaboration are listed in **ANNEX 2**.

7. Implementation

7.1. To help the implementation process, REHVA and ASHRAE will form a Liaison Committee (LC) to carry out the work with their official bodies' approval. The Liaison Committee will be composed by at least 3 members per party, chosen amongst their respective Board members, MAs and secretariats.

7.2. To achieve the objectives and to respect the MoU principles, ASHRAE and REHVA will:

7.2.1. hold yearly meetings of the LC, either face-to-face or online, at least in conjunction with the ASHRAE Winter Conference and the REHVA General Assembly, respectively, or whenever needed; the main purposes of the aforementioned meetings will be to ensure ongoing advancement and monitoring of collaborative projects underway and to keep each respective organization informed on major or new initiatives

7.2.2. Discuss new opportunities for collaboration

7.2.3. hold additional meetings, either face-to-face or online, as conditions warrant

7.2.4. ensure that all publications are available to members at member rates

- 7.2.5. promote the cooperation between ASHRAE and REHVA Committees
- 7.2.6. sponsor and jointly organize training and educational activities
- 7.3. The Parties shall also:
 - 7.3.1. promote development of harmonized European, ASHRAE and international (ISO) standards
 - 7.3.2. promote communication and information exchange between the organizations and their respective members through announcements in journals, websites, and other communication channels
 - 7.3.3. promote cooperation in the frame of and participation to conferences and exhibitions globally

8. Participation in other MoUs and development of international bodies

- 8.1. Each organization remains free to participate in any other MoU or international initiative with the same goal and will inform each other of any such developments.
- 8.2. REHVA and ASHRAE agree to join efforts, in conjunction with other organizations, to help develop the Indoor Environmental Quality - Global Alliance (IEQ - GA) or other similar international organizations.

9. Duration, termination and renewal

- 9.1. This Memorandum of Understanding will commence on the date of signature and will remain in effect for a period of three years unless terminated earlier by either party with six months' written notice.
- 9.2. Renewal of this MoU shall be automatic for identical successive periods, with the corresponding updating of Annexes 1 and 2, if deemed appropriate by both parties. If any of the parties does not wish to extend the cooperation, it must inform the other party in writing at least 60 days prior to the expiration of the then current MoU.

10. Dispute Resolution

- 10.1. Any disputes arising from this MoU shall be resolved amicably through mutual consultation. Failing which, disputes shall be referred to mediation or arbitration as agreed by both parties.

11. Confidentiality

- 11.1. Both parties agree to maintain the confidentiality of any sensitive information exchanged under this MoU and to use such information solely for the purposes outlined herein.

12. Amendments

- 12.1. Any amendments to this MoU must be made in writing and signed by authorized representatives of both parties.

13. Indemnity and Liability

- 13.1. Each party shall indemnify and hold harmless the other party against any losses, damages, or expenses arising from any breach of this MoU. Neither party shall be liable for any indirect or consequential damages arising under this MoU.

14. Force Majeure

- 14.1. Neither party shall be liable for any failure to perform obligations under this MoU if such failure results from circumstances beyond reasonable control, including but not limited to

natural disasters, acts of war, or government actions.

15. Severability

15.1. If any provision of this MoU is found to be unenforceable or invalid, the remaining provisions shall remain in full force and effect.

16. Entire Agreement

16.1. This MoU constitutes the entire agreement between the parties and supersedes all prior negotiations, agreements, and understandings, whether written or oral.

17. Counterparts

17.1. This MoU may be executed in counterparts, each of which shall be deemed an original, and all of which together shall constitute one and the same agreement.

18. Data Protection and Privacy

18.1. Both parties agree to comply with all applicable data protection and privacy laws. REHVA, as an EU entity, will adhere to the General Data Protection Regulation (GDPR). Any personal data exchanged shall be handled in accordance with these laws to ensure privacy protection.

18.2. When transferring personal data from REHVA to ASHRAE or any non-EU entity, appropriate safeguards compliant with GDPR, such as Standard Contractual Clauses (SCCs), will be implemented to ensure equivalent data protection. ASHRAE agrees to respect GDPR principles when handling personal data received from REHVA.

18.3. When transferring personal data from ASHRAE to REHVA, appropriate safeguards compliant with any such USA regulations or institutional policies will be implemented to ensure equivalent data protection. REHVA agrees to respect such principles when handling personal data received from ASHRAE.

FOR ASHRAE

Dennis Knight
ASHRAE President, 2024-2025

Signature

_____, 2024 _____
Date

FOR REHVA

Cătălin-Ioan Lungu
REHVA President, 2022-2025

Signature

_____, 2024 _____
Date

ANNEX 1 to the REHVA-ASHRAE MoU

An annual work plan can be developed by the LC under the principles of the REHVA-ASHRAE MoU in force, based on the following:

LIST OF POTENTIAL COOPERATION TOPICS BETWEEN REHVA AND ASHRAE

(this list can be adjusted any time by the mutual agreement of the parties)

1. Climate Adaptation and Resilience

- a) Joint research projects on HVAC&R systems designed for extreme weather conditions
- b) Development of guidelines for resilient building designs
- c) Organization of workshops and seminars on climate resilience strategies

2. Energy Efficiency, use of renewables and decarbonization

- i. Collaborative development of energy-efficient technologies and practices
- ii. Joint campaigns and projects promoting energy efficiency, renewable energy sources integration with HVAC&R systems, and decarbonization of buildings
- iii. Co-hosting conferences focused on net-zero energy buildings
- iv. Development of guidelines for renewable energy use in buildings
- v. Hosting workshops on energy efficiency, renewable energy technologies and their applications, and decarbonization

3. Indoor Environmental Quality (IEQ) Improvement for healthy buildings

- a) Joint research on the health impacts of indoor environmental quality
- b) Development of new standards for indoor environment quality management
- c) Creation of educational programs and webinars on IEQ best practices
- d) Research on the impact of HVAC&R systems on occupant health
- e) Development of wellness standards for indoor environments
- f) Educational initiatives on health-focused building design

4. Digitalization and Smart Buildings

- a) Joint development of smart building technologies and IoT applications (Internet of Things)
- b) Research on the integration of digital tools in HVAC&R systems
- c) Creation of a shared platform for data exchange and smart building management

5. Sustainable Building Practices

- a) Promotion of sustainable, decarbonized materials and practices in building design
- b) Development of joint guidelines for sustainable and decarbonized buildings
- c) Organizing competitions and awards for healthy and sustainable building projects

6. Education and Training

- a) Development of joint certification programs for HVAC&R professionals
- b) Organization of international student competitions
- c) Creation of joint educational modules and online courses

7. Policy and Advocacy

- a) Joint advocacy for international policies promoting energy efficiency and sustainability
- b) Collaboration on white papers and policy briefs
- c) Engaging with policymakers through joint lobbying efforts

8. Standards Development and Harmonization

- a) Collaborative efforts to harmonize European and international standards
- b) Participation in international standardization committees
- c) Joint publications on standards and best practices

9. Innovation and Research

- a) Joint funding and support for innovative research projects
- b) Establishment of research grants and fellowships
- c) Co-authoring research papers and technical documents

10. Public Awareness and Outreach

- a) Joint public awareness campaigns on the importance of HVAC&R systems
- b) Development of informational materials for the public
- c) Engagement through social media and other digital platforms

11. Global Conference and Exhibition Participation

- a) Joint organization of global conferences and exhibitions
- b) Coordinated participation in international trade shows
- c) Joint presentation of new technologies and innovations

12. Resource Sharing and Collaboration Tools

- a) Development of a shared digital library of resources and tools
- b) Creation of collaborative online platforms for project management
- c) Sharing of technical documents, case studies, and research findings

13. Technical Committees and Task Forces

- a) Formation of joint technical committees on specific topics
- b) Regular meetings and collaboration between technical experts
- c) Development of joint technical reports and guidelines

IMPLEMENTATION PLANNING

To facilitate these cooperative activities, REHVA and ASHRAE can:

1. Establish a Liaison Committee (LC):
 - i) Comprising at least 3 members from both organizations to oversee and coordinate activities.
 - ii) Hold yearly meetings and additional meetings as needed; both organizations will schedule a LC meeting during the ASHRAE winter conference or REHVA annual meeting
2. Develop an Annual Work Plan:
 - i) Define specific initiatives and activities for the upcoming year
 - ii) Regularly review and update the work plan based on progress and feedback
3. Promote Communication and Information Exchange:
 - i) Utilize journals, websites, and other communication channels for information

dissemination

- ii) Ensure accessibility of publications to members at member rates

4. Organize Joint Events and Training:

- i) Sponsor and organize training sessions, workshops, and conferences

- ii) Encourage participation from both organizations in these events

iii) A workshop will be organized jointly by REHVA and ASHRAE during every ASHRAE winter conference and CLIMA congress

5. Monitor Progress and Outcomes:

- i) Establish mechanisms for monitoring the progress of collaborative projects

- ii) Regularly evaluate the outcomes and make necessary adjustments

By focusing on these innovative fields and implementing the outlined activities, REHVA and ASHRAE can strengthen their cooperation, drive industry advancements, and contribute to global sustainability efforts.

DRAFT CONFIDENTIAL

ANNEX 2 to the REHVA-ASHRAE MoU

The following priorities are defined for the period 2024-2026:

1. **Organize** at least ONE dedicated REHVA Technical Session at the ASHRAE Winter Conferences and at least ONE dedicated ASHRAE Technical Session at the CLIMA 2025 conference.

2. Develop common initiatives focused on the following topics:

Energy Efficiency, use of renewables and decarbonization

- i. Joint campaigns and projects promoting energy efficiency, renewable energy sources integration with HVAC&R systems, and decarbonization of building.
- ii. Co-hosting conferences focused on decarbonized and/or net-zero energy buildings.
- iii. Co-hosting one or more workshops on energy efficiency, renewable energy technologies and their applications, and decarbonization in Europe.

Indoor Environmental Quality (IEQ) Improvement for healthy buildings

- i. Creation of educational programs and webinars on IEQ best practices
- ii. Development of wellness standards for indoor environments
- iii. Develop educational initiatives on health-focused building design



**American Society of Heating, Refrigerating and Air-Conditioning Engineers
and
American Society for Health Care Engineering
2012-2026 Work Plan
to Support the
2024 Memorandum of Understanding**

ASHE and ASHRAE signed a Memorandum of Understanding on July 8, 2020, aiming to achieve several mutual goals within the mandate of both organizations including, but not limited to, Consistent Leadership Communication, attendance and participation at Conferences and Meetings, Young Professional Development, Advocacy and Public Outreach, Publications, Education, coordination of Technical Activities, Research, and Community Service. Implementation of these mutual goals is accomplished by adoption of a biennial work plan of which this document is the first.

The organizations will review and update this Work Plan annually. A list of staff contacts for various elements of the Workplan is provided as an Attachment.

ACTIVITY/TASK	RESPONSIBLE PARTY	TIMING	COMMENTS
CONSISTENT LEADERSHIP COMMUNICATION FOR THE MOU			
Main Liaison Meeting	ASHRAE/ASHE Senior Staff Reps.	Annually – Jan 2024 June 2024	Agenda Items for first meeting <ul style="list-style-type: none"> • Decarb – Keep focused effort • Co-branding standards (add 43 (operations portion of 170), health care specific version of existing building energy standard) • Hospital Data • Organizational Membership on Project Committees for Standards.
Quarterly Check-In Meetings (communications and technical components of workplan)	ASHRAE: Reiniche ASHE: Flannery	January, March, June, September,.	Agendas will be developed for each call, and appropriate members/staff invited to each call. Action items and responsibilities assigned at the end of each meeting.

ACTIVITY/TASK	RESPONSIBLE PARTY	TIMING	COMMENTS
1. CONFERENCES AND MEETINGS			
Provide meeting invitation and two complimentary VIP registrations to a primary annual meeting	ASHRAE/ASHE Senior Reps. ASHE: Beebe, DOE ASHRAE: Seymour	ASHRAE – Winter ASHE – Annual and PDC	Passes have been exchanged for past events; will continue through plan term.
ASHE to promote ASHRAE Winter and Annual Conferences	ASHRAE Seymour/Gupta ASHE: Dagnon, Bazer	ASHRAE meetings are generally held in Jan. and June	ASHRAE can provide content that can be used for promotional purposes. Annual: June 22-26, 2024, Indianapolis Winter: Feb. 8-12, 2025, Orlando Annual: June 21-25, 2025, Phoenix Winter: Jan. 31-Feb. 4, 2026, Vegas Annual: June 27-July 1, 2026, Austin
ASHE Annual Conference	ASHRAE: Gupta ASHE: ?	July / August	ASHE to list upcoming dates and locations through 2026
a. Promotion of ASHE Annual	ASHRAE: Gupta	Spring/Summer	If ASHE can provide ready to use content, ASHRAE will include on its event website section.
b. Provide complimentary exhibit space to ASHRAE	ASHE: Beebe	Summer	PDC – ASHRAE will have a space with the SO's. At ASHE Annual space permitting availability
c. Provide discounts and scholarships to students or other appropriate ASHRAE members	ASHE: Bazer/Beebe ASHRAE: Seymour	Time to Be Determined	ASHRAE does not provide discounts to members of other organizations if those individuals are not ASHRAE members
d. Bin swap for trade magazines (HFM at ASHRAE – ASHRAE Journal at ASHE)	ASHE: Dagnon ASHRAE: Owen		High Performing Buildings no longer in print; would be ASHRAE Journal. What is attendance at ASHE?
ASHRAE to join as Supporting Organization of the PDC Summit	ASHRAE/ASHE Senior Reps. ASHE: Beebe, Binotti Heim ASHRAE: Seymour	March	2025 PDC – March 9-12, Atlanta, GA 2026 PDC – March 8-11, Houston, TX 2027 PDC – March 12-15, New Orleans, LA

ACTIVITY/TASK	RESPONSIBLE PARTY	TIMING	COMMENTS
a. Planning and Education	ASHE: Binotti Heim ASHRAE: Seymour		<p>Planning Task Force Representatives - The SO can appoint one representative to serve on the PDC Summit Strategic Planning Task Force</p> <p>Abstract Review - The SO can designate up to five representatives to review abstracts if possible.</p>
b. Marketing	ASHE: Binotti Heim ASHRAE: Gupta		<p>ASHE can use ASHRAE's name and logo as a PDC Summit Supporting Organization.</p> <p>However, due to our other contractual obligations, ASHE may NOT use our name or logo to promote the show in anyway.</p>
c. Registration Discounts	ASHE: Binotti Heim ASHRAE: Seymour		The SO has the opportunity to use or distribute up to 5 (max) comp registration discount.
d. Meeting & Networking Space	ASHE: Binotti Heim ASHRAE: Gupta/Seymour		<p>Access to a shared hospitality/meeting room and shared supporting organization networking space.</p> <p>Complimentary designated area for SO within the PDC conference space.</p>
e. Exhibit Booth	ASHE: Binotti Heim ASHRAE: Seymour		50% discount for purchase booth.
f. Other	ASHE: Binotti Heim ASHRAE: Gupta		SO has opportunity to provide content to be included the conference mobile app, general session walk-in slides and other opportunities onsite upon request (i.e. signage, announcement, etc.)
2. PUBLICATIONS, COMMUNICATIONS and EDUCATION			
ASHRAE and ASHE will engage key stakeholders to discuss working collectively on building decarbonization. Decarbonization Guidebook and related training courses	ASHRAE: Reiniche ASHE: Brooks	Ongoing	ASHRAE and ASHE have co-developed and branded the guidebook that will publish soon. We're investigating how to cobrand and market the training materials now.

ACTIVITY/TASK	RESPONSIBLE PARTY	TIMING	COMMENTS
Identify and provide ASHRAE resources to present educational offerings for ASHE members.	ASHRAE: Owen, Reiniche, ASHE: Beebe/Flannery	Discuss in Semiannual Meeting	
Investigate opportunities to collaborate on virtual educational sessions and conference programming around decarbonization	ASHRAE: Seymour, Giometti, Owen ASHE: Beebe, Brooks	Discuss in Semiannual Meeting	A list of ASHRAE Topical Conferences, dates and locations can be found at ashrae.org/conferences/topical-conferences .
Develop list of potential webinars, courses, conference presentations and workshops to support capability building among designers and building owners/managers.	ASHRAE: Seymour, Giometti, Owen ASHE: Beebe, Brooks	Discuss in Semiannual Meeting	
ASHE to communicate and co-market ASHRAE's webinars and other courses related to decarbonization.	ASHRAE: Gupta ASHE: Beebe, Brooks, Dagnon	Discuss in Semiannual Meeting	ASHRAE Marketing and Pub&Ed can work together to share those courses for cross promotion.
Develop priority list of potential blogs, articles, social media, and newsletter content related to collaborative efforts and post to respective websites	ASHRAE: Gupta ASHE: Dagnon	Discuss in Semiannual Meeting	ASHRAE: This is not our typical practice. We don't have dedicated pages for workplans or cross promotional efforts. If you have something relevant for our member audience, we would be happy to include it in our eSociety newsletter. We also limit the social media pushes from other groups because we work with so many that our channel would be clogged if we posted all other organizations efforts. We typically only post if we are working on something in collaboration and an ASHRAE member is involved as a presenter.

ACTIVITY/TASK	RESPONSIBLE PARTY	TIMING	COMMENTS
Regular scheduled planning meeting to promote the other organization's events, publications and other activities, especially focused on zero energy and zero carbon buildings.	ASHRAE Gupta ASHE: Brooks	Discuss in Semiannual Meeting	Would this be a quarterly decarb meeting? Focused on Decarb efforts All of our current Decarb materials can be found on www.ashrae.org/decarb and this area will be constantly updated. We will have some new initiatives during the next Society year as your incoming President's theme is focused around Decarbonization as well.
Ad swap in printed magazine (Journal)	ASHRAE: Owen ASHE: Dagnon		Would need to define content and target of advertising.
3. TECHNICAL ACTIVITIES COORDINATION			
Review current status of co-published standards (170 & 189.3) and opportunities for additional standards and guidelines (43, health care specific energy efficient design standard)	ASHRAE: Reiniche ASHE: Flannery, Brooks		
Assisting ASHE on Energy to Care through requests to the TCs, and potentially in the newsletter(s).	ASHRAE: Reiniche ASHE: Brooks	Discuss at Quarterly Meeting	
Discuss combining 514 and 188 to be one all inclusive water management standard	ASHRAE: Reiniche ASHE Flannery	Discuss at Quarterly Meeting	From Stephanie Reiniche: ASHRAE is looking at this now. The committees are combining into one and we're determining the best path forward..
Standards Development – Carbon Neutral Buildings	ASHE: Brooks ASHRAE: Reiniche	Discuss at Quarterly Meeting	
Standards Development - IAQ Pathogen Mitigation Standard	ASHRAE: Reiniche ASHE: Flannery	Discuss at Quarterly Meeting	Would this be 241?
POLICY AND ADVOCACY			

ACTIVITY/TASK	RESPONSIBLE PARTY	TIMING	COMMENTS
Coordinate ASHRAE and ASHE involvement with governments to support codes and standards supported by both organizations.	ASHRAE: Yates ASHE: Beebe, Brooks, Flannery, Hummel	Discuss in quarterly meeting	ASHRAE and ASHE should first identify the standards and codes we are advocating for: --Standard 170-2021 --Standard 189.3-2021 --Standard 188-2021 --Standard 514-2023 --Guideline 12 and 43
Engage in other policy, regulatory and legislative efforts where policy priorities align.	ASHRAE: Yates ASHE: Beebe, Brooks, Flannery, Hummel	Discuss in quarterly meeting	For example, if the Biden Administration continues for another 4 years, we should discuss possible Involvement with the Administration’s Health Sector Climate Pledge.
RESERVED ITEMS PENDING FURTHER DEVELOPMENT			
Energy Code & Standards Roadmap to Zero Carbon ASHRAE and ASHE will discuss the possibility of developing policy guidance to achieve zero energy and/or carbon.	ASHE: Beebe, Brooks ASHRAE: Reiniche	Revisit in 2024	From Stephanie Reiniche: Is this specifically geared towards healthcare facilities?
ASHE to collaborate on/support ASHRAE Strategic Research Plan, with an effort to focus on zero energy and zero carbon buildings.	ASHE: Beebe, Brooks, Flannery ASHRAE: Reiniche, Vaughn	Revisit in 2024	From Stephanie Reiniche: Are you requesting an add of healthcare facilities to the ASHRAE Strategic Research Plan?
Identify opportunities for collaborative development of research funding from other sources. Co-funded and collaborative research findings to be disseminated jointly and quickly. Focus on zero energy and zero carbon buildings.	ASHRAE: Reiniche, Vaughn	Revisit in 2024	Subject to ASHRAE’s Research Project Approval Process

ACTIVITY/TASK	RESPONSIBLE PARTY	TIMING	COMMENTS
<p>Building Energy Audits ASHE will work with ASHRAE to advocate the adoption of Standard 211 and the use of Building EQ as a tool to getting to net zero or implementing Energy to Care. Collaborate on Building EQ program and add to HEALQUEST as implementation component</p>	<p>ASHE: Beebe, Brooks ASHRAE: Yates, Reiniche</p>	<p>Quarterly Meetings</p>	<p>Promotion of the use of Building EQ may depend on alignment with Energy to Care – see next item</p>
<p>Discuss partnering on and co-branding the Energy to Care.</p>	<p>ASHE: Beebe, Brooks ASHRAE: TBD</p>	<p>Revisit in 2024</p>	<p>Assuming no conflict with Building EQ</p>
<p>Discuss ways that certification programs can be jointly developed or promoted.</p>	<p>ASHRAE: Owen, Kline ASHE: Beebe</p>		<p>ASHE to recognize HFDP https://www.ashe.org/certifications. ASHE to be included in future development of the certification.</p>

KEY STAFF CONTACTS FOR ASHE-ASHRAE WORKPLAN

ASHE Staff Leads:					
MOU Executive Oversight / Management	Chad	Beebe	Deputy Executive Director	cbeebe@aha.org	312-422-3819
Director of Education (DOE)	TBD				
State and Local Government Codes and Policies Research	Jonathan	Flannery	Senior Associate Director of Advocacy	jflannery@aha.org	312-422-3825 501-813-2400
Sustainability, Decarbonizing, Energy to Care	Kara	Brooks	Senior Associate Director of Sustainability	kbrooks@aha.org	312-422-3813
Education/Publications	Melissa	Binotti Heim	Program and Conference Manager	mheim@aha.org	312-422-3808
Communications / Marketing and Promotional	Tracy	Dagnon	Director of Communications	tdagnon@aha.org	
ASHRAE Staff Leads:					
Executive Oversight	Jeff	Littleton	Executive VP	jlittleton@ashrae.org	679-539-1100
Government Affairs and Advocacy	Alice	Yates	Director of Government Affairs	Ayates@ashrae.org	202-821-1730
Marketing and Promotion	Vanita	Gupta	Director of Marketing	vgupta@ashrae.org	679-539-1150
Grassroots/Chapter Outreach/Member Services	Lizzy	Seymour	Director of Member Services	slseymour@ashrae.org	679-539-1104
Education/Publications	Mark	Owen	Director of Publications and Education	mowen@ashrae.org	679-539-1187
Standards/Guidelines/Research/MOU oversight	Stephanie	Reiniche	Director of Technology	sreiniche@ashrae.org	679-539-1143

Year to Date Project Achievements

- Staff / Consulting firm hired and on-boarded
- Policies and procedures for compliance with federal regulations
- National Codes Collaborative active participation
- Management Meeting (Start-up Workshop); Quarterly meetings with state partners
- Sub-Recipient Agreements/Scopes of Work
- Process of hiring a workforce development consultant to lead implementation strategy (NASEO)
- Begun work on Careers in Codes webinar (ICC)



RECI ECO-TEC Update

Year to Date Spending

- Total Award Budget \$2,850,000
- Budget Period 1 (BP1) \$1,325,645
- Year to Date Forecasted Spending \$327,760
- Year to Date Actual Spending \$194,130
- Burn Rate 59% (6.8% of total budget)
- Variance \$133,630



RECI ECO-TEC Update

Changes with New Administration

- January 20, 2025: Stop Work on any activities related to DEIA (diversity, equity, inclusion, and accessibility) and “environmental justice”
- January 23, 2025: DOE Communication Pause
- At a surface level, most tasks in current RECI ECO-TEC project includes aspects of DEIA or environmental justice
- ASHRAE is adjusting project Tasks to shift focus from DEIA/Justice, and better align with identified workforce needs
 - *Example: ECTO-TEC will NOT draft a strategy for equity outreach and engagement, but base our roll out of trainings according to a **States’ Alignment Strategy** which supports on-going efforts in states to increase the codes officials workforce*
 - *Example: ECTO-TEC will NOT convene a group for equity advising, but will seek guidance on the project from a **Codes Careers Advisory Committee** made up of those involved in workforce development and codes careers in each state*



RECI ECO-TEC Update

Mitigation Strategies

- Continue to monitor changing funding landscape under new administration
- Adapt project to be in line with new administration's guidance
- Continue project activities unless instructed otherwise by DOE
- Accelerate the timeline of ASHRAE's activities in the grant (90.1 training development)
- ASHRAE take on some activities that were assigned to Sub-Recipients (ICC or NASEO)
 - This keeps funds more in-house
 - Complete these tasks sooner on the timeline than planned

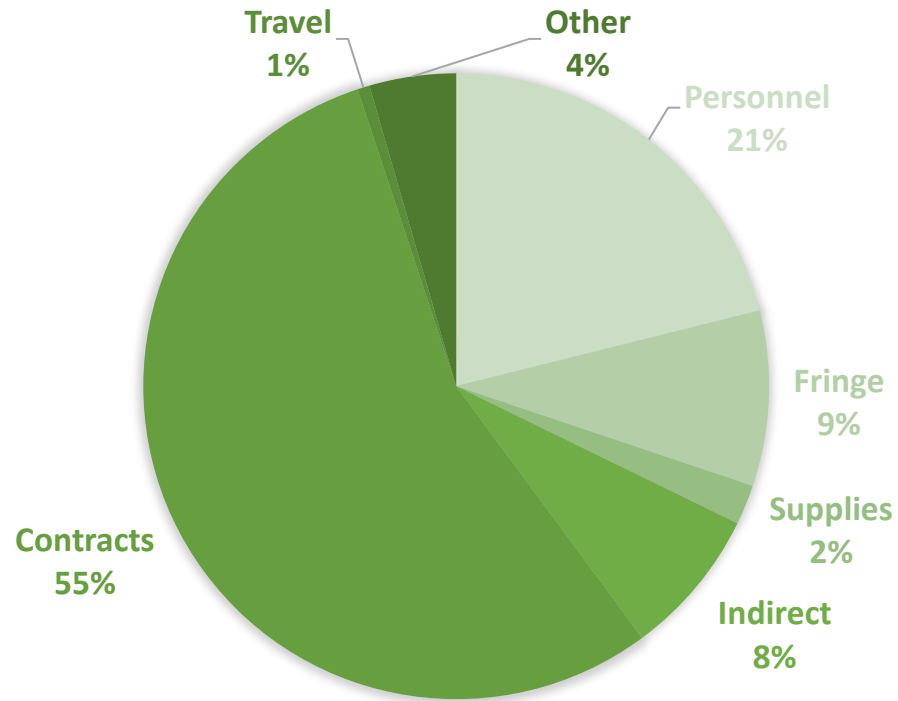


ASHRAE Grant Funding Landscape

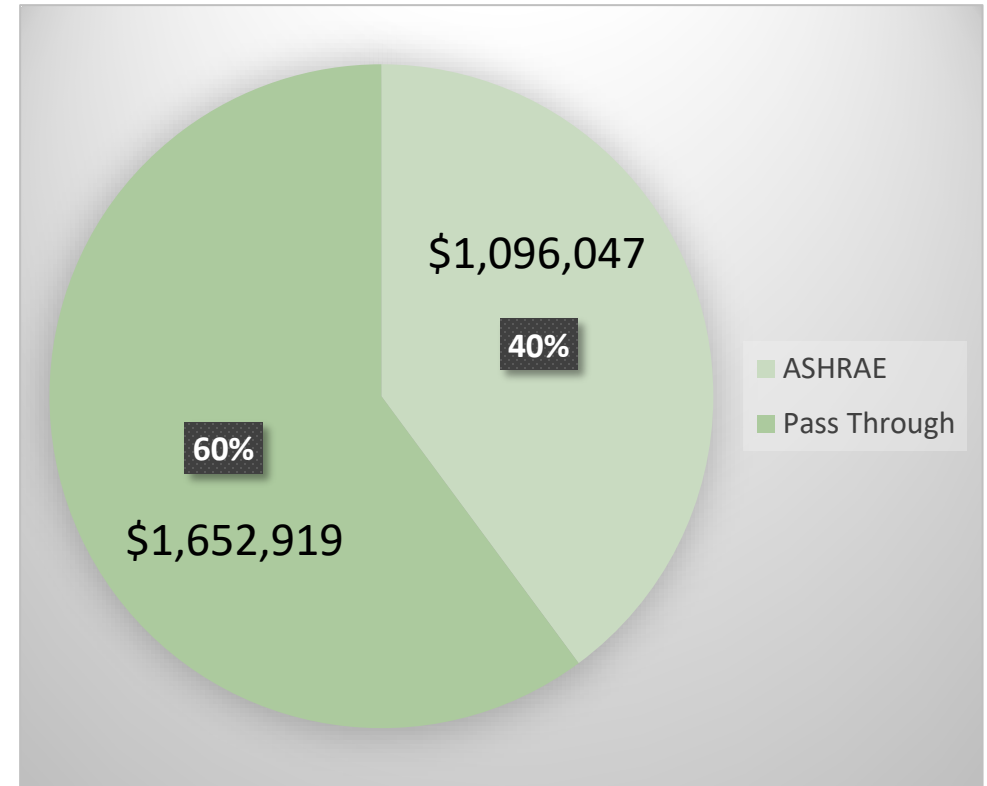
PROJECT	FUNDER	BUDGET	ROLE	TIMEFRAME
ECO-TEC	DOE (RECI)	\$2,850,000	Prime Recipient	July 2024 – June 2027
Virginia BuildCodeEd	VA Dept. of Housing and Community Development (RECI)	\$152,630	Contractor	Jan 2025 – Dec 2027
Codes Collaborative	ACEEE (DOE RECI)	\$62,740	Sub Recipient	July 2024 – Dec 2028
Support Services for Schools Partnership Pilot Program	LBNL (DOE)	\$40,134	Contractor	June 2023 – June 2025
	TOTAL	\$3,105,504		



ASHRAE RECI ECO-TEC Budget



ECO-TEC Cost Categories Break Down
TOTAL BUDGET



Internal vs. External Income
TOTAL BUDGET





Shaping Tomorrow's Global
Built Environment Today

Industry Roundtables

2024 Critical Issues Summary
and recommendations for Councils

[ashrae.org](https://www.ashrae.org)



2024 Industry Roundtable Critical Issues



- **Role of the Industry**
The role that the industry is taking on reducing **carbon emissions** and **adopting sustainable practices**, through **decarbonization** and **electrification**
- **Refrigeration Regulations**
The industry faces an overwhelming amount of regulatory information, creating confusion about which guidelines to follow for refrigerant regulations and safety. The challenges of flammable refrigerants, their impact on different sectors, and ongoing phaseouts further add to the complexity.
- **Workforce**
The growing generational gap in the workforce.
- **HVAC in Higher Education**
The lack of HVAC education presence in undergraduate curriculum.
- **Industry Collaboration**
The need for more collaboration between technicians, building owners, engineers, and architects on projects.
- **New Educational Tools**
New, more interactive and engaging tools to train and educate new and young professionals

Recommendations to Publishing & Education Council

Training and education, particularly for young professionals entering the industry is critically needed. Publishing and Education Council may consider:

- Leveraging emerging technologies and alternative formats to create training materials that may be more accessible for young professionals
- Developing additional training programs focused on HVAC fundamentals
- Adapting ALI courses to be region/country specific
- Developing resources to better educate the general public



Recommendations to Members Council

Acknowledging President Knight's theme of workforce development, many of the discussions centered around the need to engage with students and young professionals, supporting and encouraging them in their career journey in the built environment. Members Council may consider:

- Developing programs that focus on showing students (K-12, post-High including trade/technical schools) the impact they can have by choosing careers in the built environment
- Encouraging chapters to include technical training on HVAC fundamentals
- Encouraging collaboration with other industry organizations
- Exploring alternative training options, such as podcasts, videos, hands-on technical tours
- Developing a program to help facilitate internships for engineering students



Recommendations to Technology Council

Decarbonization, IEQ and refrigerant regulations are issues that members at all levels need guidance on. Technology Council may consider:

- Continuing to develop resources and practical guides on decarbonization, IEQ and refrigerants for manufacturers, design professionals, contractors, building owners/facility managers and building scientists
- Providing guidance on how emerging technologies like AI can be used to improve productivity and optimize system performance
- Providing more opportunities for technicians/operators to get involved in ASHRAE



REPORT TO THE BOARD OF DIRECTORS
From the Planning Committee
February 9, 2025

BOD OPEN SESSION AGENDA SUNDAY 2025 FEB. 9

Recommendations for Board Consideration:

No recommendations for Board consideration.

Information Items:

1. Next steps after the approval of the 2025-28 ASHRAE strategic plan were discussed. The Planning Committee is now seeking to finalize KPIs surrounding the following key areas. Areas as noted below should be considered as the draft version of KPIs:

- A strong member and volunteer base
- High utilization of ASHRAE resources
- Organizational Foresight, leadership
- A viable thriving industry and workforce
- A positive impact on the environment and the larger industry

The intended rollout of the strategic plan for the next several months was also shared. Below is a summary:

- Spring CRC Leadership Presentation
 - PAOE Points related to Strategic Plan
- Spring CRC Chapter Operations Workshop
 - Strategic Plan Training
 - KPI's to be developed by:
 - Trent Hunt, Planning Committee Chair
 - Andres Sepulveda, Planning Committee Vice Chair
 - Dunstan Macauley, Strategic Plan Development Subcommittee Co-Chair
 - Devin Abellon, Strategic Plan Development Subcommittee Co-Chair
- Strategic Plan-at-a-Glance ready for review
 - May/June
- Launch at Plenary Session
 - QR Code
 - Press Release
- July Marketing Plan
 - Press releases to all media outlets
 - Social media posts
 - eSociety/Insights
 - Chapter Notes
 - Fall CRC Leadership Presentation

Discussion was also had regarding whether the strategic plan should continue to be three years considering costs and volunteer time. The timeline for development of the plan and ASHRAE's long term vision were considered during the discussion. The Planning Committee will provide a recommendation on the above at the 2025 Annual Conference for future strategic plans.

2. To address and streamline the Planning Committee's work on the collection of council and committee MBOs, an online form has been created.

Notification about the form will be sent to councils and committees prior to the 2025 Annual Conference.

3. Coordination with the standing committees that have strategic planning direction in their ROB was done to foster communication with Planning. A Planning Committee Representative was slated to attend each of these meetings at the 2025 Winter Conference to make a formal introduction and aid in the creation of MBOs, if needed, as groups work in alignment with the 2025-28 strategic plan.

4. The Planning Committee discussed work related to the following assigned MBO:

Identify 3 innovative ideas to increase the value in ASHRAE membership.

Ideas as presented by Planning Committee Chair, Trent Hunt, and Vice Chair, Andres Sepulveda, have been noted below:

1. Workforce Development - Innovative ideas to
 - Attract Talent
 - Engage Talent
 - Retain Talent
2. Regions and Chapters using Strategic Plan for MBO Development
3. Planning Committee Advisory Group (formal or informal)
 - Smooth transition between Planning Committee years
 - New ideas for Chapter Engagement
 - Strategies to identify the best talent for the Planning Committee

Details will be presented at the Annual Conference in Phoenix.

5. The Planning Committee in their ongoing effort to map the long-term vision of ASHRAE, has selected members for a Planning Committee-Global Trends Subcommittee. The subcommittee is charged with gathering data on global trends, emerging technologies, and possible collaboration with other societies. Members selected are noted below:

- Sheila Hayter, Chair
- Jonathan Smith, Member
- Dunstan Macauley, Member
- Andres Sepulveda, Member
- Chandra Sekhar, Member

Trent Hunt

Chair

June 23, 2024

Date

Attachments: **A.** DRAFT KPIs & Rollout (2025-28 Strategic Plan)
B. Strategic Plan Development Subcommittee Report – Winter 2025
C. Implementation and Innovation Subcommittee Report – Winter 2025
D. Validation and Documentation Subcommittee Report – Winter 2025

Next Steps: Potential KPIs

A strong member and volunteer base	High utilization of ASHRAE resources	Organizational foresight, leadership	A viable and thriving industry	A positive impact on the environment and the larger industry
<ul style="list-style-type: none"> • # of Members, Volunteers • Member Retention • Member Satisfaction • # of motions from CRC's that align with strategic plan goals/objectives 	<ul style="list-style-type: none"> • Annual transactions per member • Conferences attendance (Winter, Annual, topical) 	<ul style="list-style-type: none"> • # of joint meetings & events <ul style="list-style-type: none"> • Chapter joint meeting with other societies (PAOE SA18) • Student activities held jointly with another organization (PAOE SA5.1) • YEA joint event with another society (PAOE YEA16) 	<ul style="list-style-type: none"> • # of activities in support of the emerging workforce <ul style="list-style-type: none"> • K12/STEM activities hosted by chapters (PAOE SA5) • Students participating in chapter meetings (SA6.10) • Chapter members participating in post-high school activity (SA6.13) 	<ul style="list-style-type: none"> • Market Penetration Rate: Tracking the utilization of ASHRAE standards / guidelines through a member and / or non-member survey (e.g. have you used ASHRAE standards in your work within the last three months?) • Members reporting use of ASHRAE standards in their work in the past year (addition of question to an existing survey) • Number of government outreach events • Perception of ASHRAE's influence in the advocacy space (eg via Penta research)

DRAFT

2025 Spring Rollout

Spring CRC Leadership Presentation

- PAOE Points related to Strategic Plan

Spring CRC Chapter Operations Workshop

- Strategic Plan Training

Strategic Plan-at-a-Glance ready for review

- May/June

2025 Annual Conference Launch

Launch at Plenary Session

- QR Code
- Press Release

July Marketing Plan

- Press releases to all media outlets
- Social media posts
- eSociety/Insights
- Chapter Notes
- Fall CRC Leadership Presentation

Innovation and Implementation Subcommittee Update

2025 Winter Conference

Orlando

I&I Subcommittee

Madison Schultz – Co-Chair

Billy Austin – Co-Chair

Sherry Abbott-Adkins

Samir Traboulsi

Bassel Anbari

Farhan Mehboob

Rupesh Iyengar

Mind Mapping

- Mind maps are a way to document a brainstorming session

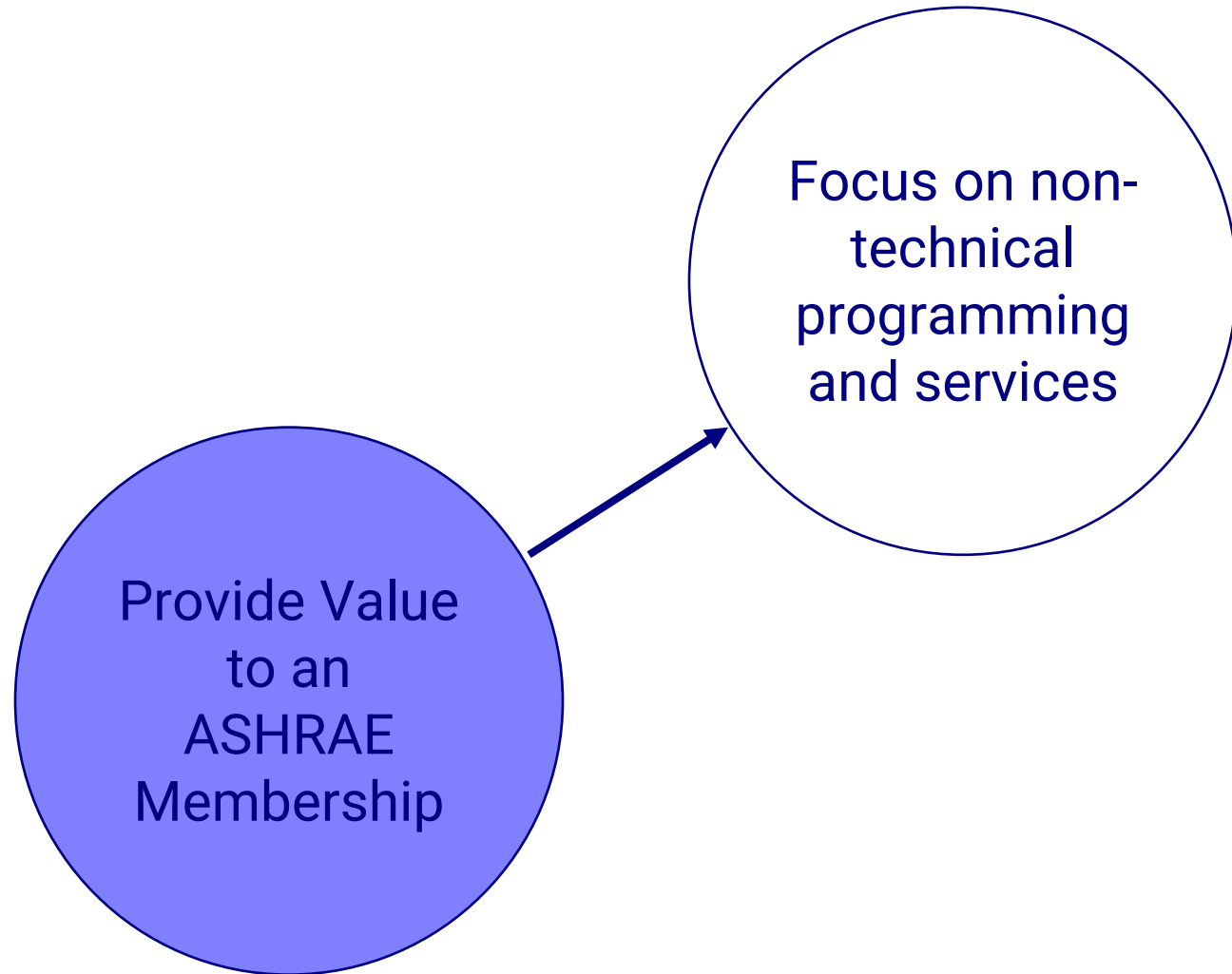
Mind Mapping

- Start with a topic



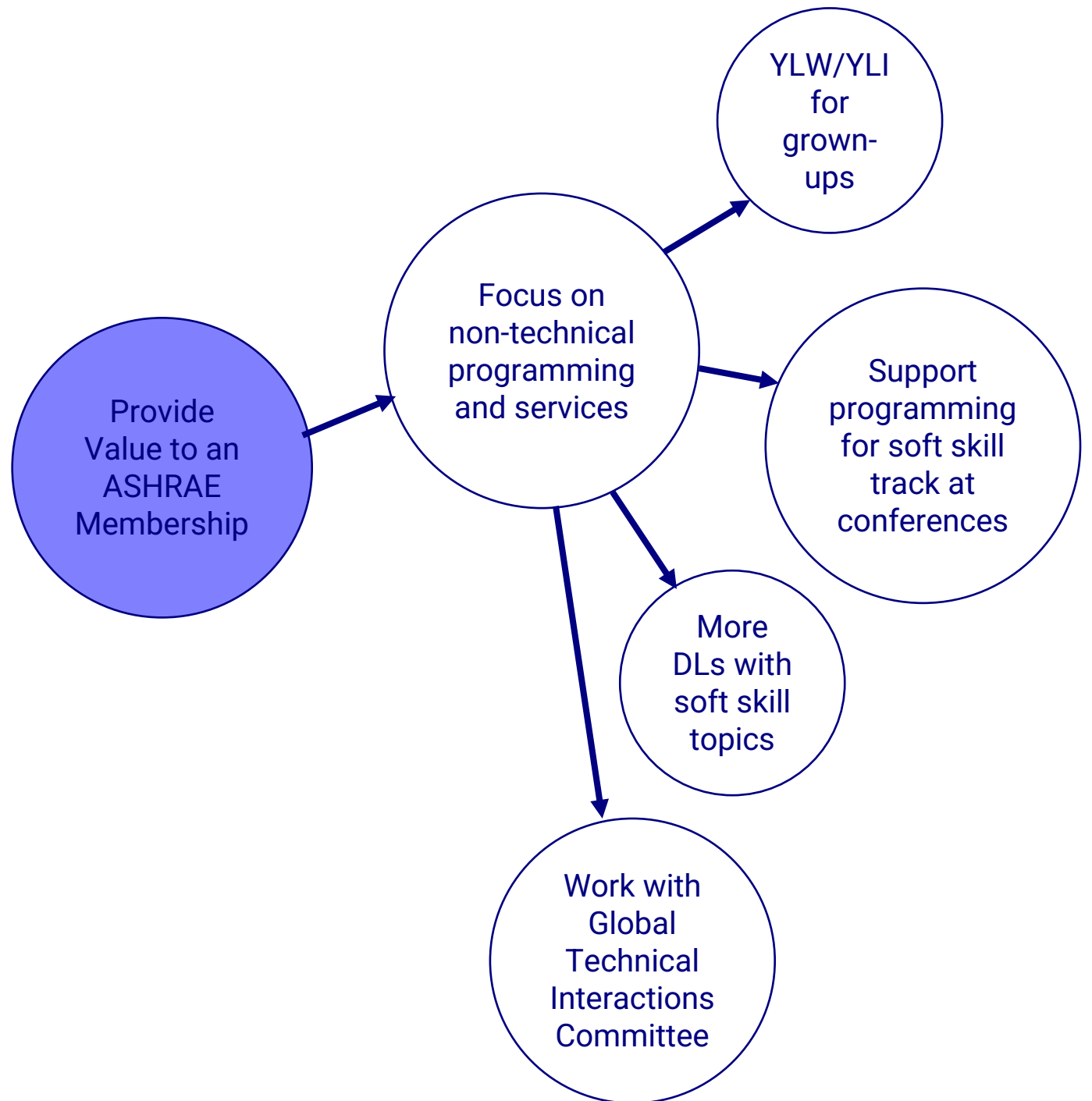
Mind Mapping

- Start with a topic
- Expand on the topic. Connect ideas with arrows.



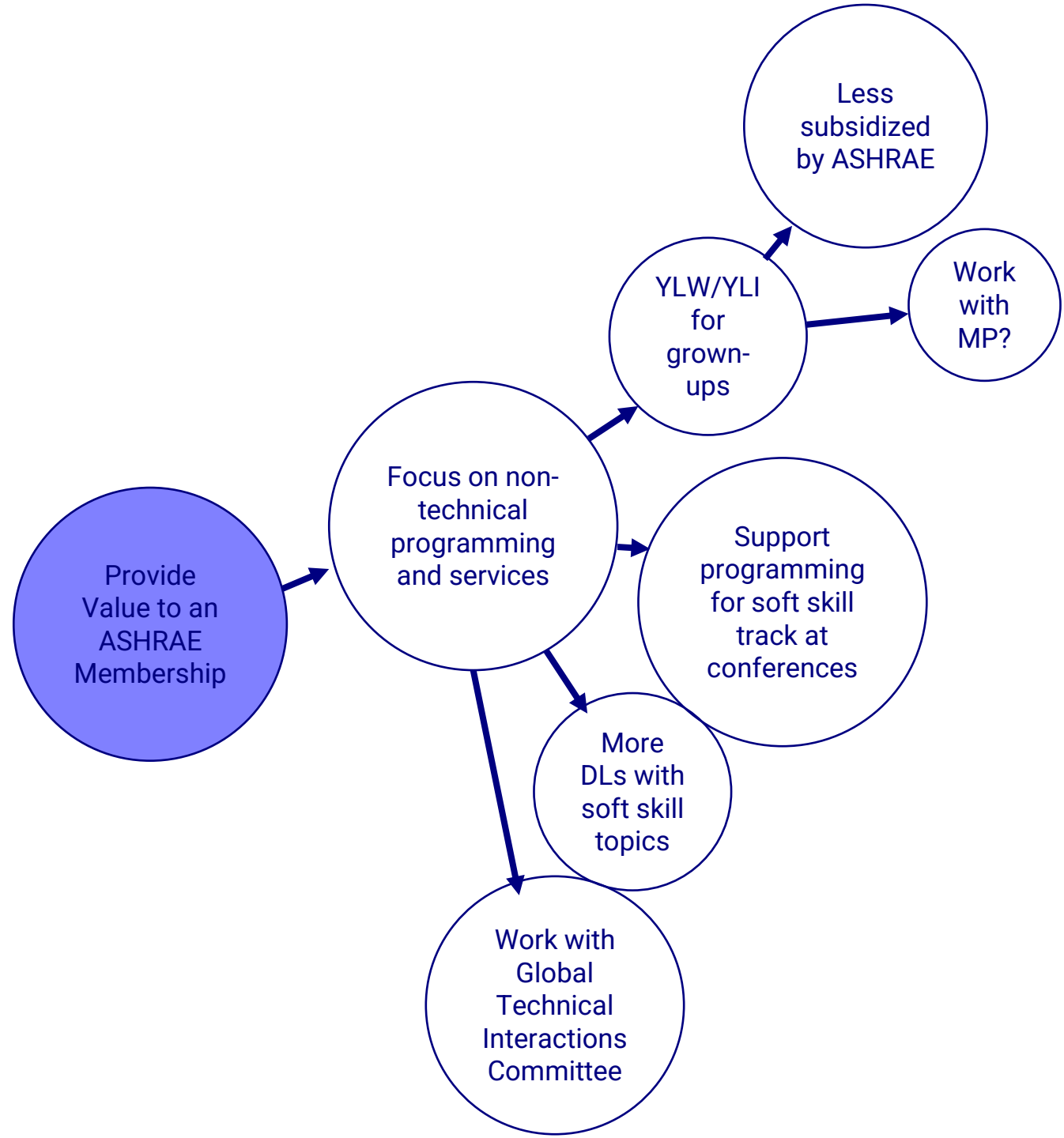
Mind Mapping

- Start with a topic
- Expand on the topic. Connect ideas with arrows.
- Continue expanding ideas and connecting.



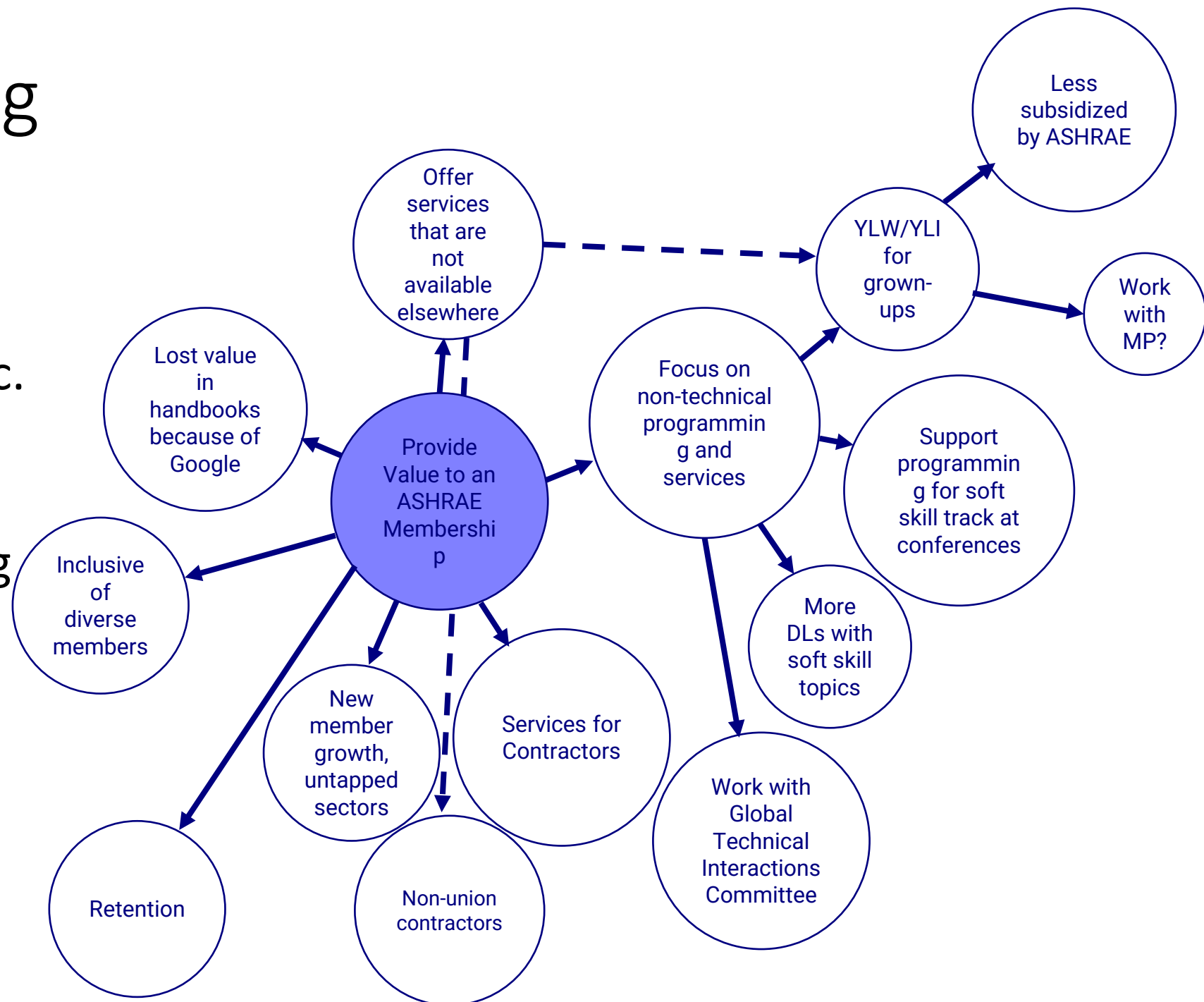
Mind Mapping

- Start with a topic
- Expand on the topic. Connect ideas with arrows.
- Continue expanding ideas and connecting.



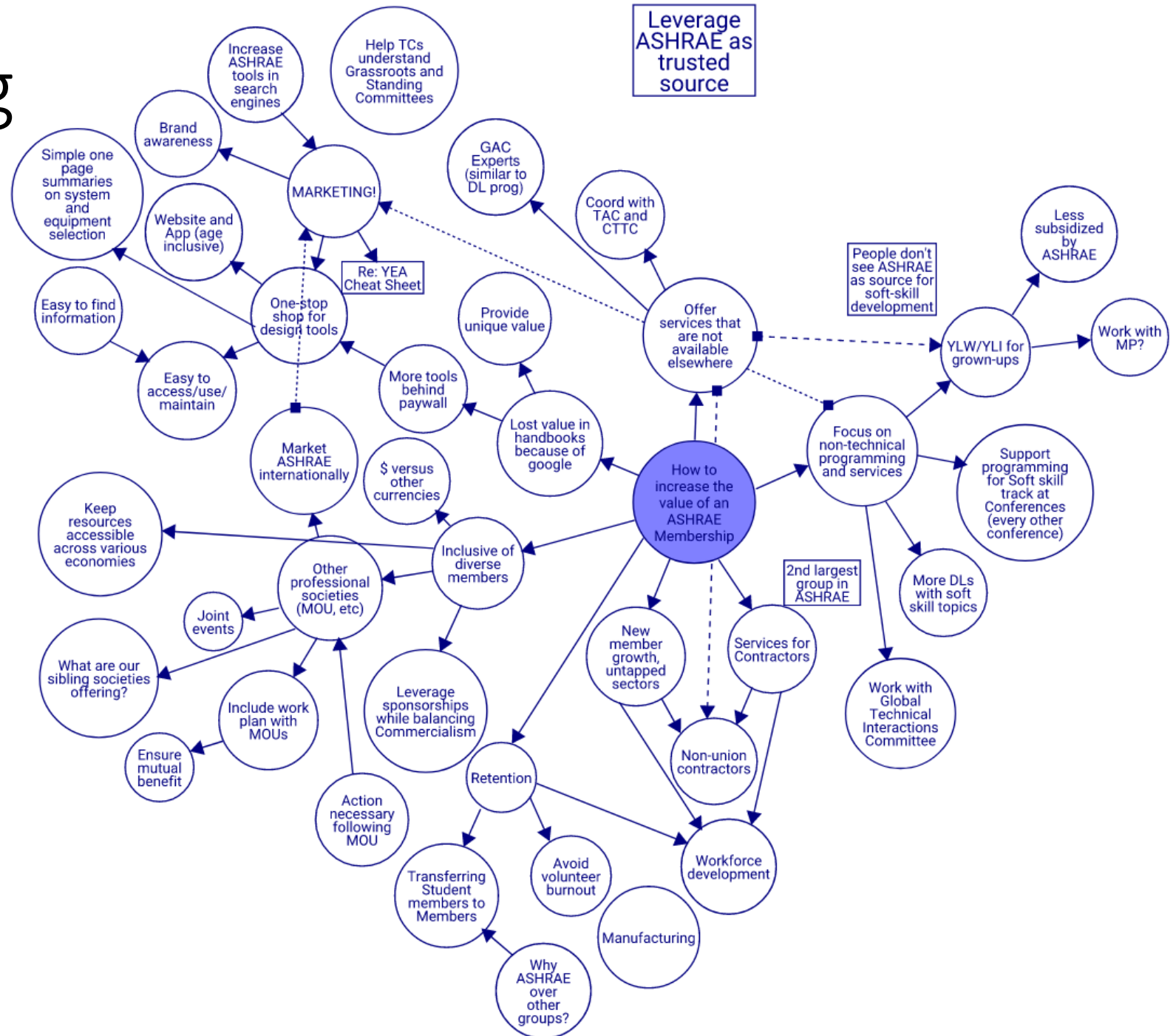
Mind Mapping

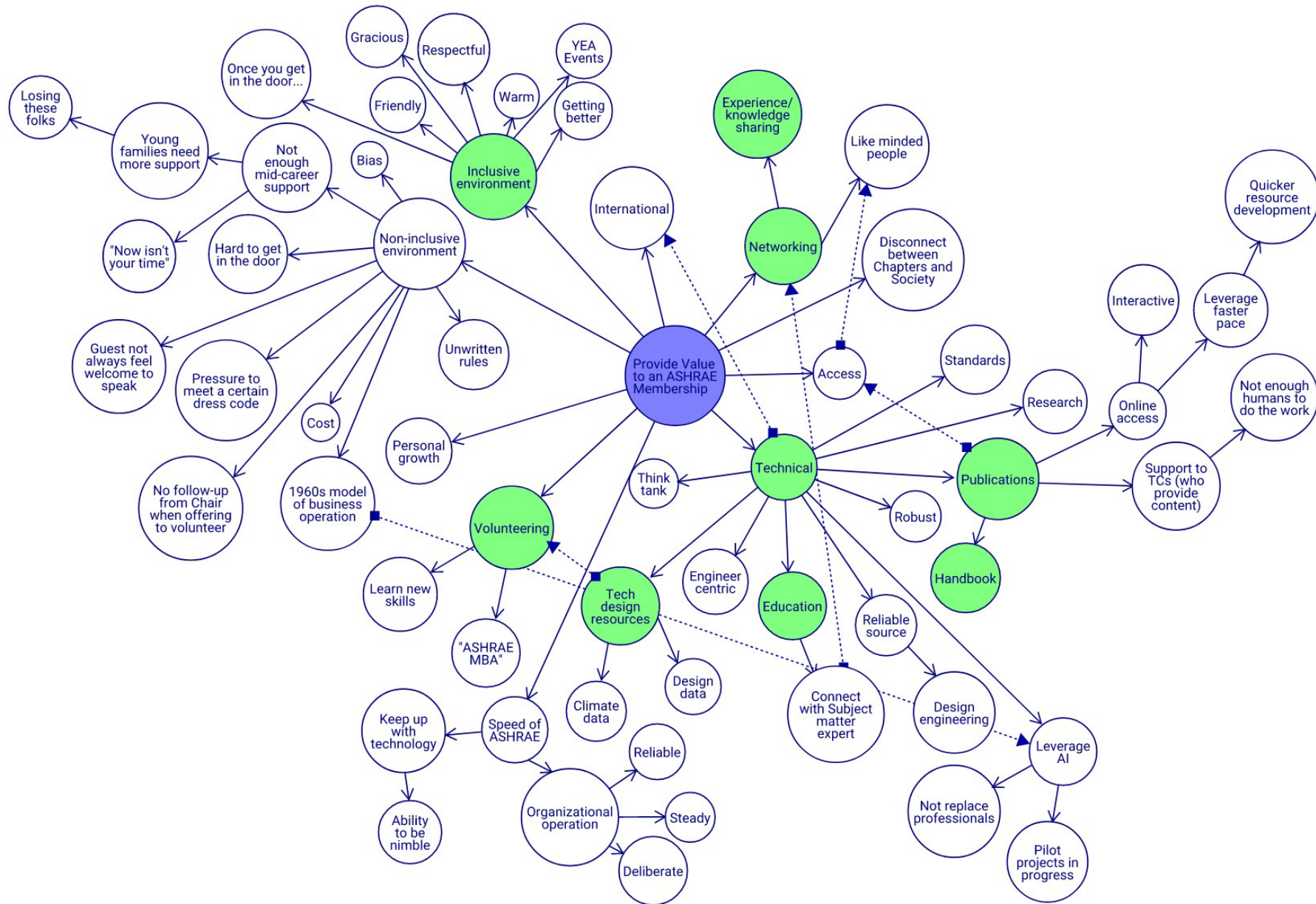
- Start with a topic
- Expand on the topic. Connect ideas with arrows.
- Continue expanding ideas and connecting.

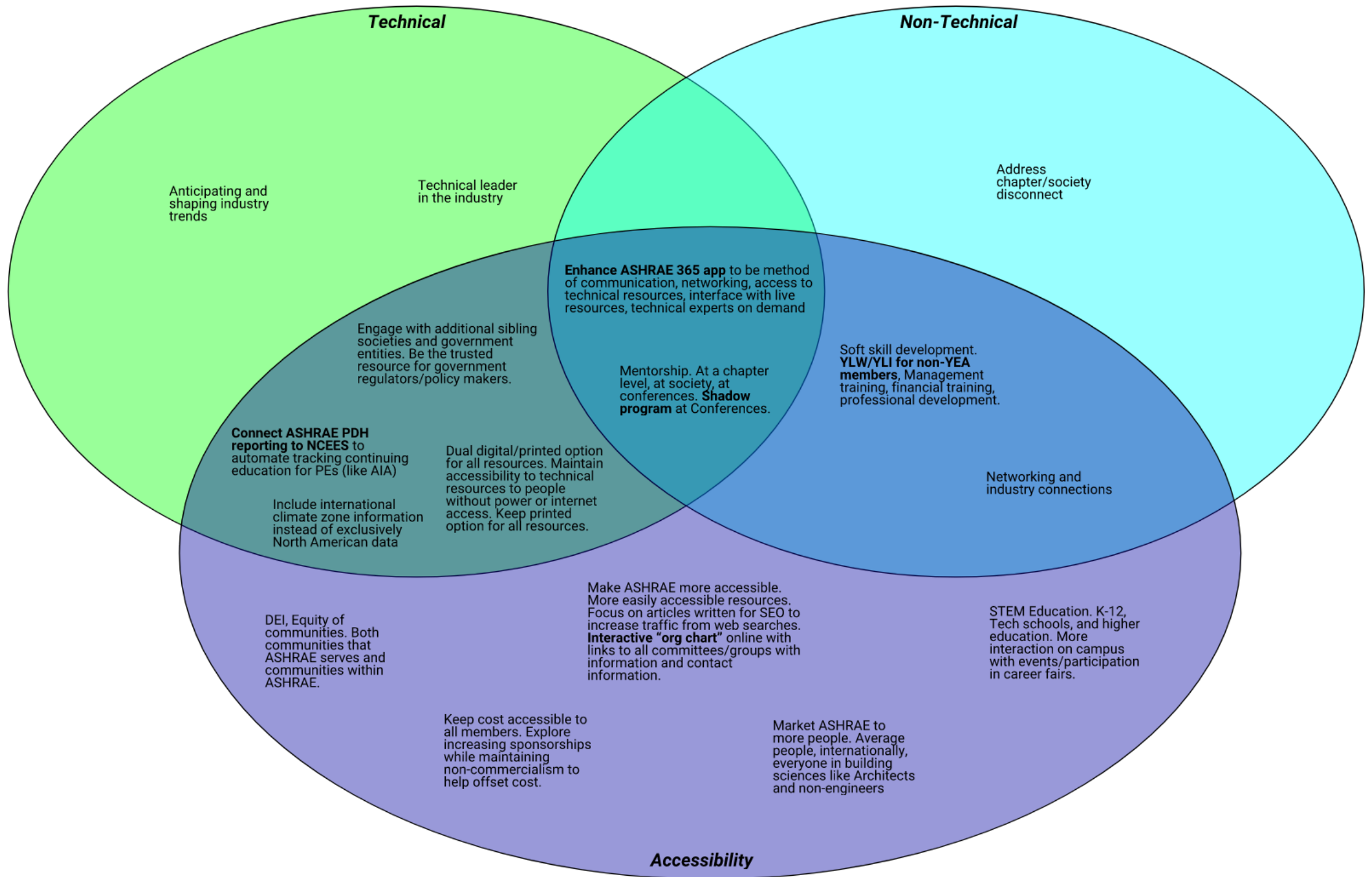


Mind Mapping

- Start with a topic
- Expand on the topic. Connect ideas with arrows.
- Continue expanding ideas and connecting.
- Each person highlights their favorite idea.

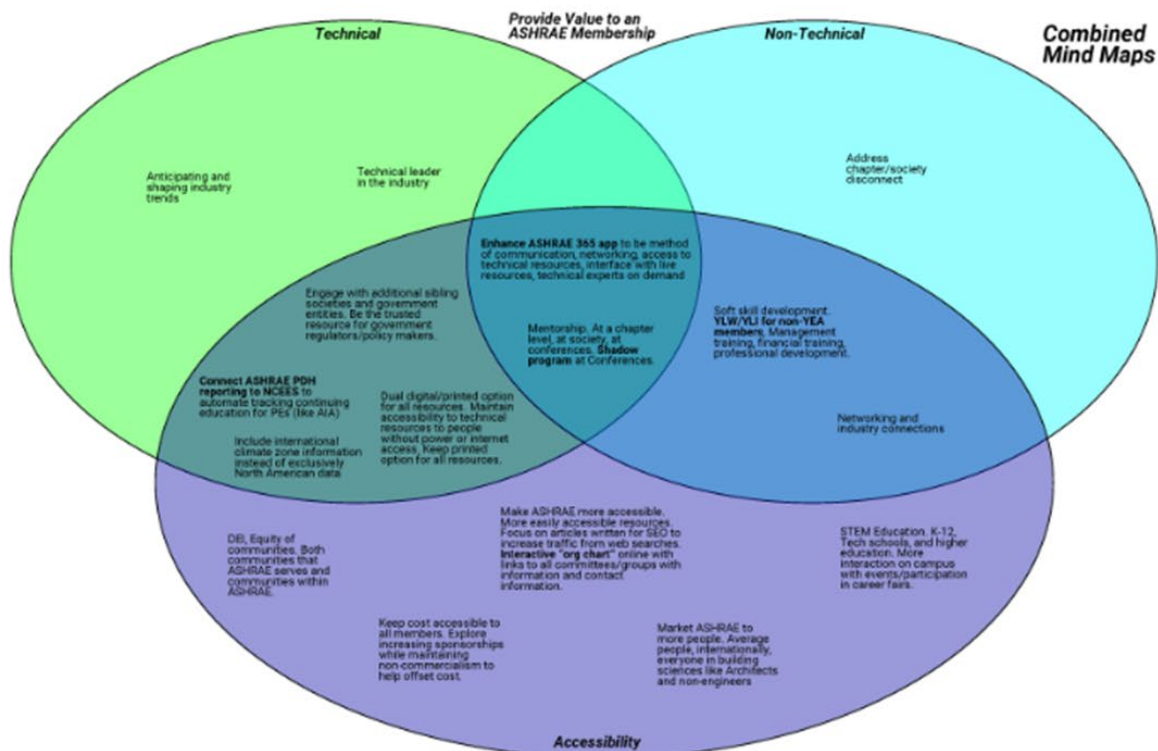




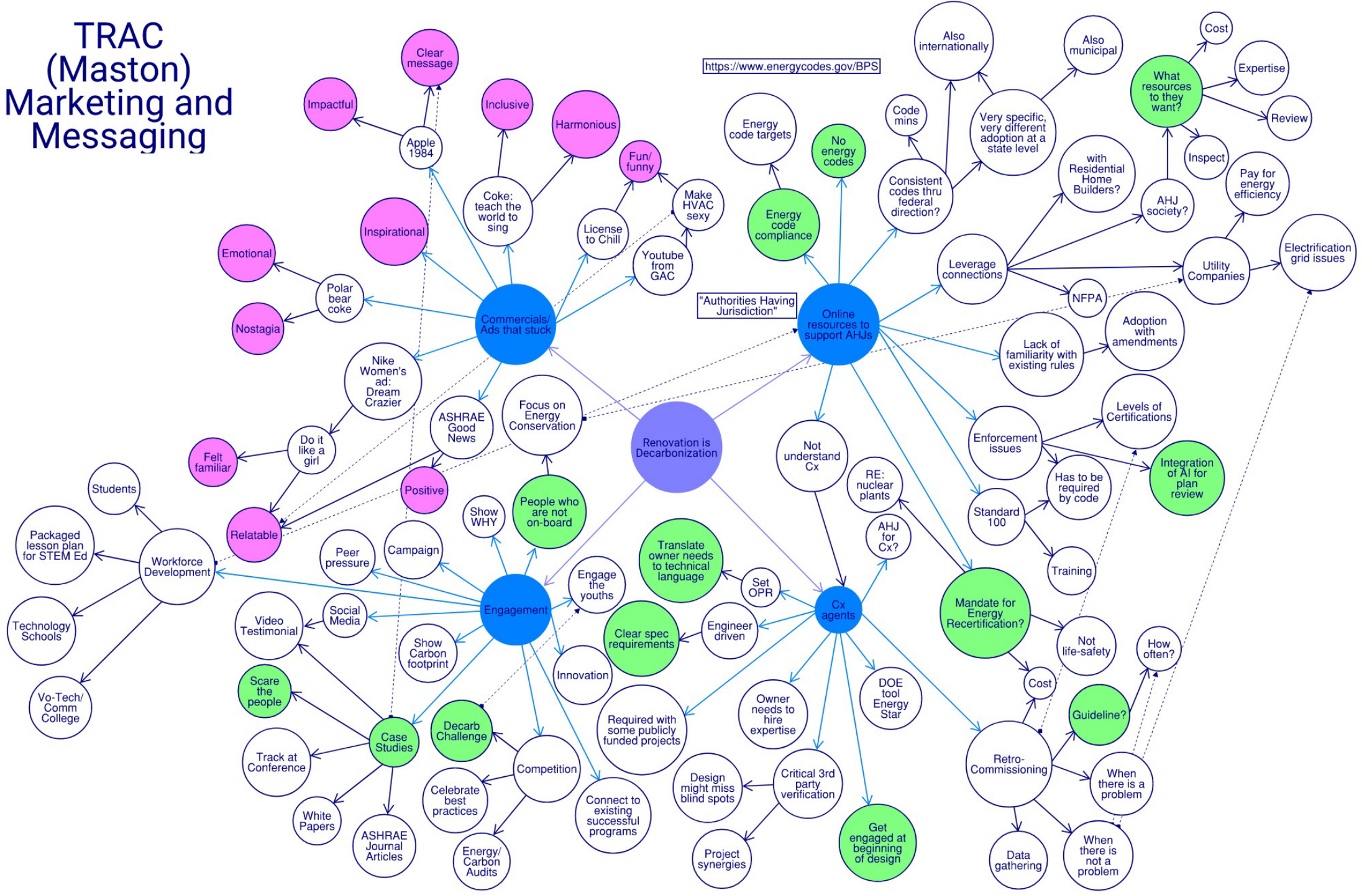


ASHRAE's Planning Committee is excited about ensuring that every ASHRAE member gets the most out of their membership. We are also a resource to help Councils and Committees align their efforts with ASHRAE's Strategic Plan. To gather valuable insights, we're organizing brainstorming sessions across different groups within ASHRAE, directly engaging with our members for their feedback. These conversations are ongoing, but we wanted to provide an update on how things are going. Here's a summary of the feedback we've gathered so far. Feel free to reach out if you need more information or if you'd like to organize a mind mapping session for your Committee, Council, or group! [Click here to view current Planning Committee members.](#)

(Click to view larger)



TRAC (Maston) Marketing and Messaging



MBOs



Take information from Mind Mapping Strategy session and coach various councils and committees to develop operational plans



Create system for gathering and documenting ideas from membership for better chapter engagement, capacity and support (joint MBO with MP)

MBO #1 – Results

PLC Members received mixed responses to emails to Committees/Councils

Some of the Committees/Councils did not know who Planning was or why we were reaching out.

We were met with feelings of hesitation and confusion from Committees/Councils

Committees had already developed MBOs by the time they heard from us.

MBO #1 – Results

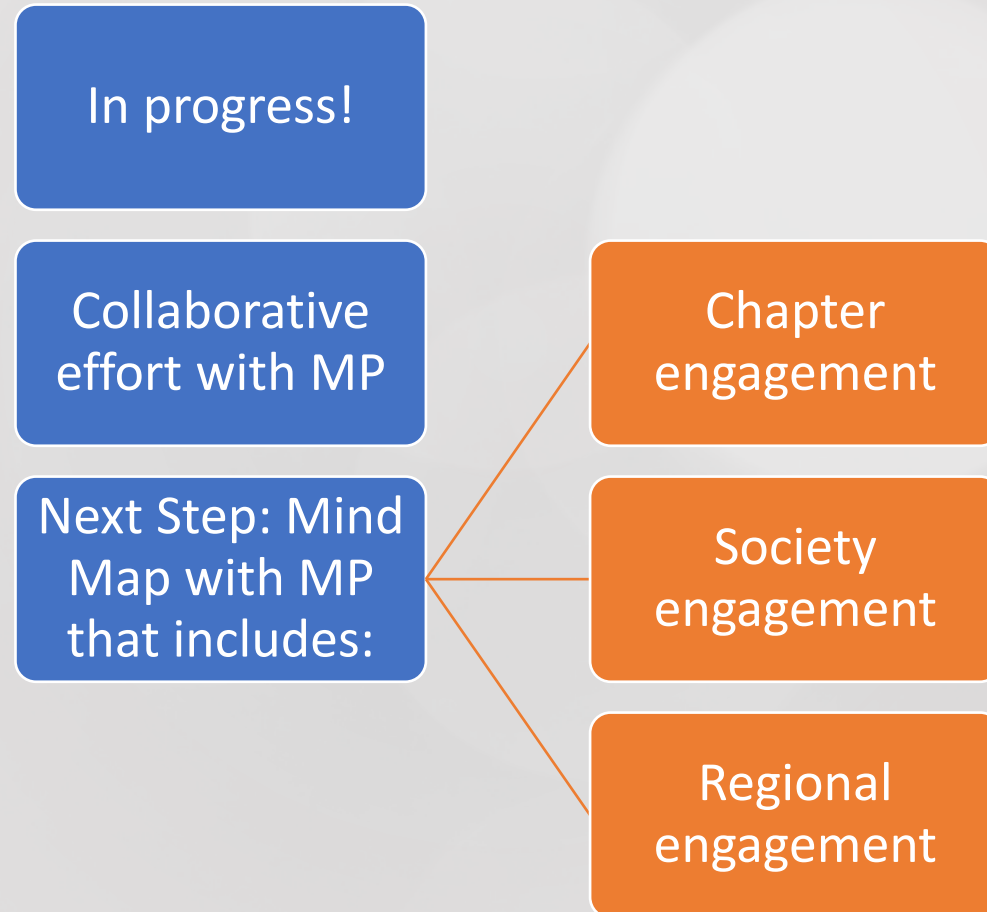
Lessons Learned:

- Work closer with Committees and Councils so they know who Planning is
- Early initial contact is key
- Include Staff Liaison and Committee's Board ExO on communication
- Ensure they understand that we are here to help, not add additional work

Next Steps:

- Reach out prior to Winter Meeting to get on the agenda
- Attend all Committees/Councils meetings and introduce PLC

MBO #2



Other Activities



Coordination with 25 Committees/ Councils

Participation in TRAC + PEAC

Members are also on:



Member's Council	H&A
PubEd Council	MP
Tech Council	Training and Education
Certification	Publications
CTTC	Refrigeration
CEC	Research Administration
Development	RP
Communications	Residential Buildings
Environmental Health	Standards
GAC	SA
Global Technical Interaction	Technical Activities
Handbook	YEA
Historical	

DEI Board Advisory Subcommittee
Multiple TCs
College of Fellows
Life Members Club
GAC
Finance Committee
BeQ
Decarbonization Working Group
Regional DEI Chair
Chapter GAC Chair
Chapter RP Chair

Thank you!

Questions?



2025 Winter Conference

**Strategic Plan
Development
Subcommittee
Mid-Year Report**

February 7, 2025

**Dunstan Macauley
Devin Abellon, PE
SPD Subcommittee Co-Chairs**

Strategic Plan Development Subcommittee



Dunstan Macauley
Co-Chair



Devin Abellon
Co-Chair



Buzz Wright
Member



Carrie Brown
Member



Chandra Sekhar
Member



Sheila Hayter
Member



Mick Schwedler
Member

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

1

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

- a. Lead the development of widely adopted standards to support indoor environmental quality, decarbonization, and resilience.
- b. 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.
- c. Develop resources based on member needs and industry trends.

- a. Tailor and target engagement and resources to ASHRAE members and defined key stakeholders.
- b. Provide guidance to targeted stakeholders on impactful ways to maximize the positive downstream effect of their engagement on the built environment.
- c. 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.
- b. 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 Tomorrow's Global Built Environment Today

KEY ENABLERS

- **Research:** The value of ASHRAE's resources is grounded in unbiased data, developed through rigorous research methods.
- **AI:** The use of AI 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.

OUTCOMES

- 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.

2025 Winter Conference Rollout – Leadership Presentation

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

2025 Spring Rollout

Spring CRC Leadership Presentation

- PAOE Points related to Strategic Plan

Spring CRC Chapter Operations Workshop

- Strategic Plan Training

Strategic Plan-at-a-Glance ready for review

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DRAFT

Future Development of ASHRAE Strategic Plans

Develop an ASHRAE Vision 2040

Develop an ASHRAE Vision 2050

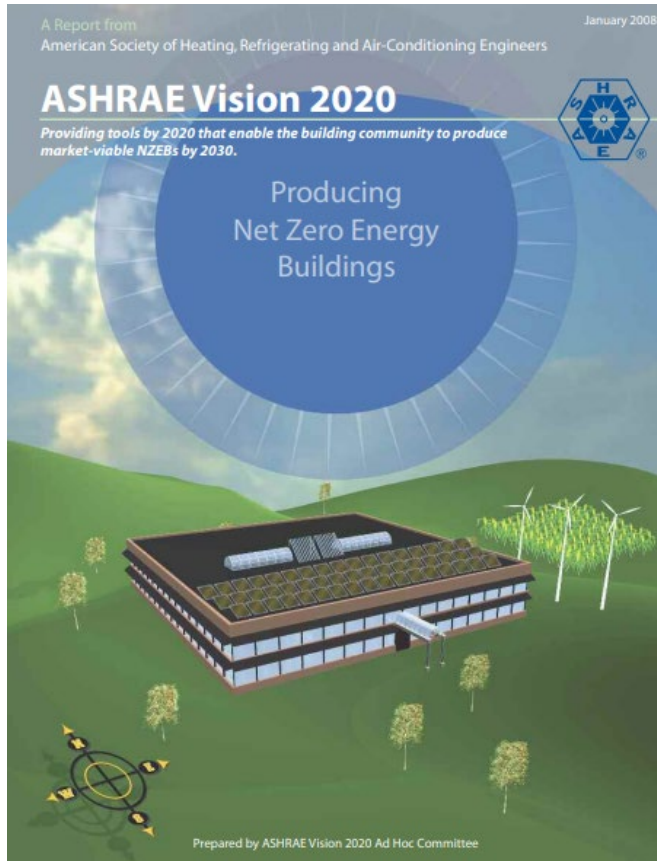
3-Year Plan vs 5-Year Plan (Pros & Cons)

Mid-Term Updates

Operational Plan



ASHRAE Vision Statements



ASHRAE VISION 2020



ASHRAE VISION 2030



ASHRAE VISION 2040???

Strategic Plan Development Cycle



Strategic Plan Development Cycle



3-Year Plan

5-Year Plan

Another Timeframe (4 Years?)

Operational Plan

2024-2025 MBOs

MBO #	Description	Metric	Initiative #	Goal #	Completion % /Date
		(how do we determine success?)			
5	Review and Update Strategic Planning Manual based upon lessons learned and new 3 Yr Strategic Planning Cycle	Publish revised Strategic Planning Manual	3	3	Annual Meeting 2025



Shaping Tomorrow's
Built Environment Today

PLANNING COMMITTEE STRATEGIC PLANNING MANUAL

Note: This Manual is owned by the Planning Committee of ASHRAE.



Questions?



**Validation & Implementation
Subcommittee Update
2025 Winter Conference, Orlando
February 7, 2025**

2025 V&D Subcommittee Members

Michael Patton – Co-Chair

Chad Smith – Co-Chair

Kellie Huff

Andres Sepulveda

David Yashar

And of course – Chandrias Jolly





V&D MBO Updates

V&D Subcommittee MBO updates

MBO #3 – Revise PLC Reference Manual & Manual of Operations

MBO #4 – Validate effectiveness and develop Metric for Strategic Plan Marketing and Promotion

SC assigned MBO - Incorporate feedback from 2024 Annual mtg to update MBO gathering tool working with IT; gather all MBO's from councils and committees to evaluate current SP alignment

SC assigned MBO – Continue to support the transition of membership survey to MP Committee and share survey results for evaluation of KPI's and trends.



MBO #3 – Revise PLC RM & MOP

- Review of Resource Manual and Manual of Operation have been complete.
- V&D Subcommittee is bringing motion to full committee to approve the updates as presented.

MBO #4 – Develop Metric for Strategic Plan Marketing and Promotion

- Subcommittee working with Marketing department.
- Marketing plan will continue to track historical metrics for awareness.
- Will work with Marketing to develop new metrics to evaluate the effectiveness of the marketing campaign and impact the Strategic Plan is having on all committees and councils.



Subcommittee self-assigned MBO's

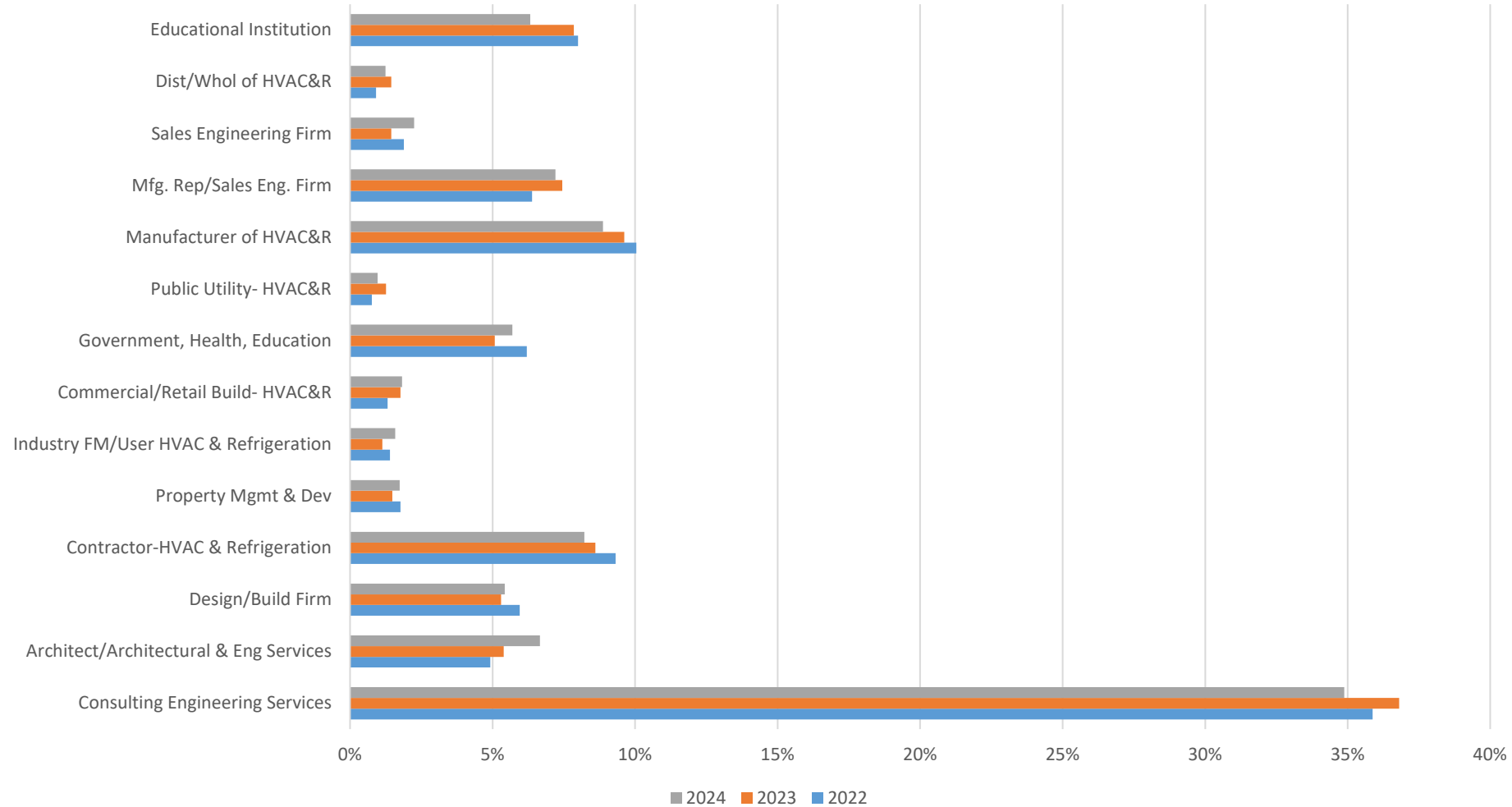
- Good progress has been made by IT group with feedback from 2024 Annual meeting on MBO gather tool. Updated features include ability to upload and download Excel files, ability to update progress throughout the year, and information saved to database for historical reference.
- MBO gathering from Committees and Councils ongoing.
- Worked with MP committee on question review before survey distributed, but have yet to receive any results from MP yet.

General Information

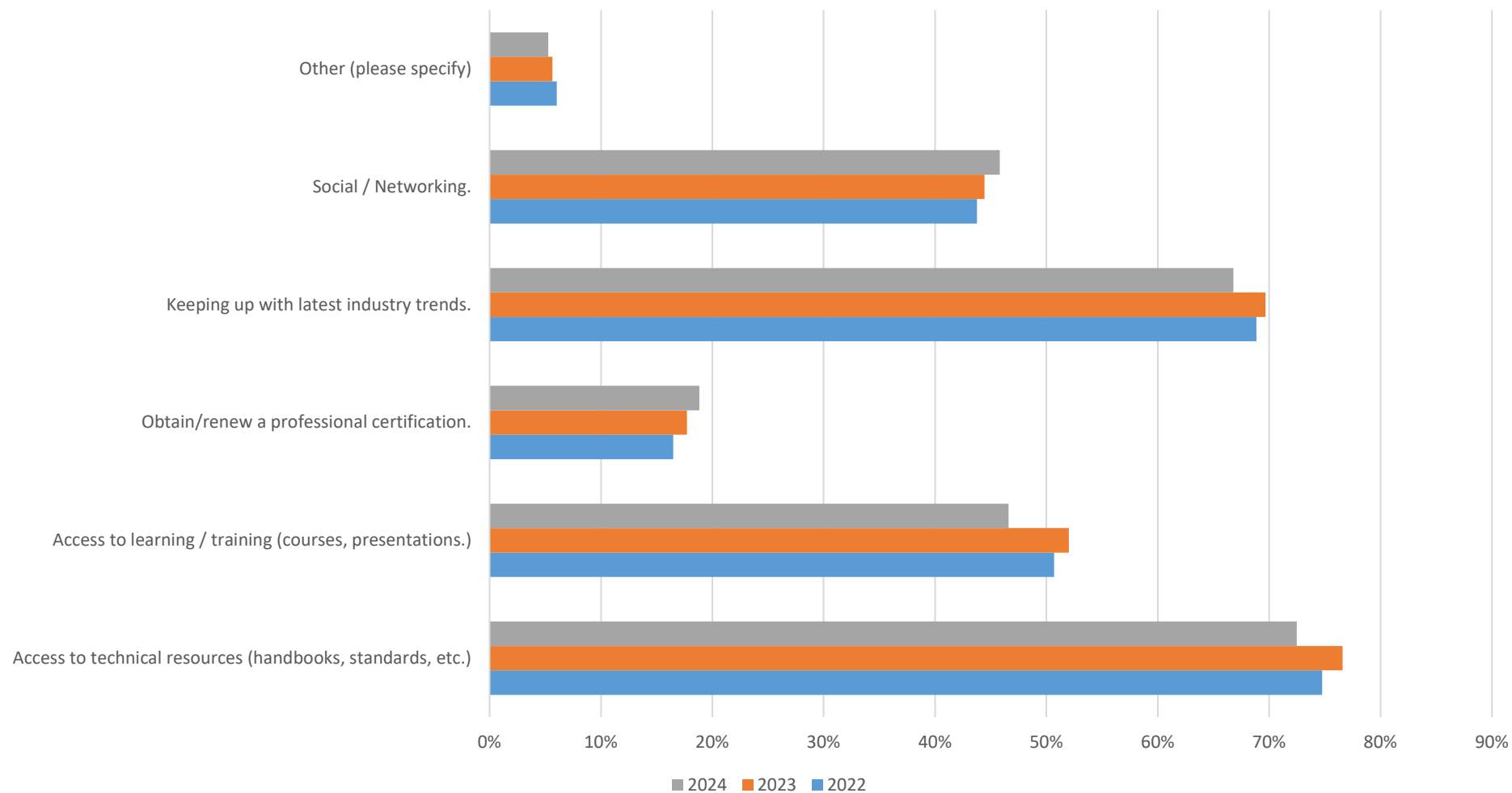
- Survey Conducted from 1 Nov 2024 to 15 Dec 2024 (6 weeks)
- Sent to all ASHRAE Members
- 2,580 respondents, 5% of membership (2023: 3,171)
- Questions:
 - Shorten the number of questions
 - Formulated to force a choice
 - Could be skipped
 - Questions added to ask about Decarb



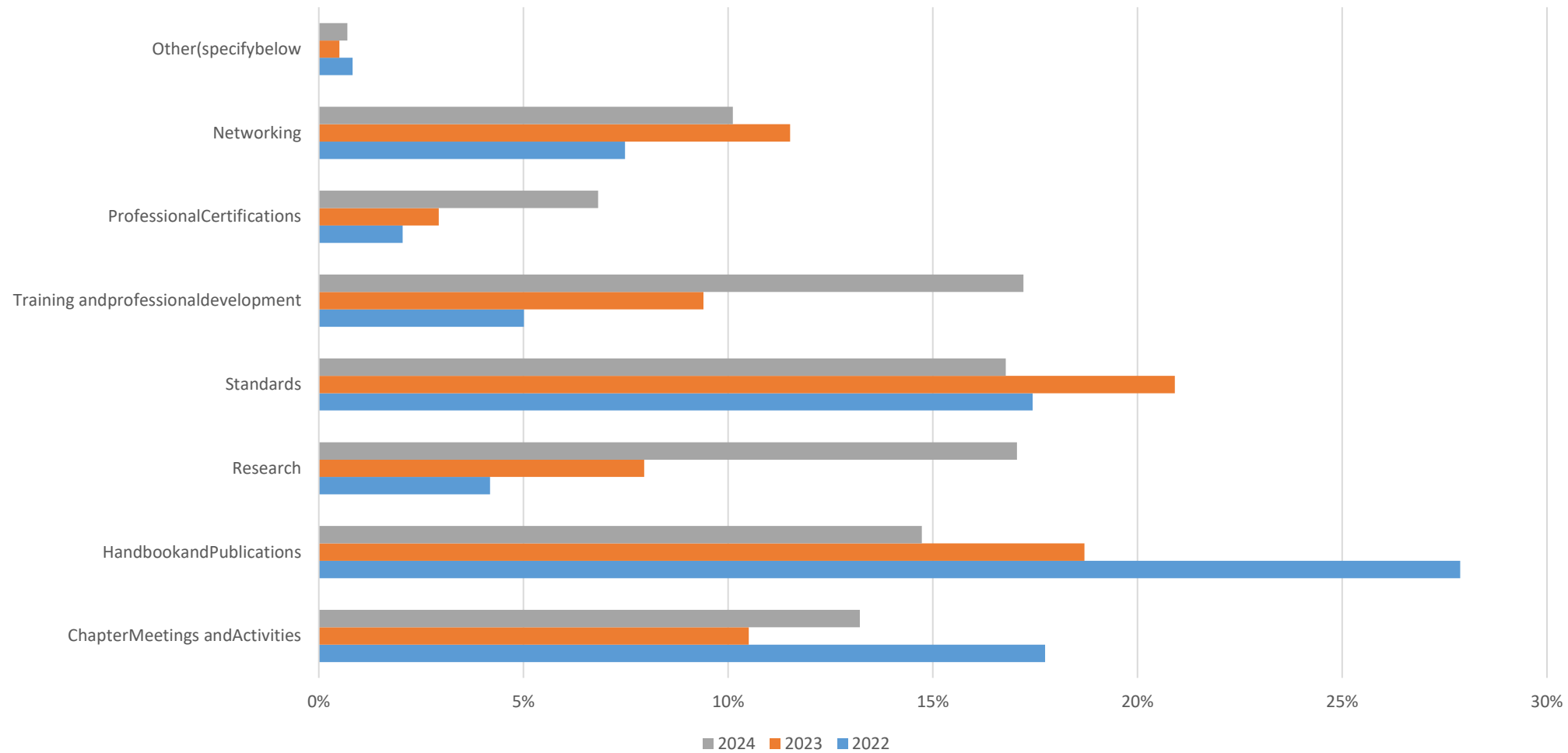
Occupation of Survey Respondents



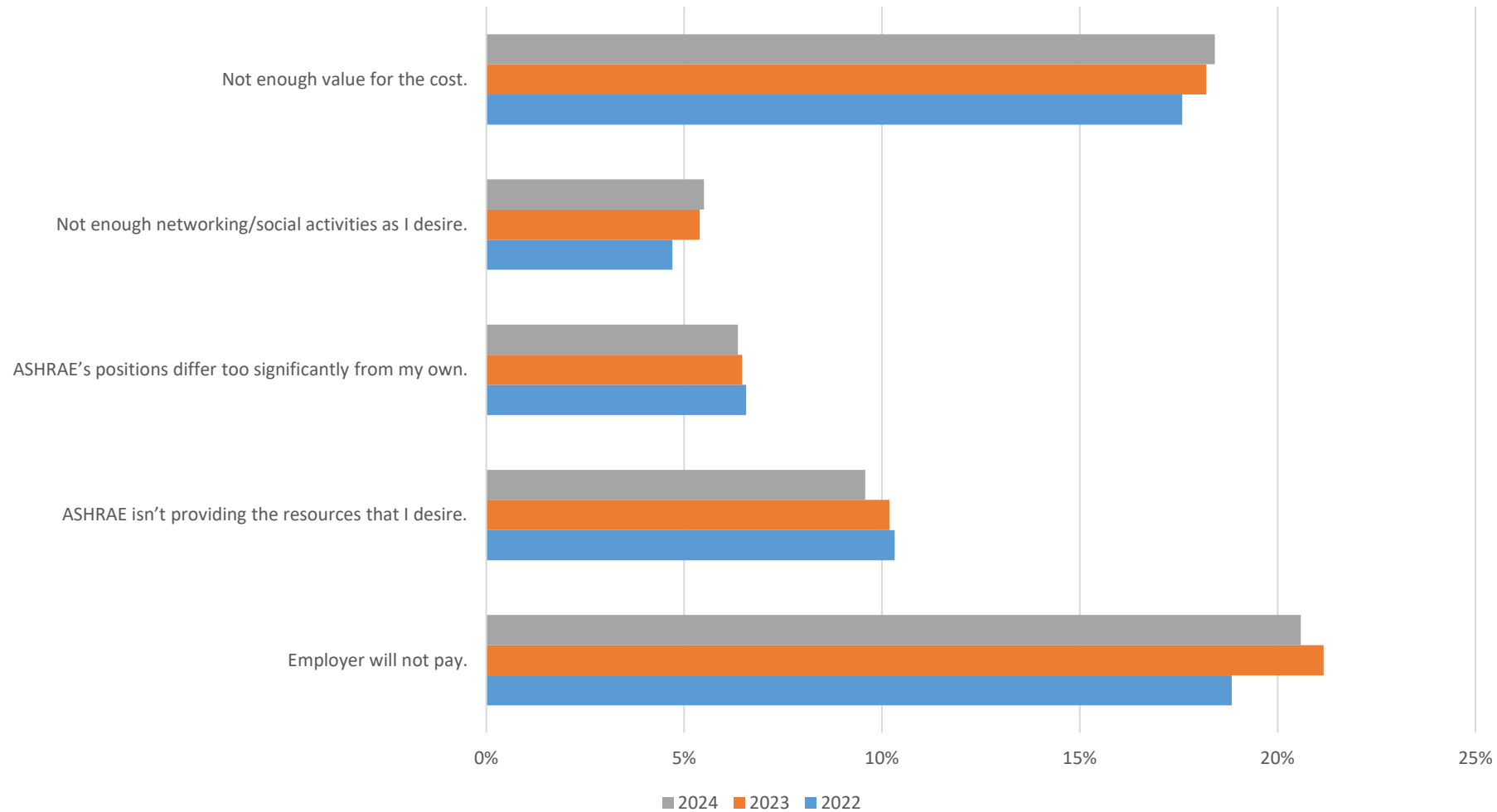
What is your primary reason for being a member of ASHRAE?



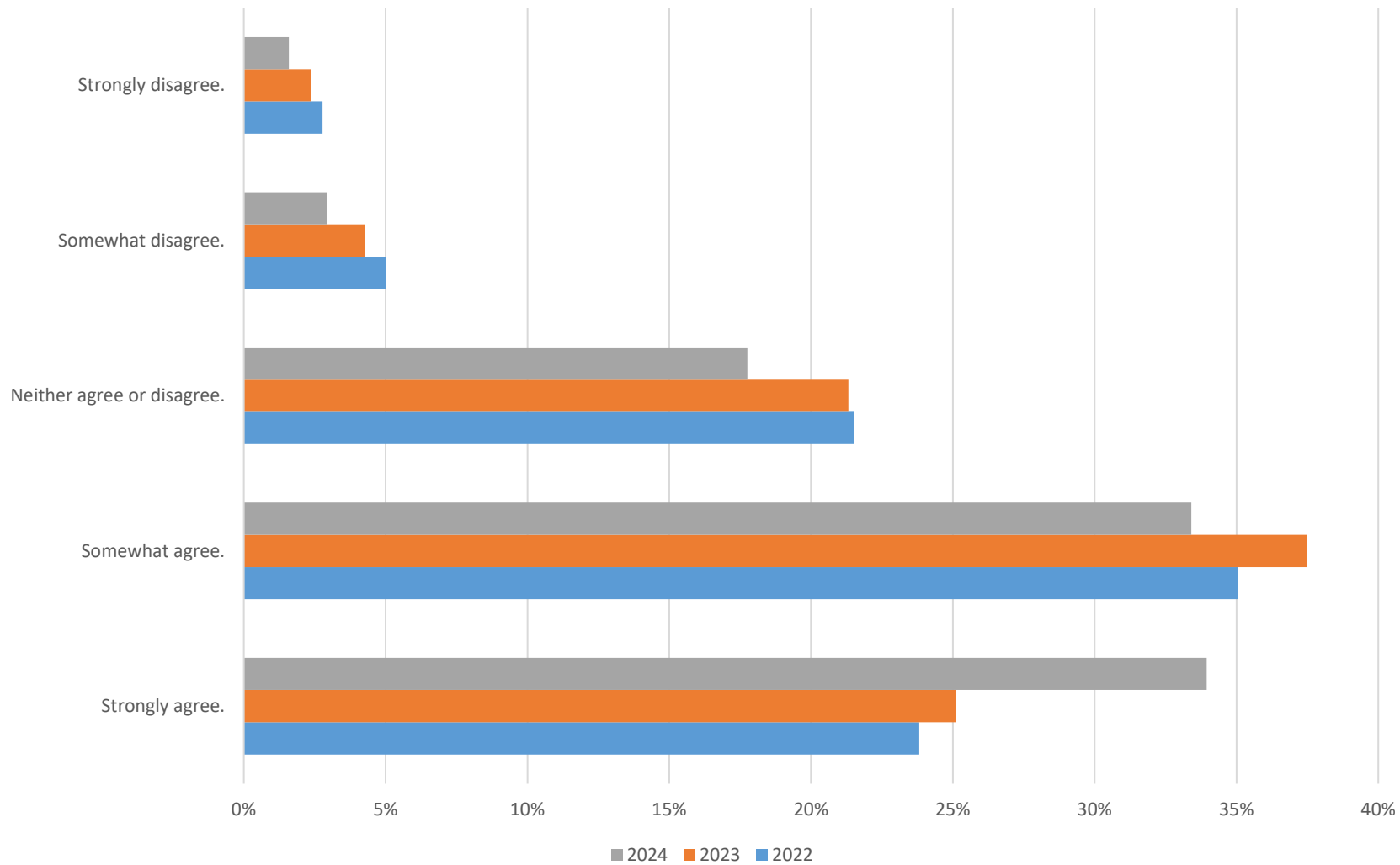
What benefits are important to you?



What are some reasons that would cause you not to renew next year?



Is ASHRAE assisting you outside of HVAC&R?





Thank you.
Questions?

REPORT TO THE BOARD OF DIRECTORS
From the ASHRAE Headquarters Building Committee
As of January 15, 2025

Recommendations for Board Approval:

1. MOTION: None

Information Items:

The Committee continued this year to oversee the correction of some operational issues and to develop a strategy to enhance the building operations to provide a quality indoor environment while effectively using energy. The Committee is also experimenting with several technologies to improve the effective operation of the facility. So far this year we have worked on the following initiatives:

1. Net-Zero Operations:
 - a. The amount of solar power installed at the Headquarters was limited to 250 kW AC due to net metering regulations from Georgia Power. The current performance over the last 12 months is at Net-Zero. As we continue to learn more about the operation of the building, we will continue to adjust the operations to effectively achieve a quality indoor environment without wasting energy. One area is the lighting system, which is not currently connected to the BAS system.
2. The Carrier Abound IAQ monitoring system has been installed and the measurements are displayed on the dashboard.
3. Ceiling Fans have been installed in the Director's offices, improving the level of comfort.
4. New Proposal from Copper Tree, LBNL, DOE to demonstrate Automated System Optimization, we are still waiting for Automated Logic to get this application set up and operating.
5. Building operation evaluations:
 - a. **Cisco intelligent building initiative**, currently evaluating the Building Intelligence using the Building Intelligence Quotient (BiQ), this is on hold until we get the lighting system issues resolved.
 - a. **Building EQ**: The ASHRAE HQ will receive a new Building EQ rating upon completion of a more recent year of energy consumption data collection and an energy audit in March of 2024. The current Building EQ score is -2, This is in comparison to the last Building EQ rating from March 2022 of 3 and indicates that we are generating more electricity than the building is using on an annual basis.
 - b. **BOMA 360**, We have approval for the use of the BOMA 360 program to evaluate the operation of the building and we will be starting the process soon.
 - c. **Green Globes-EB**, we have approval to use this system to evaluate the operation of the facility and we have started the documentation process.
 - d. **LEED Existing Building Operation and Maintenance (EBOM)**, we have recently received approval to evaluate the operation of the facility, data entry will start soon, but we will not get the rating until the new version of LEED is released.
6. We continue to present on the design, construction, and operation of the building. The presentations are quite popular and are well received.

January 15, 2025,

Chair Darryl K Boyce



**REPORT TO THE BOARD OF DIRECTORS
From the Membership Model Ad Hoc
As of February 5, 2025**

Ad Hoc Members

Ken Fulk, Chair
Ashish Rakheja, Vice Chair
Jason Alphonso
Rob Craddock
Doug Fick
Kishor Khankari
Sarah Maston
Jonathan Smith

Invited Guests

Daniel Chudecke, MP Consultant
Jason Urso, MP Chair
Louise McKenzie, MP 1st Vice Chair
Rob Druga, MP 2nd Vice Chair

Staff

Daniel Gurley, Sr. Manager Membership
Craig Wright, Director, Finance
Mark Owen, Director, Pub & Ed
Lizzy Seymour, Director, Member Services

Recommendations for Board Approval:

The following motion proposes a major organizational change, which per ROB 2.101.005.5, requires a 60-day cooling off period and the Ad Hoc would request a vote at the Board of Directors Meeting on May 6, 2025.

“A. Proposed major organizational changes shall be submitted as information and in writing to the Society’s Board of Directors at least sixty (60) days before any action is taken. Major organizational changes shall be defined as adding or dissolving a council or changing the makeup of the Board. Organizational changes may also be defined as “major” by a two-thirds affirmative vote of the Board members voting.

B. Any motion presented to the Board of Directors to make any major organizational changes shall be presented to the Board at one Board session and not voted on until the next Board session or a later Board session.

1. MOTION: Move to approve the proposed membership model restructuring plan as presented by the Membership Model Ad Hoc Committee to be implemented by the 2027-2028 Society Year.

BACKGROUND: The Membership Model Ad Hoc (MMAH) was assigned as a multi-year ad hoc, as requested by Presidential Member Scoggins and President Knight, which proposes a new, simplified Membership Model focusing on the value proposition of membership and which further aligns membership dues with the value provided. The charge of the Ad Hoc goes beyond just this specific task, which includes financial items related to the membership model revisions as well as reviewing other potential revenue sources to replace the potential standards sales revenue losses related to litigation about what is required to be included in the public domain.

The approach for the proposed membership model was also developed based on more recent CRC motions received from Regions VIII, XI, XII, and at Large, which were referred to this Ad Hoc: These motions dealt with the support of diversity, equity, and inclusion initiatives in ASHRAE; Adding tiered member dues to match the 4 levels of The World Bank; and includes the ASHRAE Handbook Online (HBO) as a baseline benefit to all members.

The proposed model simplifies the membership grades, allows for the participation of more members in chapter, region and Society level positions, provides a benefit that can be utilized for membership retention, and provides additional income from current nonpaying members, while still rewarding our most engaged members after a long term of service.

FISCAL IMPACT: For the implementation stage, the fiscal impact would be less than \$10,000. However, the fiscal impact from the integration of the new member grades could potentially cause an initial loss of \$200,000 in dues revenue. However, with low-medium level estimated membership growth rate, by Year

2 of implementation, the new model could potentially increase dues revenue by \$30,000-\$90,000 when compared to the current model. With the high-level estimated membership growth rate, by Year 1 the new model could potentially come close to break even when compared to the current model. See Attachment B "Membership Growth Projections."

STAFF IMPACT: It would take various staff from several departments a year to make all the changes to marketing collateral, Web sites, manual of procedures, Rules of the Board, the ASHRAE database and reporting systems. This effort would overlap with similar related duties and would be spread over a lengthy time frame such that it would have an incremental impact on staffing. As such, this effort would not require added staff.

Information Items:

1. The proposed new membership model includes the following revisions:
 - a. The Associate member grade and the Developing Economies discount program will be replaced with the Full Member category with a four-tiered pricing structure that reflects the four tiers of the World Bank (motion from Monterrey Chapter):
 - i. Tier 1 = Members residing in countries that fall into the World Bank's High-Income Economies will pay 100% of member dues.
 - ii. Tier 2 = Members residing in countries that fall into the World Bank's Upper-Middle-Income Economies will pay 80% of member dues.
 - iii. Tier 3 = Members residing in countries that fall into the World Bank's Lower-Middle-Income Economies will pay 60% of member dues.
 - iv. Tier 4 = Members residing in countries that fall into the World Bank's Low-Income Economies will pay 40% of member dues.
 - v. All Full Members, no matter the tier, will receive all current benefits plus Handbook Online and a choice of 1 annual benefit: eLearning Course, Certification Study Guide, or free Standard or Guideline.
 - b. The qualifications to be a Full Member will be revised to be anyone interested in the building sciences industry.
 - c. All Members, including Students, will receive access to Handbook Online (HBO) as a member benefit. Not only does access to HBO serve as a benefit to all members, but it will also serve as a member retention tool. Once an individual membership expires after 12 months, access to HBO will also expire. Once the membership is renewed, access to HBO will also be renewed. In addition to HBO access, Full Members (all Tiers), Life Service Members, Presidential Members, and Honorary Members will continue to receive the option to choose one of the following free benefits annually: eLearning Course, Certification Study Guide, or Standard or Guideline. All members will receive discounted pricing for printed and PDF versions of the Handbook.
 - d. The Affiliate grade and Smart Start discount program will be replaced with a Young Professionals membership grade that is available to anyone 35 or younger for the first two years of their membership. Young Professionals will receive Handbook Online and all other standard benefits but will not receive the choice of 1 annual benefit. Young Professionals will pay 40% of membership dues. Young Professionals will also be allowed to vote and hold office at the chapter, region and society level. Removing the Affiliate member grade will allow all members, excluding students, to hold office and vote.
 - e. The Retired Member grade will be replaced with a Tenured Professionals membership grade that mirrors the Young Professionals membership grade in terms of benefits and dues rate. This grade is

available to anyone who is 65 or older with 25 years of cumulative membership.

- f. Life Member grade is revised to become the Life Service Member grade and allows for any member who is 65 years or older, has a minimum of 30 years of cumulative membership and who has earned a Distinguished Service Award (DSA), or who can validate an equivalent of 15 qualifying service points. Life Service Members receive the same benefits as Full Members, as well as waived dues and extreme discounts to W&A conferences.
 - i. For those members who are currently Life Members or will become Life Members based on current qualifications on or before June 30, 2027, will remain Life Members.
 - ii. For those members who reach 30 years of cumulative membership and are 65 years or older but do not have a DSA nor have 15 qualifying service points, they are eligible for the Tenured Professional member grade which allows for a significant discount on dues (40% of full dues) with access to Handbook Online.
 - g. Student Members will now pay 7.5% of membership dues which is less than the current dues rate for Students which is at 10% of dues. Student Members will also receive access to Handbook Online.
 - h. Student Branch Advisors will now pay a dues rate of 20% of dues and receive Handbook Online and other general benefits including special registration rates for W&A Conferences. SBAs currently pay the same rate as Students.
 - i. There will be no changes to the Honorary Member or Presidential Member categories except that they too will also receive Handbook Online as a benefit.
2. This is the same proposed model that was reviewed at the November 6, 2024, Board of Directors meeting. The one change that was made after receiving feedback from the BOD was to increase the rate for Student Branch Advisors.
 3. The following bodies have reviewed and provided feedback for this proposed model:
 - a. Membership Promotion – MP ExCom has been present at each MMAH meeting and provided continual feedback. They shared updates with the full MP Committee at the 2024 Annual Conference in Indianapolis. MP also recommended approving both the motion from the Central Oklahoma Chapter to allow students access to Handbook Online and the motion from the Southern Alberta Chapter to allow all member grades access to Handbook Online.
 - b. Student Activities Committee – The committee provided feedback via email on the proposed changes to the Student and SBA membership grades. While the committee recommended keeping the Smart Start and Developing Economies discount programs and disagreed with raising SBA dues, they were supportive of the motion from the Central Oklahoma Chapter to provide Handbook Online access to Student members.
 - c. Life Members Club – The Executive Committee of the Life Members Club reviewed the model with emphasis on the changes to Life Members with Ken Fulk, Chair of the MMAH, on November 4, 2024, and agreed with the proposed changes.
 - d. Board of Directors – Ken presented the proposed model at the November 6, 2024, Board of Directors Meeting and asked for feedback. The MMAH discussed the feedback that was received by the BOD and made an adjustment to the SBA discounted rate.
 4. At the recommendation of the Executive Committee, the MMAH also reviewed a request to create the ASHRAE

Yellow Pages to serve as an additional source of non-dues revenue. Attachment C includes a business plan for the new "ASHRAE Global Marketplace." For society year 25-26, revenue is projected at \$12,500 and is expected to rise incrementally over the next several years to \$50,000+ as it is promoted.

5. The Charge of the MMAH included various financial tasks related to the implementation of a new Membership Model which it has accomplished with the proposed motion. However, the Ad Hoc was also requested to review current revenue streams and potential new sources of revenue to offset possible ASHRAE Standards sales revenue losses projected some time ago.

- a. Attachment D includes historical standards sales revenue and future sales revenue projections.
- b. The Ad Hoc believes that ASHRAE has weathered the worst with respect to the impact of recent legal battles over standards referenced by governmental entities being required to be available in the Public Domain. Future rulings are expected, but are believed not to further negatively impact this sales revenue stream.

In FY 23-24, ASHRAE had revenue from sales/licensing of standards of \$2.3M. Approximately 25% (\$500-575k) of ASHRAE Standards sales/licensing revenue is from code-referenced or adopted standards. This would be the likely maximum amount of revenue needing replacement if revenue from sales/licensing of those standards is undercut by the unauthorized entities that have been posting our standards for free or stealing and selling them for more than 12 years. (Note that ASHRAE itself has posted its code-referenced or adopted standards for free, read-only viewing since 2012.) During that time we have detected no attributable erosion in our revenue. In fact, that revenue has trended upward.

Pending court decisions could either (1) let the unauthorized posting/sales continue or (2) add some type of restriction. If unauthorized posting is allowed to continue, we could see no change or possibly deterioration in our revenue stream if such postings proliferate. If the courts rule to add restrictions to such postings, we could see improvement in the status quo we have experienced in the last 12 years.

- c. The "ASHRAE Global Marketplace" is one serendipitous revenue source that happened to be in the works, and which related to a request to consider an international "Yellow Pages".
- d. It is believed that new unique standards, those which meet a specialized and timely need, may be a good source of revenue to replace any revenue losses that may occur over time related to the litigation referenced above. Unique and specialized "boutique" standards, such as ASHRAE Standard 241, Control of Infectious Aerosols, is an excellent example where seeking out the current needs of the market and our customers can provide the boost needed to make up for potential losses elsewhere.

Attachments:

1. Attachment A: Proposed Model
2. Attachment B: Membership Growth Projections
3. Attachment C: ASHRAE Marketplace Global Business Plan
4. Attachment D: Standards Sales Revenue History and Projections

February 5, 2025

Date

Ken Fulk

Chair



Shaping Tomorrow's
Built Environment Today

Membership Model Ad Hoc Proposal to the BOD

Ken Fulk, Chair
Ashish Rakeja, Vice Chair

Photo is ASHRAE Headquarters Building



Current Model

Full Member Grade

Full Member	Fellow Member *	Full Member DE	Retired Member	Retired Member DE	Life Member	Presidential Member
100% (\$285)	60% (\$170)	15% (\$45)	50% of RM (\$25)	\$0		

12 years combined experience for post high ed, work, pro engineering reg/license *Good standing for 10+ yrs & elected by BOD	Retired from active participation in business + 10 yrs membership + ≥ 55	30 yrs cumulative member + ≥ 65	Served as Society President
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Full Benefits:
Subscription to HPB, Journal, Insights + Choice of 1 annual benefit + Tech Portal + Member pricing on publications, standards, courses and conferences

Benefits:
Same as Full except subscription to **digital** Journal and Choice of 1 annual benefit:

Additional New Member Benefits:
Receive a Comp Winter or Annual Conference to attend in first 2 years + HBO access for 1 year

HB PDF, 1 STD or GDL or eLearning Course

Benefits:
Same as Full Member except NO choice of annual benefit.

Benefits:
Same as Full Member + waived dues, extreme discounts to W&A Conferences. Invitations to VIP events (Presidential only)

Current Model continues onto next page

Associate Member Grade

Associate Member	Associate Member DE	Smart Start Associate Member	Smart Start Associate Member DE	Life Member
100% (\$285)	60% (\$170)	FY 10% (\$30) SY 37.5% (\$105) TY 50% (\$145)	FY 10% of DE (\$15) SY 37.5% DE (\$65) TY 50% of DE (\$85)	\$0

Work experience and interest in design, operation, maintenance in HVAC&R	3 yr program that allows Students to transfer to Associate grade at a rate that is recent graduate friendly	Associate Member 30 yrs cumulative member + ≥ 65
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Full Benefits:
Subscription to HPB, Journal, Insights + Choice of 1 annual benefit + Tech Portal + Member pricing on publications, standards, courses and conferences
*DE Associate and Smart Start have same benefits as Full Member DE

Benefits:
Same as Full Member + waived dues, extreme discounts to W&A Conferences + Invitations to VIP events

Additional New Member Benefits:
Receive a Comp Winter or Annual Conference to attend in first 2 years + HBO access for 1 year
Associate DE and Associate Smart Start DE not eligible





Current Model - Continued

Affiliate Member Grade		Student Member Grade			Other
Affiliate Member	Affiliate Member DE	Student Member	Student Member DE	Student Branch Advisor	Honorary Member
FY 25% (\$70) SY 37.5% (\$105) TY 50% (\$145)	FY \$25% of DE (\$45) SY \$37.5% DE (\$65) TY 50% of DE (\$85)	10% (\$30)	50% of Student Member (\$15)	10% (\$30)	\$0
30 years old OR have been honorably discharged from the Military within 5 yrs		Studying or have interest in HVAC&R industry related field + Must be currently enrolled in university, college, junior college or technical institute		Faculty member who is ASHRAE member & must submit application and submit annual report	Any notable person of preeminent professional distinction & elected by the BOD
Subscription to HPB, Journal & Insights + Tech Portal + Member pricing for publications, courses, standards and conferences		Subscription to HPB, Journal & Insights + Tech Portal + Student Member pricing for publications, courses, standards and conferences + Access to Student Bookstore for heavily discounted publications and printed HB			Full Member Benefits if requested
Cannot hold office or vote		Cannot hold office or vote			





Simplified Model

Member Grade				Student Member Grade		Other				
Member				Young Professional	Tenured Professional	Life Service Member	Presidential Member	Student Member	Student Branch Advisor	Honorary Member
<u>WB</u> Tier 1 100% (\$285)	<u>WB</u> Tier 2 80% (\$230)	<u>WB</u> Tier 3 60% (\$170)	<u>WB</u> Tier 4 40% (\$115)	40% (\$115)		\$0		7.5% (\$20)	20% (\$60)	\$0
Anyone interested in the building sciences industry				Anyone ≤ 35 yo who joins pays this fee first for 2 years	Anyone ≥ 65 yo with 25 years cumulative membership	30 yrs cumulative member + ≥ 65 + DSA or 15 qualifying service points	Served as Society President	Must be currently enrolled in university, college, junior college or technical institute	Faculty member who is ASHRAE member & must submit application and submit annual report	Any notable person of preminent professional distinction & elected by the BOD
HBO + Journal, HPB, Insights + Tech Portal + Member Pricing + Voting Privileges and Serve as C,R,S level roles Choice of 1: eLearning Course, Certification Study Guide, Standard or Guideline				HBO + Journal, HPB, Insights + Tech Portal + Member Pricing		Same as Member + waived dues, extreme discounts to W&A Conferences. Invitations to VIP events (Presidential Only)		Same as Young and Tenured Professionals		Full Member Benefits if requested

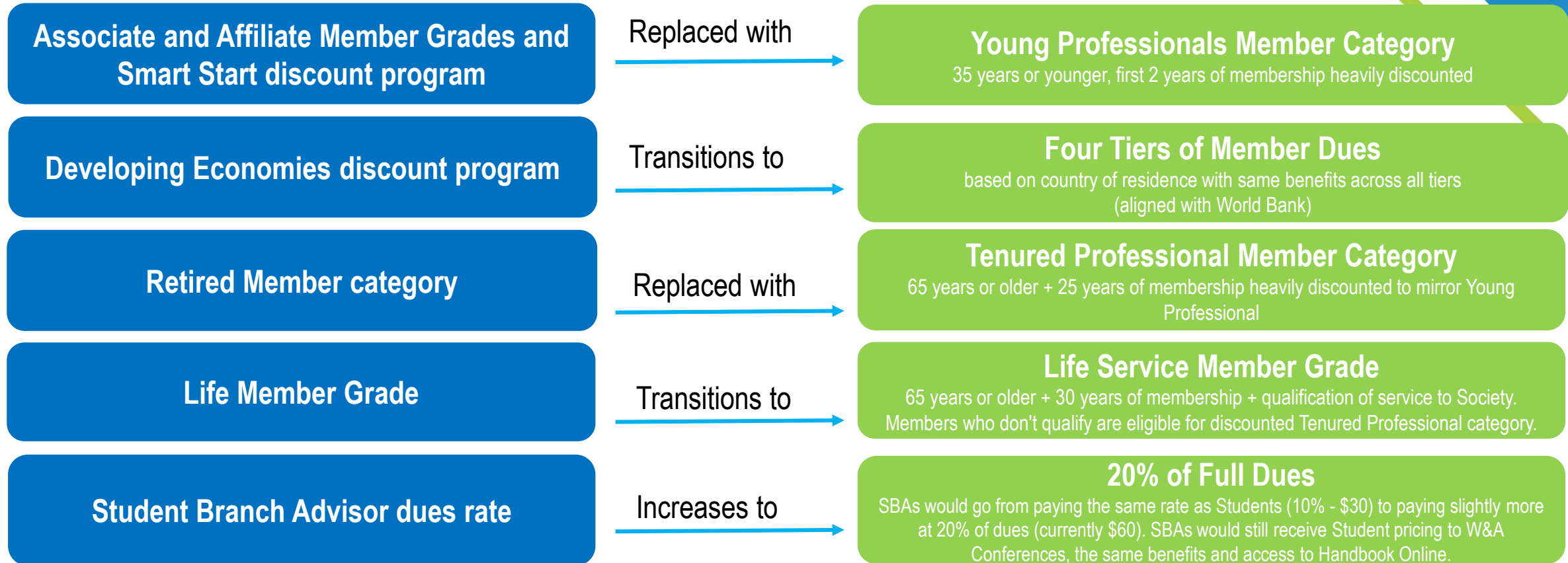
Additional New Member Benefits:
Receive a Comp Winter or Annual Conference to attend in first 2 years + HBO access for 1 year

*2025-2026 approved dues rates





Simplified Model Highlighted Changes



Benefits: All Members, even Students, receive access to Handbook Online. Full Members receive additional annual benefit option.

Member Qualifications: Broadened to be more inclusive of anyone interested in the Building Sciences industry

Reasons for the Changes

Simplification

Support Diversity, Equity and Inclusion

Young Professionals mirrors Tenured Professionals

Lift Member qualifications and restrictions

Same benefits and same dues rate

All members (except Students) can vote

All members (except Students) can hold C,R,S roles

Anyone interested in building sciences can join ASHRAE

Tiered Member Dues match all four Tiers of World Bank

Motion from Region-at-Large CRC Lebanese Chapter

Motion from Region VIII CRC Monterrey Chapter

Slowing the continued growth of Non dues paying Life Members

Added Benefit for ALL Members including Students: HBO

Motion from Region VIII Central OK Chapter

Motion from Region XI CRC Southern Alberta Chapter

MP & SAC

MP

Access to HBO serves as retention tool

When 12-month subscription to HBO ends, member will renew to gain access instantly

Access for students to HBO gives incentive for joining as a Young Professional to keep access

Rewards those who have served Society through different channels with waived dues

Allows members who have 30 years of membership and age 65 or older with significantly discounted dues rate to maintain HBO, Journal and Member Pricing

Recommended Timeline

- **February 2025:** MMAH to bring motion to the Board of Directors to approve plan. Motion will be tabled to allow for 60-day "cooling off period."
- **By the 2025 May BOD Meeting:** BOD to approval the final plan.
- **May – June 2025:** If approved, MMAH works with SRC for Bylaws amendments
- **By the 2025 Annual/Fall BOD Meeting:** BOD to vote on motion made for suggested Bylaws amendment.
- **2026 Winter Conference:** If approved by the BOD, Bylaws amendment read at the Meeting of the Members (Saturday Plenary Session) in Las Vegas.
- **Spring 2026:** Proposed Bylaws amendment added to Spring Ballot
- **June 2026:** Election
- **By June 30, 2027:** If Bylaws amendment are approved, all changes made to membership database, website, promotional materials, ROB, Committee/Council MOPs and training materials. *(Staff and Members Council will need 1 year to implement new model changes)*
- **July 1, 2027:** New model implemented.



ASHRAE Projected Membership Growth

January 15, 2025

This report provides a draft of membership growth over the next five years based on current, low, medium, and high projection scenarios using the proposed simplified model.

There are current, low, medium and high projections for both dues revenue from paid members and number of paid members.

Projection Explanations

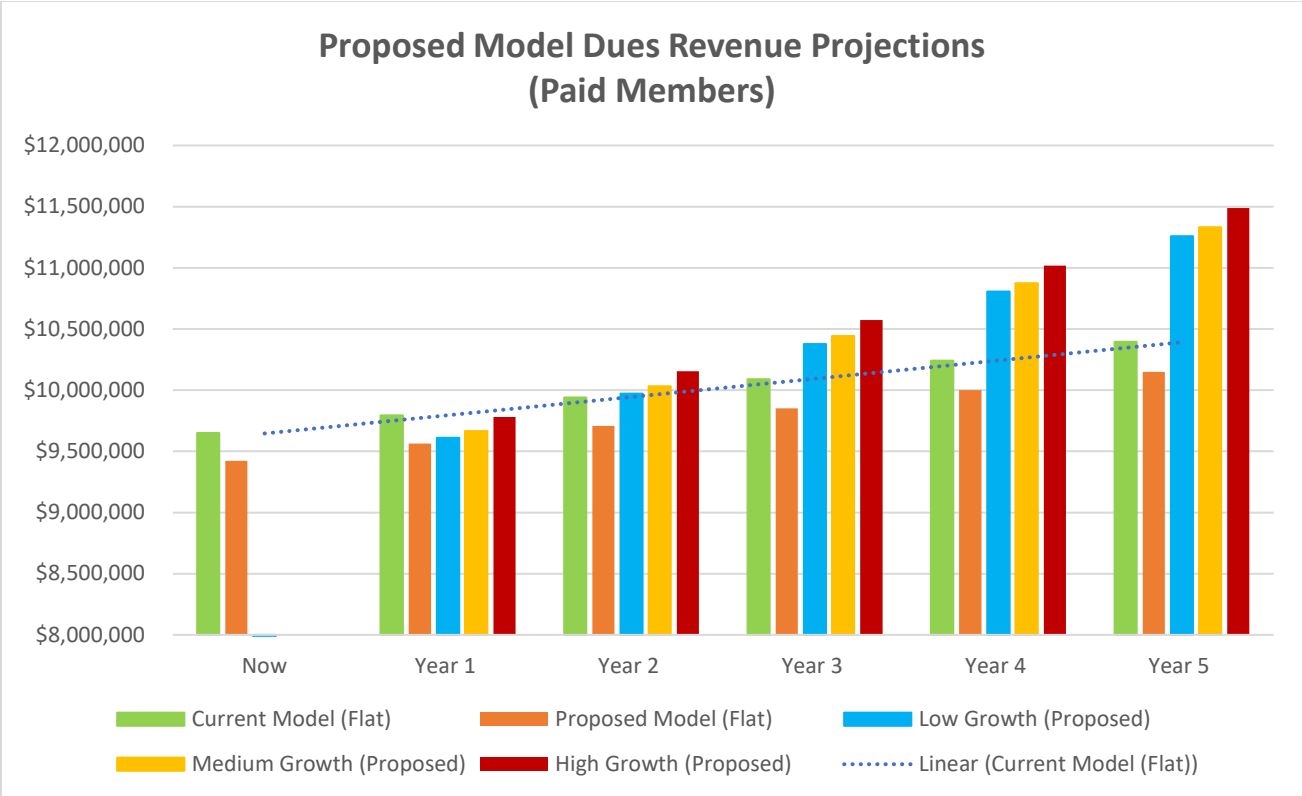
- **Current Model (Flat):** The charts below are based on the current number of paying members at the current member category assigned dues rate (SY 24-25) based on the current membership model. The line represents flat paid membership numbers with an overall 1.5% revenue increase year-over-year factored into account for potential dues increase per standard revenue projection practices.
- **Low:** If growth is slower than historical growth patterns by member grades with an overall 1.5% revenue increase year-over-year to account for dues increases.
- **Medium:** If growth is in line with historical and current growth patterns by member grades with an overall 1.5% revenue increase year-over-year to account for dues increases.
- **High:** If growth is higher than anticipated by member grades with an overall 1.5% revenue increase year-over-year to account for dues increases.

Projected Revenue Growth

NOTE: The following graph and projections are an illustrative example and dues revenue shown below will NOT match current financials.

The amounts shown below are calculated by taking the current number of paid members in each membership category multiplied by the current or proposed dues rate. The below does not consider any discounts or complimentary memberships. The projections below illustrate what the differences *could be* between the two models (current vs proposed) by using the same number of paid members to illustrate the difference between the models.

These revenue projections also illustrate a 1.5% year-to-year revenue increase to account for anticipated dues increases, which is the current dues revenue projection practice.



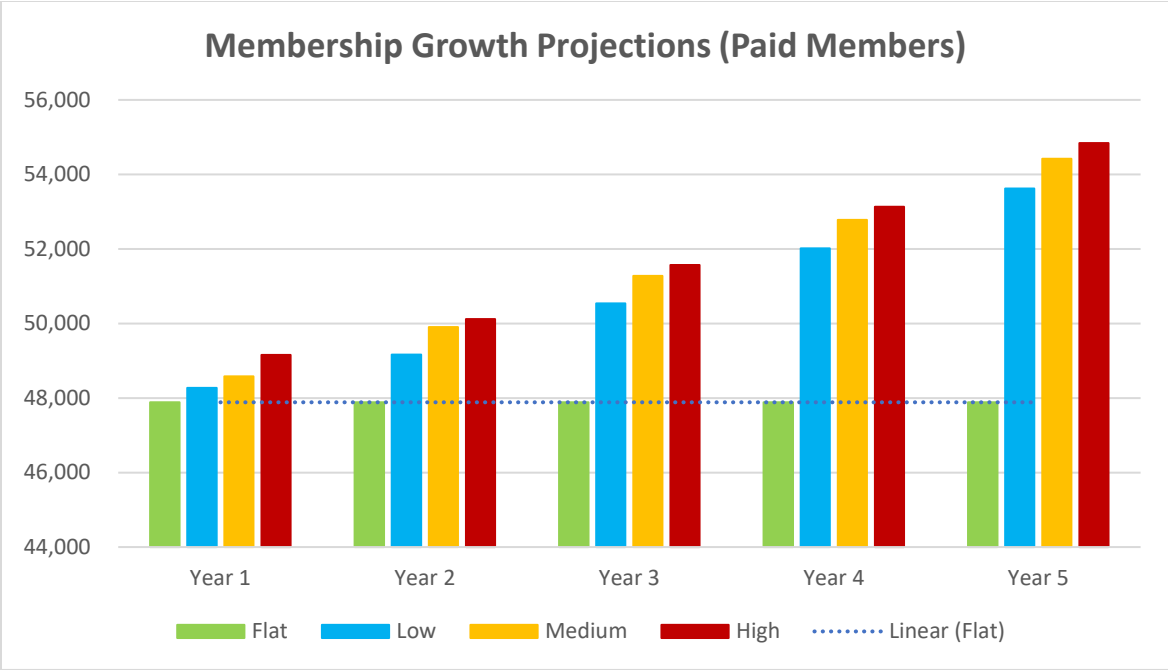
The low membership growth scenario could surpass the projected revenue using the current model by **Year 2** of implementation by about \$30,000.

The medium membership growth scenario could surpass the projected revenue using the current model by **Year 2** of implementation by about \$90,000.

The high membership growth scenario could come close to breakeven with the current model by **Year 1** of implementation by being short only about \$14,000.

Projected Membership Growth (Paid Members)

The following chart shows the projected membership growth using the projections noted below in terms of the number of paid members compared to flat membership (using SY 24-25 membership numbers) over the next five years.



Explanation of Percentage of Growth Projections by Member Grade

Instead of projecting a single growth percentage for membership numbers over the next five years, staff projected growth based on historical knowledge and trends for each proposed membership grade. Explanations of these projections are listed below for reference.

- Tier 1 Member (High-Income Economies):** There is typically 1% growth of members from these countries/regions each year (US, Canada, Europe, etc). High projected at 2%, Medium at 1% and low at 0.5%.
- Tier 2 Member (Upper-Middle Income Economies):** In the new model, these members would go from paying full dues to a reduced dues amount. This group accounts for the majority of projected loss of revenue. This is the hardest group to estimate since membership data has never been broken out in this way. Countries in this tier includes Mexico, Brazil, China, Georgia, Thailand, Indonesia, Turkey, South Africa, Malaysia, Ecuador, Colombia, and Argentina. ASHRAE does have chapters/sections in most of these areas and are expecting growth due to the newly discounted rate. High projected at 5% growth, Medium at 3%, Low at 2%.
- Tier 3 Member (Lower-Middle Income Economies):** In SY 23-24, there was 8% growth in Developing Economies countries which explains the higher growth percentages for this category. This tier includes countries like India, Bangladesh, Sri Lanka, Pakistan and parts of Africa. ASHRAE has a presence in these areas and continues to grow. This group is already paying the Developing Economies discounted rate and dues likely wouldn't change dramatically unless a country was reclassified into a different economy level. High projected at 8% growth, Medium at 4%, and Low at 2%.

- **Tier 4 Member (Low-Income Economies):** Like Tier 2 members, this group is also hard to estimate since membership data has never been broken down in this way. Countries in this tier include Sudan and Afghanistan where there is a small ASHRAE presence with growing interest. Projections in all categories are low because there are not currently many members that fit into this category nor is there a lot of ASHRAE activity currently in these countries. High projected at 3%, Medium at 2% and Low at 1%.
- **Young Professionals:** This group has the most potential for growth. This group was hit hard during COVID and ASHRAE's younger membership declined during that period. , However in SY 23-24 there was 4% growth in new members (1-2 years of membership) at the age of 35 or younger. The Pre-COVID average growth for this group of newer, young members was 5%. High projections at 6%, Medium at 4%, Low at 3%.
- **Life Service Members:** Based on strong historical data, this group is one of the easier groups to predict. With added qualifications tied to this member grade, the growth will slow which supports increased revenue by pushing members who don't qualify into different member categories paying a higher dues rate. High projected at 2%, Medium at 1%, and Low at 0.5%.
- **Tenured Professionals:** There is potential growth here due to the change in process. Instead of automatically moving 400 members per year to Life Member, those who don't qualify as a Life Service Member will be offered heavily discounted tenured professional rate with access to HBO. The percentage of growth used in this projection appear high because the current actual number of members in the "Retired" category are so low (i.e. 200). High projected at 40%, Medium at 20%, and Low at 10%.
- **Student Members:** Strong historical data supports the projections used for this group. High projected at 5%, Medium at 3%, and Low at 1.5%. Student Branch Advisors are currently lumped into this group because there are so few and there is not significant growth or decline over time. Revenue numbers are not projected for SBAs because there are so few (i.e. 400) and we don't anticipate losing a significant amount if SBA dues rates are increased.

BUSINESS PLAN: ASHRAE GLOBAL SUPPLIER & SERVICES MARKETPLACE, REVISED 3 FEB.

Executive Summary

ASHRAE Media will offer a first-ever global directory for all HVACR suppliers, industry-affiliated companies, and engineering firms for listings to the ASHRAE audience at no cost or paywall. The directory offers paid and unpaid listings while maintaining compliance with ASHRAE's privacy and commercialism policies.

Program Description

ASHRAE Media sales reps and ASHRAE members will offer listings in the directory to all companies doing business within the HVACR industry. Priority will be given to paid listings with enhanced prominence within the portal. All companies will have at least the following:

- Company name,
- HQ address,
- website URL,
- description of services/offerings, and
- explanation of the geography for services, i.e., North America, Switzerland, etc.

Enhanced features for paid customers include:

- email address,
- product descriptions and images,
- video URL link,
- product-specific URLs, and
- ASHRAE Journal InfoCenter advertising.

Benefits

- Promotion of suppliers and firms serving the HVACR industry.
- Including the directory in newsletters published by ASHRAE HQ, Regions, Chapters, and Technical Committees to raise awareness for the directory.
- Reward ASHRAE Foundation donors to its Research Projects and donation programs with top visibility listings for firms supporting ASHRAE.
- Reward ASHRAE members with 25% discounted listings, along with a link for joining ASHRAE.
- Support of ASHRAE Media advertising programs by offering paid listings as part of the ASHRAE Journal advertising program and added value to those increasing their support of ASHRAE.

Organization & Management

Fulfillment of deliverables and communication with representatives of the companies listed will be provided by a self-serve system developed by IT. Troubleshooting will be provided by IT, customer service, or other staff directly involved with the supplier. ASHRAE members will be encouraged to liaise with organizations to be listed within the directory. Paid listings are provided through a self-service, credit card widget, along with autorenewal for two or three years. The directory will be featured within ASHRAE.org's Communities section, along with redirect listings in the About, Technical Resources, and Professional Development sections.

Use of Data from the Directory

ASHRAE will be the sole owner of all data deriving from the directory proposed here. The information will be used for membership recruitment and renewal purposes. The data will not be shared or sold without the written permission of directory users. The directory will comply with all ASHRAE privacy policies and GDPR.

Marketing & Sales

ASHRAE's staff will promote and encourage listings. Independent publisher representatives will be encouraged to sell listings by receiving their standard sales commission for sold advertising. Staff will prepare marketing materials for posting on ASHRAE.org and sharing by ASHRAE members, regions and chapters. ASHRAE Media will distribute to exhibitors of AHR Expo and promote on the advertising landing page. Participation in the marketing and sales effort will be optional for ASHRAE members, regions, and chapters to ensure local directories may continue to operate and prosper.

Rates & Direct Revenue

The chart below represents a rate tier including free listings. A 25% discount will be offered to members in good standing.

	Basic	Bronze	Silver	Gold
Annual Rate	Free	\$250	\$1,000	\$3,500
Member Annual Rate	Free	\$187.50	\$750	\$2,625
Company Name, Address, Phone	✓	✓	✓	✓
Email	Text only	Text only	Live link	Live link
Website URL	Text only	Text only	Live link	Live link
Description	50 words	100 words	200 words	500 words
Logo	None	100 x 100 px	150 x 150 px	250 x 250 px
Products & Descriptions	None	None	One listing, including bold text	Two listings, including bold text
Product Images	None	None	One image	Two images
Video	None	None	None	One Video URL
Featured Products URL	None	None	Link for one product including bold text	Links for every product including bold text
Bonus	None	None	Handbook Online Subscription Value: \$342	Two Handbook Online Subscription Value: \$684
Featured Products	None	None	None	One Ad in Rotation on Directory Landing Page
ASHRAE Journal Advertising	None	None	None	Two InfoCenter Directory Ads in ASHRAE Journal Value: \$5,500

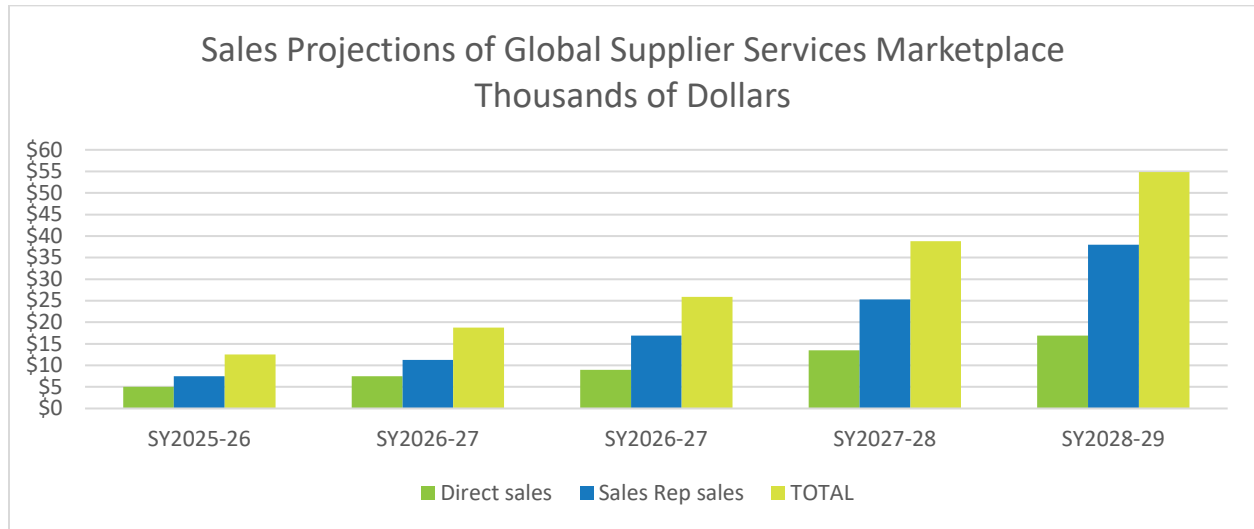
Alternative Rates & Direct Revenue

The chart below provides an alternative structure for enhanced and paid listings at the basic level for \$10 annually for nonmembers and \$7.50 for members, with the bronze, silver and gold tiers with added features. While the directory would be paid only, an added benefit will be an increase in cybersecurity and reduction of superfluous & non-HVACR industry postings.

	Basic	Bronze	Silver	Gold
Annual Rate	\$10	\$250	\$1,000	\$3,500
Member Annual Rate	\$7.50	\$187.50	\$750	\$2,625
Co. Name, Address, Phone	✓	✓	✓	✓
Email	Live Link	Live Link	Live link	Live link
Website URL	Live Link	Live Link	Live link	Live link
Description	50 words	100 words	200 words	500 words
Logo	None	100 x 100 px	150 x 150 px	250 x 250 px
Products & Descriptions	ASHRAE-Approved Certifications	None	One listing, including bold text	Two listings, including bold text
Product Images	None	None	One image	Two images
Video	None	None	None	✓ One Video URL
Featured Products URL	None	None	✓ Link for one product including bold text	✓ Links for every product including bold text
Bonus	None	None	Handbook Online Subscription Value: \$342	Two Handbook Online Subscription Value: \$684
Featured Products	None	None	None	One Ad in Rotation on Directory Landing Page
ASHRAE Journal Advertising	None	None	None	Two InfoCenter Directory Ads in ASHRAE Journal Value: \$5,500

Direct Revenue & Expenses

The following numbers forecast direct revenue and expenses. Staff time and labor are not accounted for in the numbers. Additionally, the value of membership promotion and data collection is not calculated.



	SY2025-26	SY2026-27	SY2027-28	SY2028-29	SY2029-30
Revenue					
Direct sales	\$ 5,000	\$ 7,500	\$ 9,000	\$ 13,500	\$ 16,875
Sales Rep sales	\$ 7,500	\$ 11,250	\$ 16,875	\$ 25,313	\$ 37,969
Total	\$ 12,500	\$ 18,750	\$ 25,875	\$ 38,813	\$ 54,844
Expenses					
Commissions to sales reps, actual	\$ 1,500	\$ 2,250	\$ 3,375	\$ 5,063	\$ 7,594

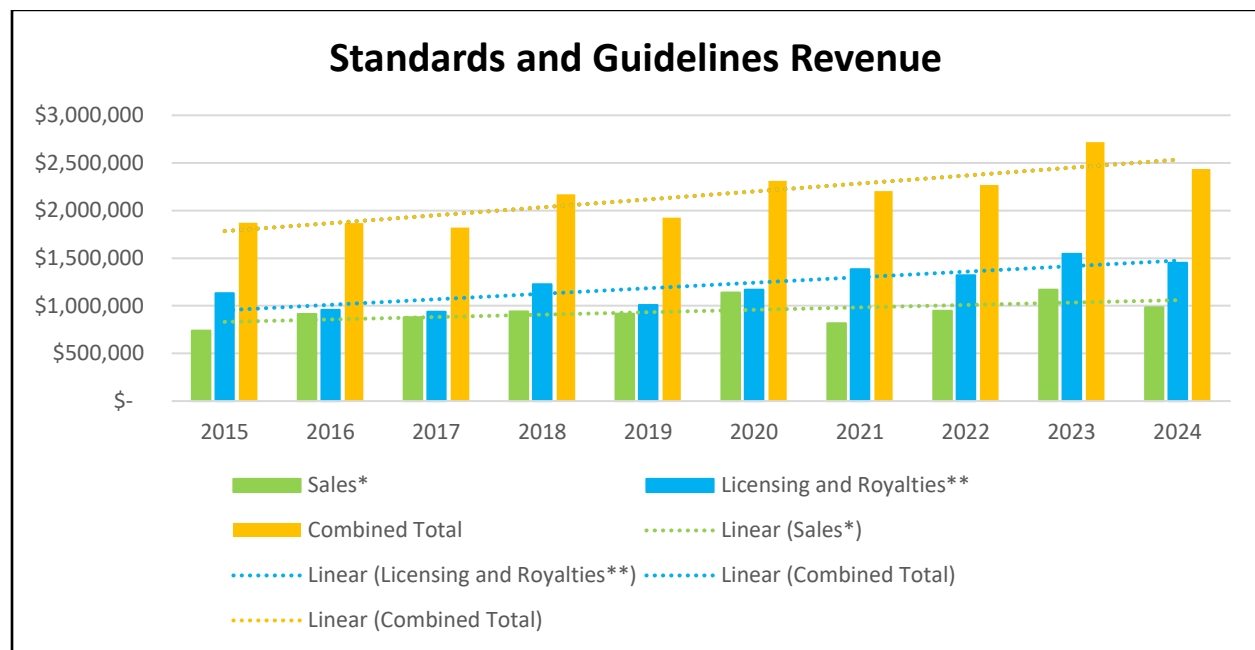
ASHRAE Standards and Guidelines Sales Outlook

10 December 2024

This report provides a snapshot of historical revenue from sales and licensing of ASHRAE standards and guidelines, assesses the outlook for future sales, and lists possible strategies for continued monetization of ASHRAE's intellectual property (IP) assets in this category.

Historical Revenue

The following chart shows recent sales revenue from sales of ASHRAE standards and guidelines, revenue from licensed resellers and royalties (which is approximately 95% derived from ASHRAE standards and guidelines), and the combined total:



*From SalesByCustomerType reports end year, print and PDF formats

**From financial statements. Approximately 95% derived from ASHRAE standards and guidelines

Sales revenues average a total of \$945k annually since 2015 and vary with the revision cycles of major standards. Revenue from licensing and royalties averages \$1.21 million annually since 2015 but is not broken out by individual publication. As shown in the figure, trendlines for combined revenue continue to be upward.

Standards and Guidelines References in Codes

Many ASHRAE standards and guidelines are referenced in building codes worldwide. For more than a decade ASHRAE has provided free [read-only access](#) to its copyrighted publications that are so referenced. Sales of such code-referenced publications total about 25% of total sales.

Legal Developments

Recent court decisions have ruled that the unauthorized, noncommercial posting of publications referenced or incorporated in codes and laws is considered “fair use” and does not constitute copyright infringement. How this will affect the sales environment for standards and guidelines is as yet uncertain. However, the degree of change depends on as-yet unanswered questions, including but not limited to the following:

- Will postings be limited to code-referenced publications?
- Will postings by any party who so desires to do so be permitted?
- Will parties be permitted to publicize their postings?
- Will parties be permitted to provide enhancements to the publications for better usability?
- Will parties be permitted to sell subscriptions for access to content with such enhancements on their sites?
- Will parties be permitted to sell advertising on their posting sites?

To the extent these questions remain unanswered, the net effect of court rulings in this area remains unknown. Assuming a worst-case scenario in which the actions listed above are permitted, ASHRAE must devise a plan for continuing to monetize these IP assets in such a sales environment.

Possible Strategies

The following are possible strategies to use for a market in which code-referenced ASHRAE standards and guidelines may be provided free of charge by others:

1. Remove prescriptive content from standards and instead include in user’s manuals. Note that this could harm adoption and referencing overall.
2. Remove informative appendices from standards and instead include them in user’s manuals. Note that this could harm value perception for purchasers.
3. Develop and offer more in-depth training on using standards. This is being done now as market demand indicates but would be accelerated.
4. Develop and offer training content tailored specifically for code officials.
5. Develop and offer tools for using the standards in design and for determining technical compliance. This can be done as market demand and a business case justifies for a given standard.
6. Increase active promotion of licensing opportunities. This can be done immediately.
7. Increase licensing/royalty rates. This can be pursued immediately as opportunities arise.



2024-25 Standing Appointments & Election Reference (For Information Only)

This document is a complete listing of standing body appointments and election outcomes within ASHRAE for the Society Year noted with the exception of PEAC, JEPC, COF, and LMC.

Updated January 2025

Board of Directors

(Members are elected)

Malcolm (Dennis) Knight, President	Charles Bertuch, DRC (I)*	Buzz Wright, DRC (X)	Blake Ellis, DAL
William (Bill) McQuade, President-Elect	Genevieve Lussier, DRC (II)*	Rob Craddock, DRC (XI)*	Luke Leung, DAL
Sarah Maston, Treasurer*	Sherry Abbott Adkins, DRC (III)*	John Constantinide, DRC (XII)	Pat Marks, DAL*
Wade Conlan, VP	Bryan Holcomb, DRC (IV)	Cheng Wee Leong, DRC (XIII)	Corey Metzger, DAL
Chandra Sekhar, VP	James (Jim) Arnold, DRC (V)	Mahroo Eftekhari, DRC (XIV)	Heather Schopplein, DAL
Devin Abellon, VP*	Susanna Hanson, DRC (VI)	Richie Mittal, DRC (XV)*	Wei Sun, DAL
Ken Fulk, VP*	Scott Peach, DRC (VII)	Mohammed (Bassel) Anbari DRC (RAL)*	David Yashar, DAL*
Jeff Littleton, Secretary	Joseph (Joe) Sanders, DRC (VIII)	Carrie Brown, DAL*	
	Jonathan Smith, DRC (IX)	Douglas (Doug) Cochrane, DAL	

Executive Committee

During intervals between Board of Directors meetings, the Executive Committee shall exercise administrative powers of the Board of Directors. Matters of policy determined by the Executive Committee between meetings of the Board of Directors shall be submitted for approval to the Board of Directors at its next meeting.

Members are determined by noted elected position on the Board of Directors.

Malcolm (Dennis) Knight, President
William (Bill) McQuade, President-Elect
Sarah Maston, Treasurer*
Wade Conlan, VP
Chandra Sekhar, VP
Devin Abellon, VP*
Ken Fulk, VP*
Jeff Littleton, Secretary

Diversity, Equity and Inclusion Subcommittee

Though not identified as a standing body, this subcommittee is an ongoing appointment made by the President-Elect and reports to the Board of Directors

Susanna Hanson, Chair	Madison Schultz, Consultant*
Heather Schopplein, Vice Chair	Lionel Davis, Consultant
Devin Abellon	Fiona Martin McCarthy, Consultant*, 7/1/2024
Mohammed Anbari*	Kishor Khankari, Consultant*, 7/1/2024
Jennifer Leach*	Alekhya Kaianathbhatta, Consultant*, 8/29/2024
Dunstan Macauley	
Max Rohr*	
Jonathan Smith	Tanisha Meyers-Lisle, Staff Liaison

Center of Excellence in Building Decarbonization

This standing body reports to ExCom.

Kent Peterson, P.E., Chair	Kayleigh Houde, MEP 2040 Liaison
Blake Ellis, P.E., Vice Chair	Bill McQuade, P.E., Members Council Liaison
Ghina Annan	Jeremy Smith, P.E., Technology Council Liaison
Carrie Brown	Costas Balaras, P.E., Ph. D., Technology Council Liaison
Luke Leung	Jaime Yeh, AHRI Liaison, 1/9/2025
Bing Liu	Stephanie Reiniche, Staff Liaison
Clay Nesler	
Rajan Rajendran	
Stet Sanborn	
Ginger Scoggins	

Continued on next page

Councils Reporting to the Board of Directors

Members Council

In addition to the below, this council includes chairs of committees reporting to the council as voting members, a Planning Committee liaison, and a Developing Economies consultant.

William (Bill) McQuade, Chair
Sarah Maston, Vice Chair*
James (Jim) Arnold, Dir. (25)
Mahroo Eftekhari, Dir. (25)
Bryan Holcomb, Dir. (25)
Scott Peach, Dir. (25)
Buzz Wright, Dir. (25)
Cheng Wee Leong, Dir. (25)
Wei Sun, Dir. (25)
Deanna Adkison (I) (27)*
Ibrahim Semhat (II) (27)*
Matthew Archey (III) (27)*
Heather Platt Gullledge (IV) (25)
Julia Timberman (V) (25)
Maggie Moninski (VI) (25)
Carrie Kelty (VII) (26)
Keith Reihl (VIII) (26)
Daniel Russell (IX) (26)
Colin Laisure-Pool (X) (26)
Jeff Hurd (XI) (27)*
Tulia Rios (XII) (25)
Ching Loon Ong (XIII) (25)
Eduardo Maldonado (XIV) (26)
Aakash Patel (XV) (25)*
Adeeba Mehboob (RAL) (27)*
Mohammed Anbari (RAL) (24)
Lizzy Seymour, Staff Liaison

Publishing and Education Council

In addition to the above, this council includes chairs of Committees reporting to the council as voting members (excluding the Historical Committee Chair) and Vice-Chairs as non-voting members, a Planning Committee liaison, and a Developing Economies consultant.

Chandra Sekhar, Chair
Kenneth (Ken) Fulk, Vice Chair*
Doug Cochrane, Dir. (25)
John Constantinide, Dir. (25)
Blake Ellis, Dir. (25)
Jonathan Smith, Dir. (25)
Kimberly Cowman, Past Certification (27)*
Megan Tosh, Past Handbook (26)
Jeremy Smith, Past Training and Education (27)*
Adeeba Mehboob, Past Publications (26)
Mark Owen, Staff Liaison

Technology Council

In addition to the above, this council includes chairs of Committees reporting to the council as voting members and Vice-Chairs as non-voting members, a Planning Committee liaison, and a Developing Economies consultant.

Wade Conlan, Chair
Devin Abellon, Vice Chair,*
Susanna Hanson, Dir. (25)
Corey Metzger, Dir. (25)*
Richie Mittal, Dir. (25) MAL (26)
Mark Fly, MAL (27)*
Joseph Sanders, Dir. (25)*
Heather Schopplein, Dir. (25)*
Constantinos Balaras, Past DRC (25)
Drury (Dru) Crawley, Past Standards (27)*
Carl Huber, Past TAC (25)
Michael Pouchak, Past RAC (26)
Larry Smith, MAL (25)
Stephanie Reiniche, Staff Liaison

Continued on next page

Committees Reporting to the Board of Directors

Nominating Committee

Chair, Farooq Mehboob
Vice Chair, Ginger Scoggins*

Region Members

I Richard Vehlow*
II Isabelle Lavoie
III James Grant
IV Jimmy Leonida
V ~~Jack Kibort~~ Stephen Ehrman 8/23/2024
VI Mark Miller
VII Karen Thrasher
VIII Christopher Ahne
IX Jessica Renner
X Marites Calad
XI Greg Fluter
XII Timothy Theriault*
XIII Ching Man Tracy Pang
XIV Bratislav Blagojevic
XV Krishnan Viswanath
RAL Mohammad Sajid

Region Alternates

I Christopher (Chris) Phelan*
II Nicolas Lemire
III Roger Jones
IV Charlie Curlin
V ~~Stephen Ehrman~~ Bradley White, 8/24/2024
VI Daniel Chudecke*
VII Grant Page
VIII William (Bill) Simpson*
IX Kevin Amende*
X Cynthia Moreno*
XI Louise McKenzie*
XII Timothy Theriault
XIII Dominador Castro*
XIV Marko Ignjatovic
XV Sandesh Bhure*
RAL Mohamed Alagraa*

Board Elected Members

Dunstan Macauley - III
Sheila Hayter - IX
Costantinos (Costas) Balaras - XIV
Robin Bryant - XII
Adeeba Mehboob – RAL
Chris Gray - VII
Mick Schwedler - VI
Tom Lawrence - IV

Board Elected Alternates

Ashok Virmani – RAL*
Bjarne Olesen - XIV
Steven Sill – I*
Bill Klock - VIII
Jen Leach - III
Karine Leblanc - X
Lee Millies - V
~~Billy Austin – IV~~ Pat Graef – XII*, 9/1/2024

Candace Denton, Staff Liaison

Continued on next page

Committees Reporting to the Board of Directors Continued

Audit Committee

Joseph Sanders, Chair
Cheng Wee Leong
Genevieve Lussier*
Craig Wright, Staff Liaison

Finance Committee

Sarah Maston, Chair*
George (Billy) Austin
Wade Conlan*
Chris Gray
Ahmed Alaa Eldin Mohamed
Ashish Rakheja
Matt Rowe
Chandra Sekhar*
Craig Wright, Staff Liaison

Development Committee (Reports to Finance)

Darryl Boyce, Chair*
Jason Alphonso, Vice Chair*
Michael Cooper*
Stephanie (Steph) Kunkel*
Dunstan Macauley*
Hassan Sultan*
Aakash Patel*
Lester Pereira, RP ExCom

Haley Goslinga, RP ExCom
Randy Jones, Foundation ExCom
Mike Hart, Foundation ExCom
Rajesh Jain, MAL
Wade Conlan, CO*
Kirstin Pilot, Staff Liaison

Planning Committee

Trenton (Trent) Hunt, Chair
Andres Sepulveda, Vice Chair
George (Billy) Austin
Rupesh Iyengar
Kellie Huff*
Dunstan Macauley*
Farhan Mehboob
Michael Patton
Madison Schultz
Chad Smith
Samir Traboulsi*
Buzz Wright*
Sherry Abbott-Adkins, Cons.*

Mohammed (Bassel) Anbari, Cons.*
Carrie Brown, Cons.*
Sheila Hayter, Cons
Mick Schwedler, Cons
Chandra Sekhar, Cons.
David Yashar, Cons.*
Devin Abellon, CO
Lizzy Seymour, Staff Dir., Membership*
Jeff Littleton, EVP
Chandrias Jolly, Staff Liaison

Society Rules Committee

Elbert (Bert) Phillips, Chair
Spencer Morasch, Vice Chair
Ioan Dobosi
Bill Klock*
Isabelle Lavoie*
Heather Schopplein
Chandra Sekhar, CO
Chandrias Jolly, Staff Liaison

Committees Reporting to Members Council

Chapter Technology Transfer Committee

Daniel Redmond, Chair
Heric Holmes, 1st Vice Chair
Elizabeth Zakelj, 2nd Vice Chair, 11/11/2024
~~John Constantinide, 2nd Vice Chair~~
Murat Bayramoglu (I)*
Abhi Khurana (II)
Stephanie Mages (III)*
Don Garipey (IV)*
Matthew Klok (V)
Eric Johansen (VI)
Kevin Muldoon (VII)
Steven McConnell (VIII)*
David Griffin (IX)*
Nikola Kravik (X)*
Matt Parkes (XI)
Esteban Baccini Jauregui (XII)*
Sivakumar Gadam (XIII)
Conor Murray (XIV)
Krishna Mitra (XV)*
Osama Khayata (RAL)
Kenneth Shifflett, Chapt. Prog. Coord. *
~~Elizabeth Zakelj, Tech Hour coord.~~
Wei Sun, BOD ExO
William (Bill) McQuade, CO*
Rhiannon Masterson, Staff Liaison

Communications Committee

Daniel Bourque, Chair
Thursten Simonsen, Vice Chair
Franco D'Atri*
Nissun Feiner
Jeanette Hay
Kinga Hydras
Sandeep Mendiratta
Bradley White
James (Jim) Arnold, BOD ExO
William (Bill) McQuade, CO*
Joslyn Ratcliff, Staff Liaison

Conferences & Expositions Committee

Maggie Moninski, Chair
Kristen Cetin, Vice Chair
Ahmed Abdel Salam
Ehab Abdelkader Mostafa
Atilla Biyikoglu
Aaron Boranian
Craig Bradshaw
Kevin Brown
Robin Bryant
Cynthia Callaway
Joe Chow
Jon Cohen
Brian Fronk
Anuj Gupta*
Haotian Liu
Money Khanna
Suzanne LeViseur
James Liston
Stephanie Mages
Andrew Reilman*
Erik Sanchez
Som Shrestha
Li Song*
Joshua Vasudevan*
Vinod Venugopal
Ng Yong Kong
Davide Ziviani
Cheng Wee Leong, BOD ExO
William (Bill) McQuade, CO*
Tony Giometti, Staff Liaison

Government Affairs Committee

Sheila Hayter, Chair
Meghan McNulty, Vice Chair
Jason Alphonso, Pub Ed. Rep.
Mohammed (Bassel) Anbari, Members Council Rep.
Christopher (Chris) Phelan, Tech Council Rep.
Timothy (Tim) Wentz, MAL
Andrew Persily, MAL
Artorius Reyes, MAL
Philip Johnston, MAL*
William Fisher (I)
Adrienne Mitani (II)*
Patrick Villaume (III)*
Weston Hockaday (IV)
Adam Doublestein (V)
Victor Nino (VI)*

Douglas Cage (VII)
Eleazar Rivera (VIII)
Peter Koneck-Wilwerding (IX)
Tracey Jumper (X)
Geoffrey Jenks (XI)
Luis Alvarado (XII)*
Abdul Razaak Syed Mubarak (XIII)*
Ioan Dobosi (XIV)
Varun Jain (XV)*
Ahmed Bolbol (RAL)
Sonya Pouncy, Commun. Coord.
Bryan Holcomb, BOD ExO
Sarah Maston, CO*
Alice Yates, Staff Liaison

Honors and Awards Committee

Thomas (Tom) Phoenix, Chair
Adam Davis, Vice Chair
Mohammad Al Tassi
Ronald (Ron) Gagnon*
Maged Hashem
Andy Reilman*
Janice Peterson*
Karine Leblanc
Scott Martin
Juliana Trigo
Krishnan Viswanath*
Wei Sun
William (Bill) McQuade, CO*
Rhiannon Masterson, Staff Liaison

Continued on next page

Committees Reporting to Members Council Continued

Membership Promotion Committee

Jason Urso, Chair
Louise McKenzie, 1st Vice Chair
Robert Druga, 2nd Vice Chair
Chonghui Liu (I)
Reaz Usmanali (II)
Ryan Westlund (III)
Darrell Sandlin (IV) *
Akshay Bhargava (V)
Jason Leffingwell (VI)*
Lionel Davis (VII)*
Ron McCarty (VIII)
Mark Penchoff (IX)
Lawrence Hodgins (X)*
Gregory Jernstrom (XI)
Guillermo Massucco (XII)
Dennis Tung (XIII)*
Adelio Gaspar (XIV)
Muhammad Ershed Jaman Khan (XV)*
Adil Inam (RAL)
Daniel Chudecke, Cons.*
Bryan Holcomb, BOD ExO
William (Bill) McQuade, CO*
Daniel Gurley, Staff Liaison

Research Promotion Committee

Lester Pereira, Chair
Haley Goslinga, 1st Vice Chair
Andrew Manos, 2nd Vice Chair
Kevin Baldwin, 3rd Vice Chair
Kimberly Thompson, 4th Vice Chair
Eric Fontaine (I)
David Sinclair (II)
Morgan Stevens (III)*
Brian Justice (IV)
Matthew Belko (V)*
**Mayra Rebeca Reyes Elizondo (VI)
,11/11/2024**
Jennings Davis (VII)
Greg Tinkler (VIII)*
Wesley Stanfill (IX)*
Robert Kunkel (X)*
Nathan Zeigler (XI)*
Javier Korenko (XII)
Suei Chea (XIII)
Aleksandar Andjelkovic (XIV)
Sayani Haribabu (XV)*
Muhammad Omer Khan (RAL)
Mahroo Eftekhari, BOD ExO*
William (Bill) McQuade, CO*
Julia Mumford, Staff Liaison

Student Activities Committee

Shaun Nienhueser, Chair
Robert Snow III, Vice Chair
Ashley Keller (I)
Elizabeth Primeau (II)
Andrew Hobson (III)
Natalie MacDonald (IV)
Arunabha Sau (V)*
Kevin Summers (VI)
Mariel Meegan (VII)*
Jacqueline Hay (VIII)
Corey Chinn (IX)
Omar Rojas (X)
Justin Albo (XI)
Juliana Trigo (XII)
Fu-Jen Wang (XIII)
Triantafyllos Triantafyllopoulos (XIV)
Yashkumar Shukla (XV)*
Michel Hayek (RAL)*
Dennis O'Neal, Accred. Rep./ ABET Board
Mansour Zenouzi, Accred. Rep./ ABET EAC
Robert Bittle, Accred. Rep./ ABET ETAC
Buzz Wright, BOD ExO*
William (Bill) McQuade, CO*
Katie Thomson, Staff Liaison

Young Engineers in ASHRAE Committee

Bruno Martinez, Chair
Elise Kiland, Senior Vice Chair
Elizabeth Jedrlinic, Junior Vice Chair
Vineet Nair (I)*
Benjamin Oliver (II)
Tyler Berry (III)
Ben Bingham (IV)
Paul Fernandez (V)
Drew Samuels (VI)
Blake Forsythe (VII)
Christopher Kriepps (VIII)*
Marie VanderVliet (IX)
Elise Backstrom (X)
Roisie (Roisin) Welch (XI)*
Keiron Nanan (XII)
Chak Mou Lam (XIII)
Joshua Vasudevan (XIV)

Money Khanna (XV)*
Eman Mohamed (RAL)*
Robert Druga, Liaison, MP*
Jake Lenahan, Liaison, CIBSE
Robert Snow III, Liaison, SA*
Zachary Alderman, MAL*
Basma Sadek, MAL*
Marisa Higgins, Cons.*
Cailin MacPherson, Cons.*
Scott Peach, BOD ExO
William (Bill) McQuade, CO*
Jeanette McCray, Staff Liaison

Continued on next page

Committees Reporting to the Publishing and Education Council

Certification Committee

Suz Ann Arroyo, Chair
Badri Patel, 1st Vice Chair
Gregory Jones, 2nd Vice Chair
Marius Balan
Kristen Cole*
Cory Jassen*
Apichit Lumlertpongpana
Carlos Mitroga
Vikram Murthy
Keith Reihl
Marianna Vallejo
Jonathan Smith, BOD ExO*
Chandra Sekhar, CO*
Tim Kline, Staff Liaison

Publications Committee

Megan Tosh, Chair
Kurt Monteiro, Vice Chair
Rodrigo Arias
Robin Bryant
Walter Grondzik*
Stephen Duda*
Wyatt Hahn*
Jennifer Isenbeck
Alekhya Kaianathbhatta*
Stephen Kavanaugh
Francis Mills
Vinod Venugopal*
Drew Champlin, Jour. Editor
Blake Ellis, BOD ExO
Chandra Sekhar, CO*
Cindy Michaels, Staff Liaison

Historical Committee

Norman Grusnick, Chair
Akinbowale (Ade) Soluade, Vice Chair
Vinay Ananthachar*
Fabio Clavijo*
Khalid Gulzar
Andrew Pearson
Henry Stehmeyer
Jonathan Smith, BOD ExO*
Chandra Sekhar, CO*
Julie Harr, Staff Liaison

Training and Education Committee

Kimberly Pierson, Chair
Tim Ashby, 1st Vice Chair
Ashley Weekly, 2nd Vice Chair
Roberto Aguilo*
Gerardo Alfonso*
Joseph Firrantello
Vanessa Freidberg
KokZhen Law
Christopher (Chris) Phelan*
James Piscopo
Christine Reinders-Caron
Zeeshan Siddiqui
Douglas Cochrane, BOD ExO
Chandra Sekhar, CO*
Karen Murray, Staff Liaison

Handbook Committee (Members Elected to Committee)

Joseph (Joe) Furman, Chair
Stephanie Mages, Vice Chair

Subcommittee for 2025 Fundamentals

Stephanie Mages, Chair
Sonya Pouncy
Caroline Calloway
Frederich Granzow
Marija Todorovic
Robert McFarlane

Subcommittee for 2026 Handbook Refrigeration

Adrienne Thomle, Chair
Drake Erbe
Kevin Muldoon
Cameron Labunski
Vance Payne
Zheng O'Neill

Subcommittee for 2027 HVAC Applications

Krishnan Gowri, Chair
Jeff Gatlin
Rex Scare
Mark Miller
Paula Hernandez
Philip Naughton

Subcommittee for 2028 HVAC Systems and Equipment

Nicolas Lemire, Chair
Elizabeth Goll
Gursaran Mathur
Satish Iyengar
Javier Korenko
Katja Auer

Continued on next page

Committees Reporting to the Technology Council

Environmental Health Committee

Marwa Zaatari, Chair
Max Sherman, Vice Chair
William Bahnfleth*
Seema Bhangar*
Richard Bruns*
Dimitris Charalambopoulos
Benjamin Jones
Howard Kipen
Linda Lee
John McKeon*
Kenneth Mead
Conor Murray
Lisa Ng
Kathleen Owen
Donald Weekes
Corey Metzger, BOD ExO*
Wade Conlan, CO*
Steve Hammerling, Staff Liaison

Global Technical Interaction Committee

Ashish Rakheja, Chair
Steven Bushby, Vice Chair
Adrienne Thomle*
Satheesh Kulankara*
Justin Prosser*
Michael Corbat*
Drake Erbe
Coleman Brumley*
Hassan Ali Younes, MAL
Fabio Clavijo, MAL
Cheng Wee Leong, MAL
Jyotirmay Mathur, MAL
George Pantelidis, MAL
Richie Mittal, BOD ExO
Wade Conlan, CO*
Ryan Shanley, Staff Liaison

Residential Buildings Committee

Rachel Romero, Chair
Carol Marriott, Vice Chair
Chrissi Antonopoulos*
Darcy Carbone
Wesley Davis
Shivraj Dhaka*
Philip Fairey
Jingjuan Feng
Jaap Hogeling
Li Lan
Kimberly Llewellyn*
Michael Pouchak
Yashkumar Shukla
Xudong Wang
Brian Dougherty*
Pawel Wargocki
Joseph (Joe) Sanders, BOD ExO*
Wade Conlan, CO*
Derrick Nesfield, Staff Liaison

Refrigeration Technology Committee for Comfort - Process - Cold Chain

Douglas Scott, Chair
Donald (Don) Brandt, Vice Chair*
Andrew Beall
Bruce Nelson
Charles Hon*
Dustin Lilya
Cesar Luis Lim*
Bruce Lindsay*
Apichit Lumlertpongpana
Davide Ziviani*
Roddam Simha
Harshal Surange
Gratiela Maria Tarlea*
Xudong Wang
Heather Schopplein, BOD ExO*
Wade Conlan, CO*
Steve Hammerling, Staff Liaison

Research Administration Committee

(Members Elected to Committee)

Natascha Milesi Ferretti, Chair
Jin Wen, Vice Chair
Srinivas Katipamula
Chris Gray
Zheng O'Neill
Dennis Landsberg
Douglas Scott
Matthew Mullen
James Bogart
Carl Huber
Roland Charneux
WenBin Ng
Allen Kirkwood*
Conor Murray*
Xudong Wang, Cons.
Anastasia Mylona, Cons*, 9/11/2024
Susanna Hanson, BOD ExO
Wade Conlan, CO
Steve Hammerling, Staff Liaison

Standards Committee (Members Elected to Committee)

Douglas Fick, Chair	Jaap Hogeling	Kenneth Monroe	Paolo Tronville
Adrienne Thomle, Vice Chair *	Jennifer Isenbeck	Daniel Nall	Douglas Tucker
Hoy Bohanon*	Satish Iyengar*	Philip Naughton	William Walter
Kelley Cramm	Phillip Johnson	Kathleen Owen	David Yuill*
Abdel Darwich	Paul Lindahl	Gwelen Paliaga	Susanna Hanson, BOD ExO*
Drake Erbe	Julie Majurin	Karl Peterman	Wade Conlan, CO*
Patricia Graef	Lawrence Markel	Justin Prosser	Ryan Shanley, Staff Liaison
William Healy*	Margaret Mathison	Christopher Seeton	

Continued on next page

Committees Reporting to the Technology Council Continued

Technical Activities Committee (Members Elected to Committee)

Kevin Mercer, Chair

Satheesh Kulankara, Vice Chair

Joy Altwies

Jason Atkisson

Vikrant Aute

Esteban Baccini Jauregui*

Tina Brueckner

Kyle Gluesenkamp*

Ongun Kazanci

Money Khanna

Gursaran Mathur

Kevin Muldoon*

~~Conor Murray~~ Diana Fisler* 8/26/2024

Kashif Nawaz

Lan Chi Nguyen Weekes

Douglas Reindl

Steve Hammerling, Staff Liaison





2024-25 Presidential Appointments (Knight)

*Appointments as displayed are for the 2024-25 Society year and includes
ASHRAE Representatives, Intersociety Representatives, Coordinating Groups, Liaison Committees,
BOD Ad Hocs, and Task Groups.*

As of January 2025

***MOU with ASHRAE**

Intersociety/ ASHRAE Reps.

Committee	Appointees	Position
AABC Commissioning Group (AABC/ACG/EMA)	Wade Conlan	ASHRAE Representative
AiCARR ASHRAE Club	Dennis Knight	President
	Billy McQuade	President-Elect
	Sarah Maston	Treasurer
	Jeff Littleton	Staff
ASHRAE Collaboration with Egypt Ministry of Environment	Ahmed Alaa Eldin Mohamed	ASHRAE Representative
American Council of Engineering Companies (ACEC)	Billy Austin	Member
American Industrial Hygiene Association	Bill Bahnfleth	ASHRAE Representative
	Wade Conlan	ASHRAE Representative
	Donald Weekes	ASHRAE Representative
American Society for Healthcare Engineering	Traci Hanegan	ASHRAE Representative
APPA: Leadership in Educational Facilities	Dunstan Macauley	ASHRAE Representative
	Darryl Boyce	Consultant
ASHRAE/ REHVA	Dennis Knight	President
	Bill McQuade	President-Elect
	Sarah Maston	Treasurer
	Jeff Littleton	Executive Vice President
Building Owners and Managers Association	Sarah Maston	ASHRAE Representative
California Building Standards Commission (CBSC) Code Advisory Committee	Scott Wayland	ASHRAE Representative
CIBSE/ASHRAE Liaison Subcommittee	Dennis Knight	Chair
	Bill McQuade	Member
	Jeff Littleton	Staff

Efficient and Healthy Schools Program Partnership with DOE	Bill McQuade	ASHRAE Representative
	John Constantine	ASHRAE Representative
Facility Guidelines Institute (FGI)	Heather Platt Gullledge	ASHRAE Representative
Global Cold Chain Alliance (GCCA)	Ade Awujoola	ASHRAE Representative
GSO (GCC Standards Organization) Liaison	Walid Chakroun	ASHRAE Representative
	Maher Mousa	ASHRAE Representative
IEQ - GA Global Alliance (IEQ)	Corey Metzger	ASHRAE Representative
	Bill Bahnfleth	Alternate
Illuminating Engineering Society	Kelly Seeger	ASHRAE Representative
Indian Society of Heating, Refrigerating and Air Conditioning Engineers (ISHRAE)	Ginger Scoggins	ASHRAE Representative
International Association of Plumbing & Mechanical Officials	Phillip Trafton	Member
International Facility Management Association (IFMA)	Jennifer Isenbeck	ASHRAE Representative
International Network for Women in Cooling initiative (INWIC)	Mahroo Eftekhari	ASHRAE Representative
	Sonya Pouncy	ASHRAE Representative
National Association of Women in Construction	Robin Bryant	ASHRAE Representative
National Council of Examiners for Engineering and Surveying (NCEES)	Dennis Wessel	Participating Organizations Liaison Council – Licensing That Works Task Force
National Council of Examiners for Engineering and Surveying (NCEES)	Ben Leppard Jason Alphonso	Exam Writer/ Mechanical Engineering Examination
National Council of Examiners for Engineering and Surveying (NCEES)	None	Item Writer/ Architectural Engineering Examination
National Environmental Balancing Bureau (NEBB)	Donald Hill	ASHRAE Representative
National Institute of Building Sciences (Board Rep.)	Charlie Curlin	ASHRAE Representative
National Institute of Building Sciences (NIBS) Building Information Management (BIM) Council	Jennifer Lather	ASHRAE Representative
New Buildings Institute	Mick Schwedler	ASHRAE Representative
PAHO/WHO Pan American Health Organization	Tim Wentz	ASHRAE Representative
Rocky Mountain Institute (RMI)	Bill McQuade	ASHRAE Representative

United Nations Environment Programme	Tim Wentz	Chair
	Bill McQuade	Member
	Vikram Murthy	Member
	Mark Owen	Staff

BOD Subcommittees, Ad Hoc, and Task Groups

Committee	Appointees	Position
ASHRAE Headquarters Building Ad Hoc	Darryl Boyce	Chair
	Don Brandt	Member
	Jayson Bursill	Member
	John Constantinide	Member
	Paul Torcellini	Member
	Jeff Littleton	Executive Vice President
	Stephanie Reiniche	Staff Liaison
ASHRAE Membership Model Ad Hoc	Ken Fulk	Chair
	Ashish Rakheja	Vice Chair
	Jason Alphonso	Member
	Billy Austin	Member
	Rob Craddock	Member
	Doug Fick	Member
	Kishor Khankari	Member
	Sarah Maston	Member
	Jonathan Smith	Member
	Lizzy Seymour	Staff Liaison
	Mark Owen	Staff
	Craig Wright	Staff
Diversity, Equity, and Inclusion Advisory Board Subcommittee	Susanna Hanson	Chair
	Heather Schopplein	Vice Chair
	Devin Abellon	Member
	Bassel Anbari	Member
	Jennifer Leach	Member
	Dunstan Macauley	Member
	Max Rohr	Member
	Jonathan Smith	Member
	Madison Schultz	Consultant
	Lionel Davis	Consultant
	Tanisha Meyers-Lisle	Staff Liaison

Special Committees

Committee	Appointees	Position
Roundtable Reports Review Committee (R3C)	Chandra Sekhar	Member (Chair, Pub & Ed Council)
	Kenneth Fulk	Member (Vice Chair, Pub & Ed Council)
	Wade Conlan	Member (Chair, Tech Council)
	Devin Abellon	Member (Vice Chair, Tech Council)
	Tulia Rios	Member (Chair, Planning Subcommittee, Members Council)
	Julia Timberman	Member (Chair, Region Operations Subcommittee, Members Council)
	Lizzy Seymour	Staff Liaison



Region - Chapter Presidential Visit Roadmap

Region	Chapter Number	Chapter Name	City	Visits since 2015-16		2015-16 Underwood (F2F)	2016-17 Wentz (F2F)	2017-18 Olesen (F2F)	2018-19 Hayter (F2F)	2019-20 Boyce		2020-21 Gulledge		2021-22 Schwedler	
				F2F	Total					(F2F)	(V)	(F2F)	(V)	(F2F)	(V)
1	15	CRC			3		CRC						CRC	CRC	
1	1	Boston	Boston, MA	2	3			1							
1	3	Rhode Island	Providence, RI	1	1							1			
1	4	Connecticut	Hartford, CT	2	2	1									
1	6	Long Island	Garden City, NY	1	1										
1	7	New Jersey	Newark, NJ	1	1										1
1	8	New York	New York, NY	3	4		1						1		
1	9	Northeast	Albany, NY	0	1								1		
1	10	Central New York	Syracuse, NY	1	1	1									
1	11	Rochester	Rochester, NY	1	2								1	1	
1	12	Niagara Frontier	Buffalo, NY	1	1										1
1	111	Champlain Valley	Burlington, VT	1	1										1
1	118	Maine	Lewiston, ME	1	1										
1	129	Twin Tiers	Owego, NY	1	1										1
1	146	Bi-State	White Plains, NY	1	1										1
1	152	Granite State	Manchester, NH	3	3										1
2	9	CRC			1								CRC		
2	13	Quebec	Quebec, PQ	1	1		1								
2	14	Montreal	Montreal, PQ	0	2								1		1
2	15	Ottawa Valley	Ottawa, ON	2	3				1	1			1		
2	16	Toronto	Toronto, ON	4	5	2		1						1	1
2	37	Hamilton	Hamilton, ON	1	1	1									
2	100	Halifax	Halifax, NS	2	4			1		1			1		1
2	116	London (Canada)	London, ON	2	3			1					1		
2	117	NB/PEI	Moncton, NB	3	4			1		1					1
2	141	Windsor	Windsor, ON	1	2			1					1		
3	11	CRC			2					CRC					CRC
3	21	Philadelphia	Philadelphia, PA	0	1								1		
3	22	Central Pennsylvania	York, PA	2	2										2
3	23	Johnstown	Johnstown, PA	1	2								1	1	
3	24	Pittsburgh	Pittsburgh, PA	0	1								1		
3	25	Baltimore	Baltimore, MD	2	3				1				1	1	
3	26	National Capital	Washington, DC	1	2								1	1	
3	27	Hampton Roads	Norfolk, VA	1	2								1		
3	28	Richmond	Richmond, VA	1	2								1		
3	98	Lehigh Valley	Allentown, PA	1	3								2	1	
3	125	Roanoke	Roanoke, VA	1	2								1		
3	134	Anthracite	Scranton, PA	1	2								1	1	
4	8	CRC			3	CRC	CRC						CRC		
4	29	North Piedmont	Greensboro, NC	5	6	1			1	1			1	1	
4	30	Southern Piedmont	Charlotte, NC	4	5	1				1			1	1	

Region - Chapter Presidential Visit Roadmap

Region	Chapter Number	Chapter Name	City	Visits since 2015-16		2015-16 Underwood (F2F)	2016-17 Wentz (F2F)	2017-18 Olesen (F2F)	2018-19 Hayter (F2F)	2019-20 Boyce		2020-21 Gulledge		2021-22 Schwedler	
				F2F	Total					(F2F)	(V)	(F2F)	(V)	(F2F)	(V)
7	99	East Tennessee	Knoxville, TN	2	3							1	1		
7	114	Tennessee Valley	Chattanooga, TN	2	3							1	1		
7	128	Bluegrass	Lexington, KY	2	2									1	
7	130	Northwest Florida	Pensacola, FL	1	1										
7	133	North Alabama	Huntsville, AL	3	3									1	
7	192	West Virginia	Charleston, WV	2	2									2	
8	16	CRC			1					CRC					
8	62	Arkansas	Little Rock, AR	6	7	1	1	1	1			1			
8	63	Shreveport	Shreveport, LA	0	0										
8	64	Houston	Houston, TX	2	3	1			1			1			
8	65	Alamo	San Antonio, TX	2	2	1			1						
8	66	Austin	Austin, TX	2	3	1			1			1			
8	67	Dallas	Dallas, TX	1	1									1	
8	68	Central Oklahoma	Oklahoma City, OK	5	5				1	1				1	
8	69	Northeastern Oklahoma	Tulsa, OK	4	4				1					1	
8	70	Fort Worth	Ft. Worth, TX	3	3				1	1				1	
8	71	West Texas	Lubbock, TX	1	1									1	
8	91	East Texas	Tyler, TX	2	2					1				1	
8	154	South Texas	Corpus Christi, TX	1	2					1		1			
8	165	Mexico City	Mexico City, MEX	1	1				1						
8	166	Monterrey	Monterrey, MEX	1	1										
8	173	Guadalajara	Guadalajar, MEX	1	1										
8	208	Northwest Arkansa	Fayetteville AR	5	6	1		1		1		1			
9	14	CRC			6	CRC	CRC		CRC	CRC			CRC	CRC	
9	53	Kansas City	Kansas City, MO	4	5	1			1			1	1		
9	72	El Paso	El Paso, TX	2	2									1	
9	73	Rocky Mountain	Denver, CO	4	5	1			1			1	1		
9	Section	Fort Collins	Ft. Collins, CO	1	1				1						
9	74	Utah	Salt Lake City, UT	1	1				1						
9	75	Nebraska	Omaha, NE	0	1								1		
9	76	Wichita	Wichita, KS	3	5	1			1			2			
9	77	New Mexico	Albuquerque, NM	2	2									1	
9	93	South Dakota	Sioux Falls, SD	1	2							1	1		
9	127	Black Hills	Rapid City, SD	2	2			1							
9	131	Big Sky	Billings, MT	2	2				1						
9	135	Idaho	Boise, ID	1	1										
9	148	Pikes Peak	Colorado Springs, CO	2	3				1			1	1		
9	150	Ozarks	Springfield, MO	3	4	1			1			1			
10	14	CRC			2	CRC				CRC					
10	81	Sacramento Valley	Sacramento, CA	3	4		1	1				1			
10	82	Golden Gate	San Francisco, CA	6	7		1	1	1			1	1		

Region - Chapter Presidential Visit Roadmap

Region	Chapter Number	Chapter Name	City	Visits since 2015-16		2015-16 Underwood (F2F)	2016-17 Wentz (F2F)	2017-18 Olesen (F2F)	2018-19 Hayter (F2F)	2019-20 Boyce		2020-21 Gulledge		2021-22 Schwedler	
				F2F	Total					(F2F)	(V)	(F2F)	(V)	(F2F)	(V)
12	209	ASHRAE Caricom	Charlottesville, TTO	0	3							2		1	
12	213	South Brasil	Porto Alegre, BRA	1	3							2			
12	220	Peru	Lima, PER	0	2							2			
13	10	CRC			3			CRC	CRC	CRC					
13	142	Singapore	Singapore, SGP	0	2							1		1	
13	143	Hong Kong	Hong Kong, HKG	3	5		1	1				1		1	
13	149	Malaysia	Kuala Lumpur, MYS	1	3			1				1		1	
13	157	Taiwan	Taipei, TWN	1	3							1		1	
13	167	Phillipines	Manilla, PHL	1	3			1				1		1	
13	170	Thailand	Bangkok, THA	2	4			1		1		1		1	
13	183	Indonesia	Jakarta, IDN	0	2							1		1	
13	194	Japan	Tokyo, JPN	8	10	1	1	2	2	1		1		1	
13	195	South Korea	Seoul, KOR	3	5	1		1	1			1		1	
13	198	Macao	Macao, CHN	1	3		1					1		1	
14	9	CRC			5			CRC	CRC	CRC			CRC		CRC
14	168	Hellenic	Athens, GRC	6	6	1	1	1	1					1	
14	176	Danube	Timisoara, ROM	2	3	1	1								1
14	177	Portugal	Lisbon, PRT	2	2									1	
14	182	Spain	Madrid, ESP	3	3				1					1	
14	203	Cyprus	Nicosia, CYP	3	3		1	1							
14	204	Ireland	Dublin, IRL	4	5		1		1					1	1
14	225	Nordic	Copenhagen, DNK	1	1										
14	206	ASHRAE UK	London, UK	2	2										1
14	214	Israeli	Ramat Gan, ISR	0	0										
14	Section	UK Midlands	Central England	4	4		1	1		1				1	
14	Section	Glasgow		2	2		1	1							
15	12	CRC													
15	163	Western India	Ahmedabad, IND	2	5			1	1				2		1
15	158	India	New Delhi, IND	5	9	1		1		1		3		1	
15	169	ASHRAE Bangalore	Bangalore, IND	1	2	1						1			
15	171	Sri Lankan	Colombo, LKA	1	2							1			
15	185	Chennai	Chennai, IND	2	3							1			
15	186	Pune	Pune, IND	1	3							2			
15	188	ASHRAE Mumbai	Mumbai, IND	2	4	1						1		1	
15	191	ASHRAE Deccan	Hyderabad, IND	2	3	1						1			
15	197	Bangladesh	Dhaka, BGD	1	2	1						1			
15	215	East India	Kolkata, IND	0	2							2			
15	216	Rajasthan	Jaipur, IND	2	7							3		2	
15	217	Chandigarh	Chandigarh, IND	2	6							3		1	
RAL	21	CRC			5	CRC		CRC	CRC				CRC		CRC
RAL	160	Saudi Arabia	Dhahran, SAU	0	1							1			

Region - Chapter Presidential Visit Roadmap

Region	Chapter Number	Chapter Name	City	Visits since 2015-16		2015-16 Underwood (F2F)	2016-17 Wentz (F2F)	2017-18 Olesen (F2F)	2018-19 Hayter (F2F)	2019-20 Boyce		2020-21 Gullledge		2021-22 Schwedler	
				F2F	Total					(F2F)	(V)	(F2F)	(V)	(F2F)	(V)
RAL	161	Cairo	Cairo, EGY	1	2					1			1		
RAL	162	Lebanese	Beirut, LBN	0	1								1		
RAL	164	Kuwait	Kuwait, City, KWT	1	2								1		
RAL	174	Pakistan	Karachi, PAK	4	8	1	1						2		2
RAL	175	ASHRAE Falcon	Dubai, UAE	2	3					1			1		
RAL	179	Northern Pakistan	Islamabad, PAK	1	5		1						2		2
RAL	181	Bahrain	Manama, BHR	1	3	1							1		1
RAL	184	Qatar ORYX	Doha, QAT	0	1								1		
RAL	187	ASHRAE Nigeria	Lagos, NGA	0	1								1		
RAL	189	Central Pakistan	Lahore, PAK	1	4		1						2		1
RAL	193	Turkish	Istanbul, TUR	2	4		1						2		
RAL	207	South Africa	Johannesburg, Capetown, Durban	1	2				1				1		
RAL	210	Faisalbad	Faisalbad, PAK	0	3								2		1
RAL	211	Pyramids	Giza, EGY	1	2								1		
RAL	212	Jordan	Amman, JOR	0	2								1		1
RAL	218	Oman	Muscat, OMN	0	1								1		
RAL	219	Libya	Tripoli, LBY	0	1								1		
RAL	222	Alexandria	Alexandria, EGY	0	0										
RAL	221	Sudan	Khartoum, SDN	0	0										
RAL	224	Ghana	Accra, GHA	0	0										
Totals						40	46	42	67	31	0	3	154	94	44

Last Updated

2/1/2020

Region	# Chapters + Sections	Totals		Only Face to Face Included in this section				% Chapters Visited	2015-16		2016-17		2017-18		2018-19		2019-20		2020-21		2021-22		2022-23		2023-24		2024-25	
		CRCs	Chapter Visits	Zero Visits	One Visit	Two Visits	3 s ts		(F2F)	(V)	(F2F)	(V)	(F2F)	(V)	(F2F)	(V)	(F2F)	(V)	(F2F)	(V)	(F2F)	(V)	(F2F)	(V)	(F2F)	(V)	(F2F)	(V)
I	15	3	51	1	10	2	2	93	2	1	1	0	0	0	0	0	1	3	7	0	1	0	34	0	1	0		
II	9	1	26	1	3	3	2	89%	3	1	5	1	3	0	0	5	1	4	0	0	2	0	2	0	1	0		
III	12	2	22	2	7	2	0	75%	0	0	0	1	0	0	0	11	7	0	0	0	3	0	0	0	0	0		
IV	11	3	28	0	2	3	4	82%	3	3	0	1	3	0	3	7	0	0	0	6	0	6	0	2	0	0		
V	13	3	42	1	2	0	9	85%	0	6	0	9	0	0	0	8	10	0	0	9	0	9	0	0	0	0		
VI	14	1	36	0	6	2	3	79%	0	1	2	4	0	0	1	12	12	0	0	0	3	0	1	0	0	0		
VII	14	4	36	0	2	8	4	100%	0	0	0	1	0	0	1	4	11	0	2	0	11	0	6	0	6	0		
VIII	18	1	43	1	6	4	5	83	5	1	2	8	5	0	5	6	0	0	6	0	6	0	5	0	5	0		
IX	17	6	3	1	4	5	4	76%	4	0	1	8	0	0	0	8	6	0	0	9	0	9	0	1	0	0		
X	16	2	71	0	3	0	11	88%	4	7	9	9	1	0	0	11	10	1	2	0	13	0	4	0	4	0		
XI	15	3	47	1	1	5	4	67%	2	4	0	5	5	0	0	12	5	10	0	4	0	0	0	0	0	0		
XII	24	3	82	4	3	2	10	63	6	9	9	12	8	0	0	18	6	3	0	8	0	8	0	3	0	0		
XIII	15	3	40	2	4	1	3	53	2	3	7	3	2	0	0	10	0	10	1	0	2	0	0	0	0	0		
XIV	16	5	31	1	1	4	5	63	2	6	4	3	1	0	0	0	6	2	1	0	3	0	3	0	3	0		
XV	13	0	33	1	4	6	1	85%	7	4	1	1	3	0	0	42	0	13	4	0	9	0	2	0	4	0		
RAL	22	5	84	12	11	7	2	91%	7	4	1	1	3	0	0	42	0	13	4	0	9	0	2	0	4	0		
Total	244	45	709	28	69	54	69	79%	40	0	46	4	42	0	67	0	31	0	3	154	94	44	11	0	104	0	33	0

