



Board of Directors

Open Session

Sunday, January 21, 2024 | 1:30 – 5:30 PM CST (UTC-05:00) | Grand Horizon C(4)

<https://ashrae.webex.com/ashrae/j.php?MTID=m1c1f15c24ca0b1c52225e426b374c848>

Meeting Number: 2343 258 0767 | **Meeting Password:** ChicagoBOD1

****BOD GROUP PHOTO AT 1:20 PM CST****

1. CALL TO ORDER - Scoggins

2. CODE OF ETHICS – Scoggins

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

(Code of Ethics: <https://www.ashrae.org/about/governance/code-of-ethics>)

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

3. ROLL CALL/INTRODUCTIONS - Scoggins

4. REVIEW OF MEETING AGENDA – Scoggins

5. APPROVAL OF MINUTES – Scoggins

A.* January 5, 2024

6.* REVIEW OF ACTION ITEMS - Scoggins

7. OPEN SESSION – Addresses to the Board of Directors

8. NOMINATING COMMITTEE REPORT

9. TREASURER’S REPORT – McQuade

A.* 2023-24 Financial Update

B.* Major Variations and Financial Statements – December 2023

C.* Finance Committee Report

10.* BOD DEI ADVISORY SUBCOMMITTEE REPORT AND PRESENTATION – Khankari (Mindy Gulati)

11.* TFBF REPORT TO THE BOD – Scoggins (Kent Peterson)

12.* POSTPONED MOTION | DECEMBER 12, 2023 | MOTION 5

The Board of Directors approve the transition of activities of the Task Force for Building Decarbonization (TFBD) to the ASHRAE Center of Excellence for Building Decarbonization (CEBD).

13.* POSTPONED MOTION | JANUARY 5, 2024 | MOTION 2

ExCom recommends to the Board of Directors that Society enter into an MOU with IGBC (Indian Green Building Council).

14. COMMITTEE REPORTS

A. Executive Committee – Scoggins

i.* Saturday, January 20, 2024

B.* Planning Committee - Conlan

15. PRESIDENTIAL AD HOC COMMITTEE AND BOD TASK GROUP REPORTS

A.* ASHRAE at International Conferences - Gagnon (Andres Sepulveda)

B.* Policies for Collaboration Ad Hoc –Scoggins (Tim Wentz)

B. Membership Model and Benefits Ad Hoc – Fulk

D.* ASHRAE’s Carbon Footprint: Measurement and Recommendations for Reduction – McQuade

E.* DOE Schools Pilot Project – Leadership Teams – Constantinide

F.* ASHRAE Headquarters Ad Hoc – Scoggins (Darryl Boyce)

16.* MARKETING UPDATE – Scoggins (Vanita Gupta)

17. EXECUTIVE SESSION (Separate Agenda)

18. APPOINTMENTS UPDATE (SINCE JUNE 2023) – Scoggins

A.* Standing Committee Appointments & Election

B.* Presidential Appointments

19. INFORMATION ITEMS – Scoggins

A.* Report of the President

20. OLD BUSINESS

A.

21. NEW BUSINESS

A.

22. UPCOMING MEETINGS

Wednesday, January 24, 2024 | 2:00 – 6:00 PM CST (UTC-05:00)

Spring Meeting and Strategic Planning Session | Peachtree Corners, GA
March 21 – 22, 2024

23. ADJOURNMENT

**MINUTES****BOARD OF DIRECTORS MEETING**

Friday, January 5, 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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PRINCIPAL APPROVED MOTIONS

Board of Directors Meeting

Friday, January 5, 2024

No. - Pg.	Motion
1 – 2	The open session minutes from the October 19, 2023 and December 12, 2023 BOD meetings be approved.
3 – 3	Motion 2: <i>ExCom recommends to the Board of Directors that Society enter into an MOU with IGBC (Indian Green Building Council).</i> be postponed to the Winter Meeting in Chicago.
5 - 5	Members Council recommends to the Board of Directors that Society approve the Region-at-Large be reorganized and become two regions based on geographical and chapter allocation. The current Sub-Region II (two) is to become Region XV, and Sub-Region I (one) is to become Region-at-Large (RAL). Starting the society year 2024-2025.
6 - 7	Members Council recommends to the Board of Directors that the following waivers to the Rules of the Board be approved: <ul style="list-style-type: none">➤ Waiver of 3.910.001.1 A minimum of six chapters, with a minimum regional membership of 1,800, excluding students is required. All chapters must have functioned within an existing region for a minimum of three years.➤ Waiver of 3.910.002.1 Chapters wishing to form a region must present the following to the director and regional chair of the region to which they are presently assigned. Chapters not assigned to a region must present the following to Members Council by working with the Society Director of Member Services.<ul style="list-style-type: none">A. Written petition, signed by each chapter's officers and Board of Governors.B. Tentative slate of regional officers.C. Identification of regional boundaries.D. Schedule for proposed implementation.E. Tentative initial CRC site and date selected.
7 - 8	The Decarb Challenge Fund be increased by \$15,580.

ACTION ITEMS

Board of Directors Meeting

Friday, January 5, 2024

No. - Pg.	Responsibility	Summary of Action	Status	Goal Date
1 - 3	Denton	Send the IGBC MOU and Work Plan to BOD members for review and comment prior to the Winter Meeting.		January 2024



MINUTES
BOARD OF DIRECTORS MEETING

Friday, January 5, 2024

MEMBERS PRESENT:

Ginger Scoggins, President
Dennis Knight, President-Elect
Bill McQuade, Treasurer
Billy Austin, Vice President
Wade Conlan, Vice President
Ashish Rakheja, Vice President
Chandra Sekhar, Vice President
Jeff Littleton, Secretary
Steven Sill, Region I DRC
Ronald Gagnon, Region II DRC
Mark Tome, 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
Eileen Jensen, Region XI DRC
John Constantinide, Region XII DRC
Cheng Wee Leong, Region XIII DRC
Mahroo Eftekhari, Region XIV DRC
Richie Mittal, RAL DRC
Doug Cochrane, DAL
Dru Crawley, DAL
Blake Ellis, DAL
Art Giesler, DAL
Kishor Khankari, DAL
Corey Metzger, DAL
Heather Schopplein, DAL
Wei Sun, DAL

GUESTS PRESENT:

David Roberts
Farooq Mehboob
Greg Schnable
Heather Schopplein
Zeki Poyraz

Krishnan Viswanath
Kartik Kommireddi
Mohammad Abbas Sajid
Nitin Naik
Robert Kunkel
Ahmed Alaa Eldin

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

Tamera Catchings, Manager – Region Activities
Daniel Gurley, Sr. Manager - Membership
Rhannon Masterson, Manager – Chapter Programs
Tony Giometti, Group Manager - Conferences

CALL TO ORDER

The meeting was called to order at 9:01 a.m.

CODE OF ETHICS

Ms. Scoggins read the code of ethics commitment and advised that the full code of ethics statements and core values were available online.

ROLL CALL/INTRODUCTIONS

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

REVIEW OF MEETING AGENDA

Ms. Scoggins reviewed the meeting agenda. There were no changes or additions.

APPROVAL OF MINUTES

Mr. Sun moved and Mr. Peach seconded that

1. The open session minutes from the October 19, 2023 and December 12, 2023 BOD meetings be approved.

MOTION 1 PASSED (Unanimous Voice Vote, CNV).

EXCOM REPORTS

OCTOBER 20, 2023

Ms. Scoggins reviewed information items from the report. The full report was attached to the agenda.

NOVEMBER 14, 2023

Mr. Rakheja reported that the work plan with IGBC is ongoing, the draft has been prepared and shared with IGBC. The intent is to sign the MOU with IGBC at ACREX in February.

Mr. Rakheja moved that

2. ExCom recommends to the Board of Directors that Society enter into an MOU with IGBC (Indian Green Building Council).

The draft MOU and work plan were showed on screen and are included in ATTACHMENT A and B.

Mr. Rakheja reported that the draft MOU is currently with IGBC awaiting approval. He reported that he did not anticipate any major changes from IGBC.

There was discussion of the draft MOU and a summary of that discussion is below:

Excellent initiative.

The draft MOU has been approved by IGBC's legal team as well as the CII (an umbrella group of IGBC).

Is there any obligations that have cost implications as part of the work plan?

The work plan does provide an opportunity for IGBC representatives to attend the Winter Conference; there will be a similar invite for Society leadership for their conference. Two past Society Presidents have attended the IGBC conference in the past. IGBC showed interest in exploring the possibility of a joint conference to take place at a regular interval.

Once we iron out the details, suggest looking at this partnership as an investment, not an expense. This MOU represents a huge opportunity for Society to get into the Indian market.

It was suggested that the motion be postponed until the Chicago meeting to allow the BOD an opportunity to review the draft MOU and work plan.

Mr. Khankari suggested that if the motion is postponed that IGBC be advised that it is the BOD's intent to approve the MOU in Chicago after the review period.

Ms. Jensen moved and it was seconded that

3. MOTION 2 be postponed to the Winter Meeting in Chicago.

MOTION 3 PASSED (Unanimous Voice Vote, CNV).

Staff will send the IGBC MOU and Work Plan to BOD members for review and comment prior to the Winter Meeting.

AI - 1

DECEMBER 21, 2023

Ms. Scoggins reported that ExCom acted on behalf of the BOD in between meetings. The Planning Committee asked ExCom to review proposals for the strategic plan consultant and their preferred vendor cost more than was originally budgeted. ExCom approved an increase to the budget for the strategic plan development per the recommendations of the Planning Committee.

She reported that ExCom was asked to act on behalf of the BOD because of a timing issue and a desire for the selected vendor to be on board prior to Chicago.

Mr. Khankari expressed that the development of the strategic plan was of the utmost importance to the BOD. He shared his opinion that up to that point, he did not see much involvement of the BOD on the development of the new strategic plan. He requested that the BOD be involved and kept updated as the process progressed.

POSTPONED MOTION – OCTOBER 19, 2023

Motion 3 from the October 19, 2023 BOD meeting:

*Section 5.1 of the bylaws be edited to allow for elected officers to receive compensation if funded by the Society. Specifically beginning at line 11 **remove** "shall receive no" and insert "may receive."*

was brought back to the floor.

Mr. Knight, Mr. Conlan, Mr. Sekhar, and Mr. McQuade recused themselves from discussion of the motion and left the meeting.

The motion was read, and the group was reminded that the motion on the floor was determined to be a major organizational change and would require a two-thirds vote to pass.

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

Speaking against the motion. Approving the motion would take away from Society's spirit of volunteerism. Feel that it is self-serving and promotes elitism. Could create divisions in our members; even a good explanation as to why the motion was approved may not get translated well. Could promote lobbying of BOD candidates. Could result in some members not being elected or moving up in Society over concerns that they would require a salary. Our mission is to serve humanity and this motion detracts from that mission. Members should be proud of the time that volunteers dedicate at the BOD and ExCom level.

Speaking against. If this motion is approved, where will it stop? Also brings up administrative issues.

Speaking against. Approving this motion would create a conflict of interest for BOD members. Would set a dangerous precedent for the chapters and regions.

Speaking against. However, also see how no financial compensation places a burden on volunteers from small businesses.

Speaking in favor. Understand the sentiment against the motion but feel that most of what has been said is inaccurate. Elitism is caused by this issue; we have become an elite group and we don't even see it. We would set parameters surrounding payments to members. Administrative issues are petty; what is fair is well established. Payment is not equivalent to a salary; the stipend would make service as an officer more palatable. Strongest argument against the motion is the regions using it as a model to pay regional and chapter volunteers as well. Be careful with the strong rhetoric against, feel that this issue is more gray than what is being presented.

MOTION 4 FAILED (1:24:0, CNV)

Ms. Scoggins stated that she did not want to weigh in on the discussion prior to the vote. She expressed agreement with the last comments made in favor of the motion. She stated that there is a lot of respect that ASHRAE President is a volunteer position. Being ASHRAE President is a full-time job and requires someone who can afford it and support it. She expressed her opinion that the right decision was made.

Mr. Knight, Mr. Conlan, Mr. Sekhar, and Mr. McQuade rejoined the meeting.

MEMBERS COUNCIL REPORT

Mr. Knight reported on the activities of the December Members Council meeting. The full report was attached to the agenda and is included in ATTACHMENT C.

He advised that the BOD was made aware of the petition to reorganize RAL. He suggested that the BOD have an open discussion based on the packet distributed on December 12th and hold the vote until the Chicago meeting. Consensus was sought.

Mr. Mittal stated that it would be his preference to vote on the motion at this meeting.

Ms. Scoggins suggested that the motion be brought to the floor and there could be a motion to postpone if that was the will of the group.

Mr. Knight moved that

5. Members Council recommends to the Board of Directors that Society approve the Region-at-Large be reorganized and become two regions based on geographical and chapter allocation. The current Sub-Region II (two) is to become Region XV, and Sub-Region I (one) is to become Region-at-Large (RAL). Starting the society year 2024-2025.

Mr. Mittal summarized the motion background from ATTACHMENT C.

The BOD was reminded that the motion represented a major organizational change and would require a two-thirds vote to pass.

Mr. Anbari provided additional background information and reported that splitting the Region is a sign that we are successful in terms of membership and expansion.

Mr. Knight was asked to provide additional information on the negative votes from Members Council. He reported that the primary concern surrounded on the number of members and chapters.

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

Spoke in favor. Understand what Chapters in India are experiencing. The region should be split because of cultural differences as well.

Spoke in favor. Don't think the reorganization will hurt or hinder the work of the BOD; instead, feel that an additional region provides more impetus for BOD reorganization into districts.

Spoke in favor. Has there been any discussion of combining the chapters with not enough members? Should we vote on the required waivers first?

Ms. Scoggins advised that the BOD would vote on the motion on the floor first and then the motion to waive the ROB would be voted on.

Spoke in favor. The strongest argument for the motion is the delivery of member benefit. Increasing member dues would increase revenue and more can be invested in members. Having an additional region makes us more responsive to members in that part of the world.

Spoke in favor. Current geographical barriers create barriers to participation.

Spoke in favor. Region XIV has been able to develop and serve members more once since it was formed. Sub-Region II plans to expand and create more chapters.

Spoke against. A split at a later date could be beneficial but have concerns over the proposed new regions not meeting requirements in the ROB. Suggest that struggling chapters be addressed first and the time and resources proposed in the motion are allocated to support travel to these chapters. Evaluating the motion from a business and operational perspective. In the long run, the region may need to be reorganized but we need more time; feel we are being pushed to vote.

Spoke in favor. Future discussions about BOD balance and size are probably warranted.

Spoke in favor. RAL cannot assist chapters in the current situation. If the reorganization is not approved feel we will lose a lot of chapters and members.

Overall in favor. Believe that reorganization would serve the members more. Concerned with the speed of implementation considering the number of questions.

Spoke in favor. Members have been working on this recommendation and they know what is best for their region. Consider this a win for BOD composition. Like that those most affected are in favor of the motion.

Spoke against the motion. The BOD had extensive discussions a short time ago regarding a smaller BOD. Passing this motion would open pandora's box. Why do we have the ROB if we keep approving waivers?

Spoke in favor. The current physical size of RAL is equivalent to two typical US regions. Many of the chapters in RAL are newly established and will grow in time.

Spoke in favor of the motion in principle. Suggest that we address struggling chapters first. There is currently a Members Council initiative to investigate chapters throughout Society with insufficient members. Suggest that regardless of the outcome of this motion, that Council initiative should move forward.

Spoke against the motion. Feel that there should be less regions, not more. However, the waivers to create Region XIV have allowed those chapters to be successful.

Undecided. Region XI has a similar handshake agreement to RAL regarding the rotation of representation; Region XI has found that as long as there is transparency, members do not have an issue with the timeframe. Acknowledge that the travel restrictions are a barrier.

Undecided. Not sure that the proposed recommendation provides the intended solution. Suggest that the sub-region structure be evaluated to provide the desired support.

The region has a plan to address struggling chapters; chapters will be dissolved or changed to sections as appropriate.

The BOD is answerable to the membership and this motion comes with the voice of 10% of ASHRAE's total membership from 20 different countries. Chapters in RAL are struggling because they cannot be served properly. Don't believe that delaying treatment is the answer. The BOD should have a strategic vision for the future of ASHRAE. If this motion does not pass there will be a tsunami of disappointment; don't know what form that tsunami will take but ask the BOD to ponder the consequences.

There can never be a CRC in India because none of the chapters in Pakistan can travel there, and vice versa.

Spoke in favor. There is a sense of expectation at the region now that there is a path to growth for the chapters. There will be a lot of disappointment at the region if the motion does not pass. Urge and request members of the BOD to vote favorably.

Mr. Knight spoke in favor of the motion. He stated that every concern or question that was raised was also raised at Members Council. In most cases, there is a written plan to address these issues. The sub-region structure does not allow leadership to move between countries easily or to organize and attend CRCs.

MOTION 5 PASSED (22:5:0, CNV).

Mr. Conlan provided the following statement regarding his negative vote: *While I understand the motion and the effort the team spent creating this motion and background, I felt that the reasons provided to address the issues without splitting RAL, as explained, would not resolve the issues.*

Mr. Knight moved that

6. Members Council recommends to the Board of Directors that the following waivers to the Rules of the Board be approved:

➤ **Waiver of 3.910.001.1**

A minimum of six chapters, with a minimum regional membership of 1,800, excluding students is required. All chapters must have functioned within an existing region for a minimum of three years.

➤ **Waiver of 3.910.002.1**

Chapters wishing to form a region must present the following to the director and regional chair of the region to which they are presently assigned. Chapters not assigned to a region must present the following to Members Council by working with the Society Director of Member Services.

- A. Written petition, signed by each chapter's officers and Board of Governors.
- B. Tentative slate of regional officers.
- C. Identification of regional boundaries.
- D. Schedule for proposed implementation.
- E. Tentative initial CRC site and date selected.

Mr. Khankari stated that he was undecided on the motion. He expressed his opinion that ROB was meaningless if the BOD was going to approve waiver after waiver. He suggested that the BOD should think through the rules before approving waivers.

It was asked if passing or defeating the motion on the floor would have an impact on MOTION 5. Mr. Littleton responded that he understood the concern. He stated that the BOD had no choice at the current point and time but to approve the proposed waivers as the reorganization had already been approved. He suggested that waivers to the ROB could be presented in a different way moving forward.

Mr. Peach expressed agreement with Mr. Littleton. He stated that the BOD approved the reorganization of RAL and the BOD has an obligation to do what is necessary to support that motion.

Mr. Knight stated that the ROB are guidelines for doing business and the BOD owns the ROB. He stated that when a compelling argument to waive the ROB is presented the BOD should give it serious consideration; whether that consideration comes before or after the primary motion is irrelevant.

MOTION 6 PASSED (21:0:6, CNV).

Mr. Conlan provided the following statement regarding his abstention: *I believe that the 1,800-member threshold that was being waived has a purpose to ensure that the region has some flexibility and viability to survive a drop in membership in tough times. RAL made note of many issues and concerns with hardship that would affect the region. Without clear guidance on when a Region would be dissolved based on members, which can be lower than 1,800 members, I could not vote in favor of waiving the motion.*

DECARB CHALLENGE FUND

Ms. Scoggins reported that the YEA Committee made a recommendation to increase the budget of the Decarb Challenge to \$65,000. Increasing the budget will allow for additional, worthy projects to be recognized.

An email from the YEA Committee, outlining how the additional funding would benefit the Challenge was shown on screen and is included in ATTACHMENT D.

Mr. Gagnon moved and Mr. Ellis seconded that

7. The Decarb Challenge Fund be increased by \$15,580.

Mr. McQuade asked what Society would not do in order to increase the Decarb Challenge Fund.

Mr. Crawley spoke in favor of the motion. He stated that the proposed motion demonstrated that Society “walks the talk.”

Other BOD members spoke in favor of the motion.

MOTION 7 PASSED (23:1:2, CNV).

Mr. Conlan provided the following statement regarding his abstention: *I apologize for not recusing myself as I am listed as a team leader for a submitted project. Since this vote was expanding the number of projects awarded, I felt that it was a conflict of interest to vote on increasing the budget that could alter if my project would be selected or not.*

It was suggested that unused funds from the TFBD be reallocated towards this initiative. Mr. McQuade stated that the recommendation would be presented to the TFBD at their meeting that afternoon.

ADJOURNMENT

The meeting adjourned at 11:06 a.m.

A handwritten signature in black ink, appearing to read 'JH Littleton', with a horizontal line extending to the right.

Jeff H. Littleton, Secretary

ATTACHMENTS:

- A. Draft IGBC MOU
- B. Draft IGBC Work Plan
- C. Members Council Report to the BOD
- D. Decarb Challenge Fund Request



Memorandum of Understanding ASHRAE and Indian Green Building Council (IGBC)

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 2001, IGBC mission is to Enable 'sustainable built environment for all'.

ASHRAE and IGBC 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:

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/ IGBC senior representatives to:

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

ASHRAE/ IGBC 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 IGBC:

K S Venkatagiri
Executive Director
Indian Green Building Council (IGBC),
CII-Sohrabji Godrej Green Business Centre
(GBC) Survey #64, HiTech City, Hyderabad, India
Phone: +91-40-4418 5100
Email: k.s.venkatagiri@cii.in

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 **IGBC** 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 **IGBC** agree to coordinate promotion of joint grassroots meetings of respective members. Exchange of 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 **IGBC** 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 **IGBC** 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 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 **IGBC** agree to:

- Cross-market educational offerings and 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 **IGBC**.
- Discuss ways that certifications programs can be jointly developed or promoted.

TECHNICAL ACTIVITIES COORDINATION

ASHRAE and **IGBC** 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 **IGBC** 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 **IGBC** 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 **IGBC**. 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

Printed Name/Title

Signature

Date

FOR IGBC
K S Venkatagiri/Executive Director

Printed Name/Title

Signature

Date

Printed Name/Title

Signature

Date

ASHRAE & IGBC Workplan for 2024-26

ASHRAE and Indian green Building Council (IGBC) are entering into a MoU and as part of the same, this Work Plan is developed to ensure smooth implementation of planned activities which will be helpful to promote the mutual interests of respective members and to help in the advancement their respective missions of serving the humanity. This Work Plan outlines specific activities the organizations have agreed to implement. The organizations will review and update this Work Plan once in two years. A list of staff contacts for various elements of the Workplan is provided as an Attachment.

At the start of this relationship, the focus is to leverage ASHRAE's technical leadership and IGBC's premier position in India as an organization promoting sustainability. The main focus areas will be de-carbonization, energy efficiency policies, thermal comfort, indoor air quality, design tools, research activities and build upon each other strengths.

Activity/Task	Responsible Party	Timing	Status And Comments
Consistent Communication			
Leadership Meetings	ASHRAE/IGBC nominated leaders	Annually	Meeting either at the IGBC Congress, ACREX or the ASHRAE Winter Meeting
Staff Liaison Meetings (Review of workplan status)	ASHRAE: Insert name IGBC: Insert name	Twice a year	Meetings shall be governed by pre-agreed agenda and appropriate members/staff shall be invited to each call. Action items and responsibilities shall be assigned at the end of each meeting.
Special meetings for joint initiatives	Assigned Members	As per pre-agreed schedule	As needed to achieve the goals of the joint initiative
Conferences And Meetings			
Provide meeting invitation and a complimentary registration to a primary annual meeting	ASHRAE: Insert name IGBC: Insert name	Once a year	ASHRAE –Winter meeting; IGBC Annual Congress
Promote joint meetings between local Chapters of ASHRAE and IGBC in India.	ASHRAE: Insert name IGBC: Insert name	Throughout the year	Activities may include: a. Panelist or presenters at each other's conferences b. Promote education offerings of the other organization in newsletters, website, social media and other member communications, when and where it is relevant, and space is available
Local chapters of ASHRAE & IGBC will endorse & promote the events/programs organized by the other Society.			
Organize one joint conference in India	ASHRAE: Insert name IGBC: Insert name	Atleast once in two years	A joint topical conference shall be organized jointly by ASHRAE & IGBC in India or neighboring countries as feasible.

ASHRAE & IGBC Workplan for 2024-26

Activity/Task	Responsible Party	Timing	Status And Comments
Publications and Education			
Engage key stakeholders to discuss utilization of mutual resources for promoting education programs & publications			Focus area will be those relating to de-carbonization, IEQ and energy efficiency.
Investigate opportunities to utilize ASHRAE Distinguished Lecture Programs.			
Develop list of potential publications, webinars, courses, and workshops related to mutual interest			
Develop list of potential blogs, articles, social media, and newsletter content related to collaborative efforts and post to respective websites			
Technical			
Reference ASHRAE Standards, wherever applicable into the implementation of IGBC’s certification and ratings.	ASHRAE: Insert name IGBC: Insert name	Once a year	Participation of ASHRAE relevant experts when the Green Building rating systems are developed/updated.
Policy and Advocacy			
Inputs into public policy documents & local Codes & Standards	ASHRAE: Insert name IGBC: Insert name	Once a year	IGBC may reference ASHRAE Standards & Publications, wherever required while providing inputs or developing public policy documents, codes & standards.
Research			
Explore opportunities for joint research	ASHRAE: Insert name IGBC: Insert name	Once a year	Interest areas may include to promote decarbonization, energy efficiency and indoor air quality in India
Student Activities			
Interaction between Student Chapters	ASHRAE: Insert name IGBC: Insert name	Once a year	Joint meetings & programs between local student chapters to be organized.
Supporting mutual Activities			Support & promote programs organized by local Chapters of each of the Society and also invite ASHRAE DL, if needed.

ASHRAE & IGBC Workplan for 2024-26

Key Staff/Member Contacts for Implementing ASHRAE-IGBC Workplan

IGBC Staff/Member Leads:					
Chief Executive					
MOU Manager					
ASHRAE Staff/Member Leads:					
Chief Executive					
MOU Manager					

**REPORT TO THE BOARD OF DIRECTORS
From the Special Members Council Meeting
As of December 20, 2023**

Recommendations for Board Approval:

1. Members Council recommends to the Board of Directors that Society approve the Region-At-Large be reorganized and become two regions based on geographical and chapter allocation. The current Sub-Region II (two) is to become Region XV, and Sub-Region I (one) is to become Region-At-Large (RAL). Starting the society year 2024-2025.

BACKGROUND: RAL has 33 chapters in 19 countries covering the Middle East, Pakistan, Africa, India, Bangladesh, and Sri Lanka. It is becoming too large of a geographical area and number of chapters to manage and provide the required support to chapters and members. Travel restrictions between some of these countries limit regional officers to travel and support chapters and members.

The sheer size of the region does not allow regional officers to Service Chapters adequately. Weak and struggling chapters are emerging.

Based on the current bylaws of RAL, Sub-Region 1 and Sub-Region 2 share regional positions based on the number of chapters in each sub-region. Sub-Region 1 gets 60%, and Sub-Region 2 gets 40% of the regional positions. The regional structure and position rotation rules have slowed down the members' advancement path, causing them to lose interest. The progression to DRC is a 20-plus-year journey. The same is true of other regional positions.

All chapters stressed the fellowship and goodwill between RAL members, officers, and chapters, which is what makes RAL an exceptional region. Any future arrangement should preserve these bonds.

This issue was discussed with RAL chapters during RAL CRC. A petition was written and signed by 30 Chapter Presidents.

ASHRAE is a global society. By Making RAL into two regions, it will enhance international representation in the society.

FISCAL IMPACT: Estimated between \$49,100 - \$61,800 based on feedback from Society.

STAFF IMPACT: In the next 5-months (JAN – JUN 2024): 30 hours to accomplish the following:

- Grassroots staff liaison to engage with additional/new RVC
- Updates to website, member database, CIQ
- Establish updated reports for new region (PAOE, Membership, Chapter, Rosters, etc.)
- Creation of regional email aliases.
- Updates to Rules of the Board, Manual of Chapter Operations, Region Operations Manual, and CRC Manual

Ongoing: 4-5 hours per month throughout the year, each year, dedicated to maintaining financial accounts for both RAL and Region XV, assuming Region XV would need this support. 3-4 days for travel of 1 staff member per year to attend Region XV CRC.

Members Council Vote: Passed (18-7-0, chair not voting)

2. Members Council recommends to the Board of Directors that the following waivers to the Rules of the Board be approved:
 - a. **Waiver of 3.910.001.1**
A minimum of six chapters, with a minimum regional membership of 1,800, excluding students is required. All chapters must have functioned within an existing region for a minimum of three years.
 - b. **Waiver of 3.910.002.1**
Chapters wishing to form a region must present the following to the director and regional chair of the region to which they are presently assigned. Chapters not assigned to a region must present the following to Members Council by working with the Society Director of Member Services.

- A. Written petition, signed by each chapter's officers and Board of Governors.
- B. Tentative slate of regional officers.
- C. Identification of regional boundaries.
- D. Schedule for proposed implementation.
- E. Tentative initial CRC site and date selected.

BACKGROUND: The Chapters of ASHRAE Region-At-Large (RAL) resolved to petition the Society Board of Directors to restructure RAL by creating two separate Regions from the existing Sub-Region boundaries. The proposed new regional split will divide the current RAL member total of 2,977 into two Regions that are below the required 1,800 members. Sub-Region 2 will become Region XV with 1,273 members; Sub-Region 1 will remain RAL with 1,704 members. Two chapters in Sub-Region 1 have not been in existence for the minimum three years: Alexandria (2021) and Ghana (2023). The signatures on the written petition submitted by RAL only included 30 chapter presidents without those of the Board of Governors; 2 chapters were not included due to nonexistent leadership; 1 new chapter was recently chartered. There are active plans in place to support struggling chapters, increase membership, and grow new chapters and sections in the new Region.

FISCAL IMPACT: None

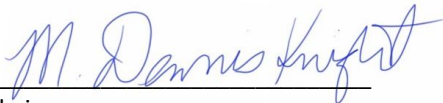
STAFF IMPACT: None

Information Items:

1. Members Council approved the charters of four new Sections in Region XIV: Belgium Section (Brussels, Belgium); Germany Section (Kaiserslautern, Germany); Italy Section (Milan, Italy); and the France Section (Paris, France). The total number of ASHRAE Sections is 43.

12/28/2023

Date


Chair

Denton, Candace

From: Zach Alderman <zalderman.929@gmail.com>
Sent: Thursday, January 4, 2024 11:46 AM
To: Ginger Scoggins
Cc: Littleton, Jeff; McCray, Jeanette; Madison Schultz; Branislav (Baki) Cvijetinovic; Bruno Martinez; Elise Kiland; Denton, Candace
Subject: Re: FW: 2023 Decarb Challenge Fund Update

Good Morning Ginger,

Yes, I've compiled the following metrics for the Board to discuss:

- With the current \$50,000 in funding:
 - We will be able to make approximately \$45,000 in awards. The remaining \$5,000 may be able to give a partial award to the next ranked project, but we do not want to notify them to negotiate budget (a 50% reduction in their requested funds/scope) until we know if the additional funds can be approved.
 - We will be able to secure approximately \$47,000 USD in matching funds from partner groups applicants have coordinated with.
 - Projected Carbon savings will be on the order of 1.8 million kg of CO2 over the life cycles of the projects based on the submitted calculations.
 - We will have projects in Asia (1), North America, and Africa (1).
- With an additional \$15,850 in funding:
 - We will be able to guarantee the full award amount approved by the board (\$20,000 more than we can guarantee currently)
 - We will secure an additional \$37,000 in matching funds, this is more than DOUBLE the matching funds ratio of the original \$50,000, huge bang for our buck.
 - Projected carbon savings increases by nearly 500,000 kg of CO2 (a 25% increase), and enables policy work to be implemented in a South American city which will enable a net zero building plan to be implemented, likely saving millions more tons of CO2 emissions.
 - We add one additional project in Asia, South America (previously not included), and North America.

If it was my money, which I guess some of it is :) , the added funding would be a no-brainer to maximize the impact of the Challenge.

I would prefer to keep any additional identifying information regarding the leading projects confidential to maintain the integrity of the award and review process, and allow the BOD to make an objective decision based on performance and not any possible connection to the projects.

Please let me know if it would be useful for me to join the BOD call tomorrow, I have a conflict I would need to reshuffle, but am happy to do so if there is anything I would need to discuss with the board.

Thank you!

Zach

On Tue, Jan 2, 2024 at 10:51 AM Ginger Scoggins <gscoggins@engineereddesigns.com> wrote:

Zach,

I have this discussion on the BOD agenda for this Friday. Would it be possible to do a short summary of the difference in what we can achieve if we do the \$50K option or the \$65K option that I can share with the BOD?

Thanks,

Ginger Scoggins PE, CEM, CxA, FASHRAE, Principal

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From: Zach Alderman <zalderman.929@gmail.com>

Sent: Friday, December 22, 2023 3:19 PM

To: Littleton, Jeff <JLittleton@ashrae.org>

Cc: Ginger Scoggins <gscoggins@engineereddesigns.com>; McCray, Jeanette <JMcCray@ashrae.org>; Madison Schultz <madison.schultz@gmail.com>; Branislav (Baki) Cvijetinovic <branislav.cvijetinovic@snclavalin.com>; Bruno Martinez <brunocmartinez@gmail.com>; Elise Kiland <ekiland@cmihvac.com>

Subject: Re: FW: 2023 Decarb Challenge Fund Update

Jeff, thank you for the quick response!

Because the outcome of the funding decision will impact 3 different teams and the possibility of a partial versus full award for one team and iterating through the bottom three if that is the case, it makes sense from our end to wait until we have clarity on the total funding amount to vote to approve.

Since it looks possible that we can have a decision next week, we can wait to vote until after that point. We can move quite quickly on the approval once we confirm the funding amount. Notice of award are scheduled for January, which we hoped would be right after the holidays to give teams the max amount of time to implement their projects, and give time to folks for attending the winter conference to be recognized if they are able to, and that should still be achievable on this timeline.

Thanks again and happy holidays to you as well!

Zach

On Fri, Dec 22, 2023 at 1:48 PM Littleton, Jeff <JLittleton@ashrae.org> wrote:

Hi Zach,

We will not be able to provide an OK today, but I feel good about providing the additional funding. I'd suggest that you approve two scenarios – one with \$50K in funding and one with the additional \$18K. I know that's not ideal given the various amounts that have been requested, but that's the best approach for now.

We may be able to get a firm answer next week. When are you planning to provide the notifications?

Thanks and happy holidays!

Jeff



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Jeff Littleton
Executive Vice President

180 Technology Parkway
Peachtree Corners, GA 30092
Tel: 678-539-1100
JLittleton@ashrae.org

ashrae.org/newhq



**2024 ASHRAE
WINTER CONFERENCE**

CHICAGO, JAN 20-24 | AHR EXPO, JAN 22-24

From: Zach Alderman <zalderman.929@gmail.com>

Sent: Friday, December 22, 2023 2:27 PM

To: Ginger Scoggins <gscoggins@engineereddesigns.com>; Littleton, Jeff <JLittleton@ashrae.org>

Cc: McCray, Jeanette <JMcCray@ashrae.org>; Madison Schultz <madison.schultz@gmail.com>; Branislav (Baki) Cvijetinovic <branislav.cvijetinovic@snclavalin.com>; Bruno Martinez <brunocmartinez@gmail.com>; Elise Kiland <ekiland@cmihvac.com>

Subject: Re: FW: 2023 Decarb Challenge Fund Update

Hi Ginger & Jeff,

I just wanted to check status on approving the additional decarb funds.

We were looking to vote to approve and get this wrapped up this today, or go back to the bottom potential awardees if we are not going to get the additional funds, and see if they can reduce their scopes. Any update so we can take appropriate action and get everything finished up would be greatly appreciated. Thank you both and have a Merry Christmas if you are celebrating this weekend.

Thanks!

Zach

On Tue, Dec 19, 2023 at 2:35 PM McCray, Jeanette <JMcCray@ashrae.org> wrote:

You're welcome!

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Jeanette McCray
Assistant Manager, Membership

180 Technology Parkway
Peachtree Corners, GA 30092
Tel: 678-539-1178
JMcCray@ashrae.org

2024 ASHRAE WINTER CONFERENCE

CHICAGO, JAN 20-24 | AHR EXPO, JAN 22-24

From: Zalderman 929 <zalderman.929@gmail.com>

Sent: Tuesday, December 19, 2023 1:56:52 PM

To: McCray, Jeanette <JMcCray@ashrae.org>

Cc: Madison Schultz <madison.schultz@gmail.com>; Branislav (Baki) Cvijetinovic <branislav.cvijetinovic@snclavalin.com>; Bruno Martinez <brunocmartinez@gmail.com>; Elise Kiland <ekiland@cmihvac.com>

Subject: Re: FW: 2023 Decarb Challenge Fund Update

Awesome thanks Jeanette!

Zach

On Dec 19, 2023 at 10:46 AM, <Jeanette McCray> wrote:

Hi Zach,

You're welcome! Glad everyone is on the mend. 😊

Thank you for this information. I sent Jeff over the top 9 projects based on the grading rubrics that totaled the \$68,500 so that he could see the breakdown and what we are requesting and get some information about each project.

As soon as I hear anything I will pass it on.

All the best,

Jeanette



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Jeanette McCray
Assistant Manager, Membership

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Peachtree Corners, GA 30092
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JMcCray@ashrae.org

ashrae.org/newhq



2024 ASHRAE WINTER CONFERENCE

CHICAGO, JAN 20-24 | AHR EXPO, JAN 22-24

From: Zach Alderman <zalderman.929@gmail.com>

Sent: Monday, December 18, 2023 12:12 PM

To: McCray, Jeanette <JMcCray@ashrae.org>

Cc: madison schultz <madison.schultz@gmail.com>; Cvijetinovic, Branislav (Baki) <branislav.cvijetinovic@snclavalin.com>; Bruno Martinez <brunocmartinez@gmail.com>; Elise Kiland <ekiland@cmihvac.com>

Subject: Re: FW: 2023 Decarb Challenge Fund Update

Hi Jeanette!

Sorry for the delay! Thank you for asking after us and we are slowly on the mend :)

The requested additional funding would allow us to fully fund 1 additional project which would otherwise be underfunded and may not be able to be completed, and allow us to fund an additional 2 more projects. Without the funds we would be able to award 6 full projects, so adding these 3 projects would represent a 50% increase in the total projects awarded for a 31% increase in funding.

Thank you for passing this on!

Best,

Zach

On Mon, Dec 18, 2023 at 8:10 AM McCray, Jeanette <JMcCray@ashrae.org> wrote:

Good morning Zach,

Hope you and your family are doing better.

Can you please send me the number of the exact projects that you are requesting additional funds for as soon as possible? Jeff Littleton has reached out to me and would like this information to possibly provide the additional funds.

Thanks,

Jeanette



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Jeanette McCray
Assistant Manager, Membership

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ashrae.org/newhq



**2024 ASHRAE
WINTER CONFERENCE**

CHICAGO, JAN 20-24 | AHR EXPO, JAN 22-24

From: Zach Alderman <zalderman.929@gmail.com>

Sent: Saturday, December 16, 2023 4:30 PM

To: Ginger Scoggins <gscoggins@engineereddesigns.com>

Cc: Chris Gray <cgray@renucommunities.com>; McCray, Jeanette <JMcCray@ashrae.org>; Madison Schultz <madison.schultz@gmail.com>; Elise Kiland <ekiland@cmihvac.com>; Baki Cvijetinovic <branislav.cvijetinovic@snclavalin.com>; Bruno Martinez <brunocmartinez@gmail.com>

Subject: 2023 Decarb Challenge Fund Update

Hi Ginger,

I wanted to share some great news with you on the Decarb Challenge fund!

We had a total of 42 applications, and thanks to a combination of 18 volunteers from the YEA committee and the college of fellows (11 YEA and 7 COF), we were able to complete the review of all applications on time and with good statistical confidence in the results.

- The average review score from any reviewer ranged between 79-120 / 150. The average of all scores by all reviewers was 95/150.
- The average score of applications which are being recommended for awards are over 125/150
- 17/18 reviewers had at least one of the 8 applications they reviewed recommended for award. 11 reviewers had 2 or more applications recommended.
- Applications recommended for award would be implemented in San Louis Obispo California, Omaha Nebraska, Kansas City Missouri, Taichung Taiwan (2), Sao Paolo Brazil, Chennai India, Waterloo Ontario, Cincinnati Ohio, and Ullor Ghana, covering North and South America, Asia, and Africa.

We have \$65,850 of funding applications which are clear standouts from the rest of the pack. Although we can certainly pare the awards back to the \$50,000 allocation through several methods (including eliminating or paring back one or more of the projects in Taiwan, Brazil, and Cal Poly), I wanted to see if there were any additional funds available from society to make all of these awards at the requested values. If not, we will move forward early next week with scope reduction requests from the lowest scoring applicants to be recommended for awards, along with availability & intent confirmations from the remaining top applicants, and then vote to approve the final list and dollar amounts and send those recommendations through to Society.

Thank you for considering this last minute request, and we are so excited to see these chapters and project teams recognized and get rolling with their unique and exciting proposals!

Best,

Zach Alderman
YEA Decarb Ad Hoc Consultant

ACTION ITEMS

Board of Directors
As of January 5, 2024

Number	Responsibility	Summary of Action	Status	Goal Date
1	Austin	Investigate the possibility of developing region specific AI courses. Region specific courses would be developed by members outside of North America and presented by members from the regions where they were developed. (Assigned October 13-14, 2022)	Ongoing	
2	Scoggins	Work with AASA to review and provide recommendations on external actionable items from the Global HVAC Summit. (Assigned February 5, 2023)	Ongoing	
3	Wentz and Olesen	Review the Global HVAC Summit report and provide a list of actionable items for external groups. (Assigned February 5, 2023)	Ongoing	
5	Austin	Ask the Publishing and Education Council to consider expanding the New Products Advisory Group to products outside of PEC. (Assigned June 28, 2023)	Ongoing	2024 Winter Conference
6	Littleton and DEI Subcommittee	Work on a process to immediately address inappropriate behavior at Society Conferences and report back to the BOD. (Assigned October 19, 2023)	Complete <i>Process sent to the BOD 1/3/24</i>	
7	Denton	Send the IGBC MOU and Work Plan to BOD members for review and comment prior to the Winter Meeting. (Assigned January 5, 2024)	Complete	



Financial Update

Board of Directors

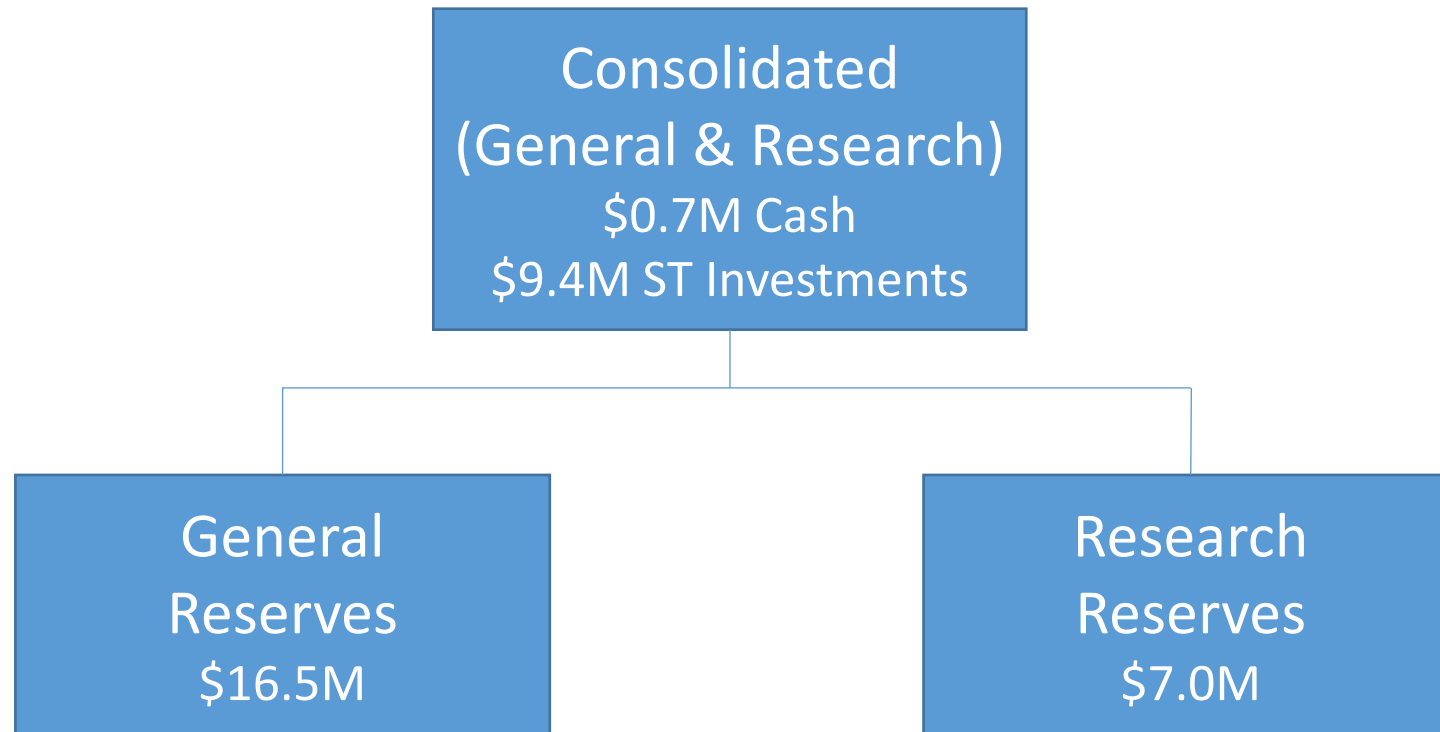
Bill McQuade, Treasurer
January 21, 2023
Winter Meeting – Chicago

Financial Status

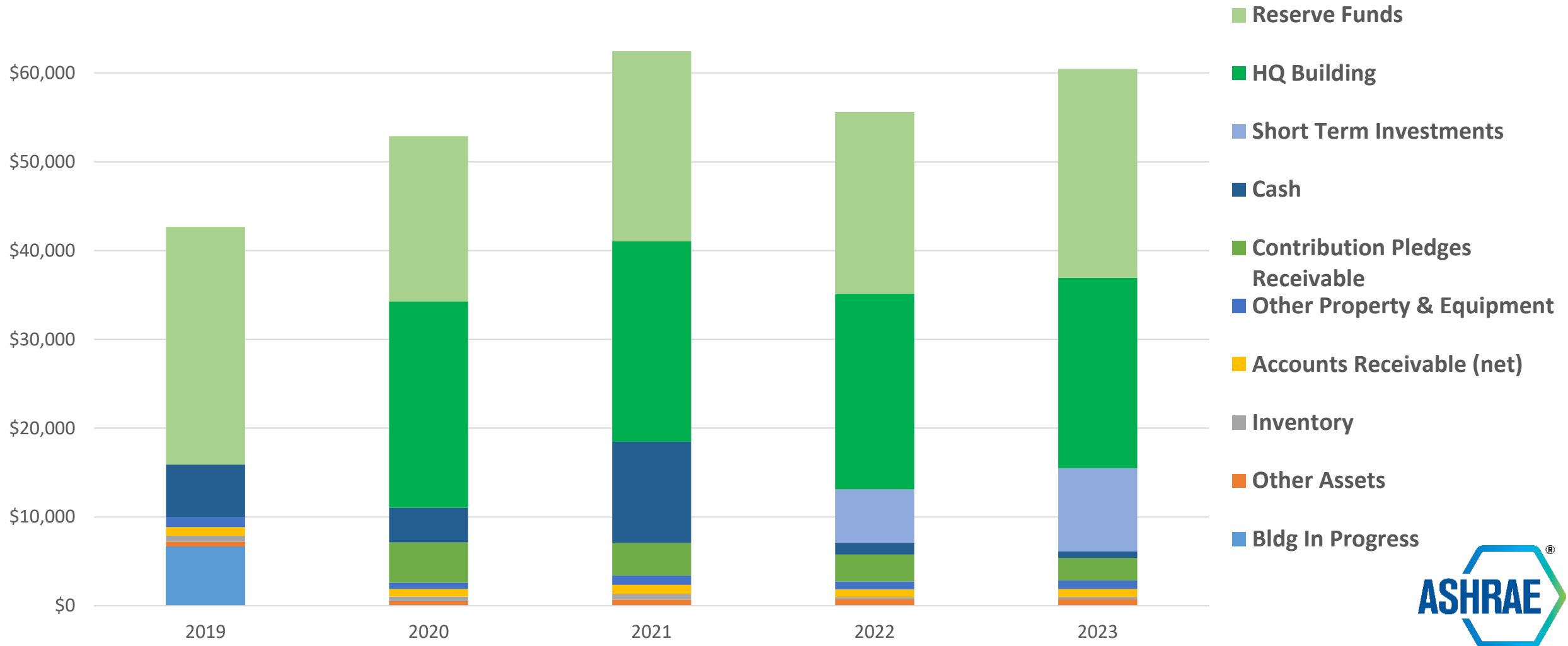
As of December 31, 2023



Fund Structure – as of 12/31/23

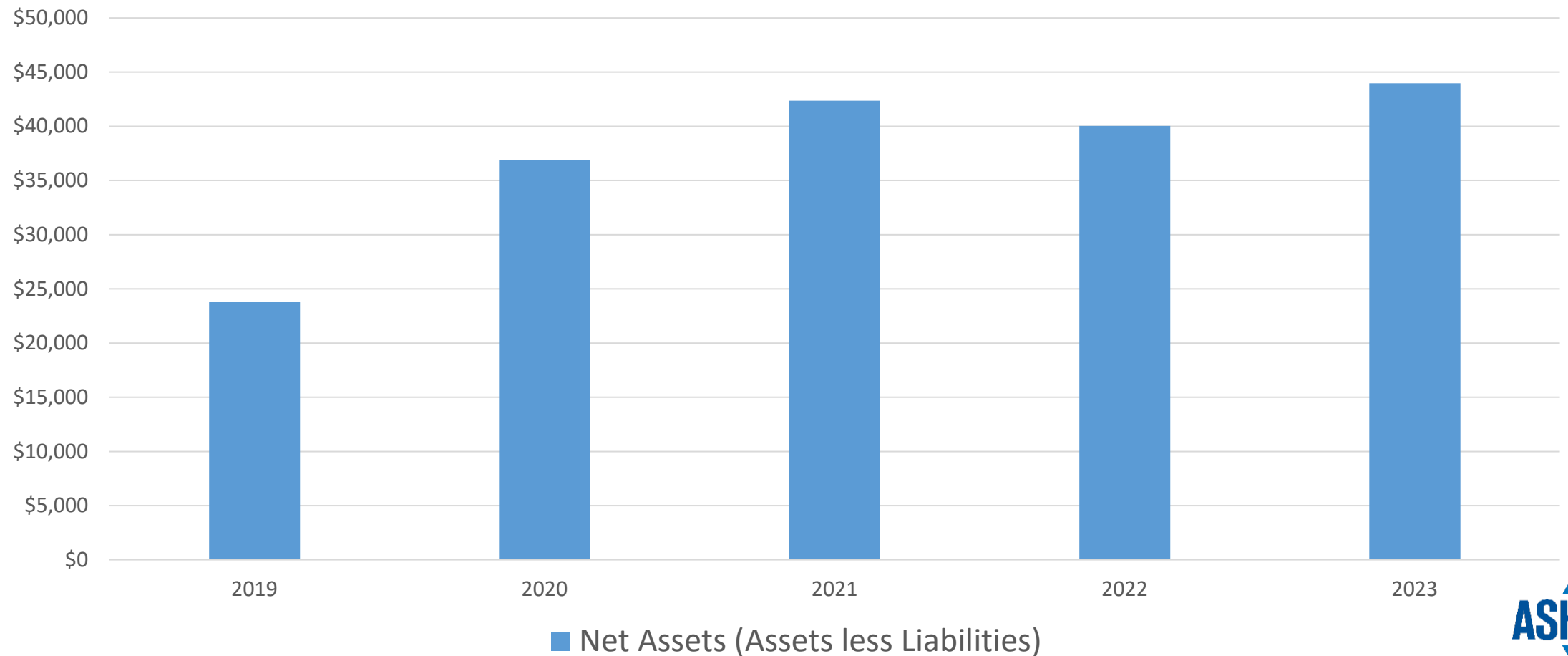


Consolidated Funds Composition of Assets As of December 31 (in Thousands)



Consolidated Funds Cumulative Net Assets As of December 31

(in Thousands)



General Fund Revenue and Expenses

Forecast vs. Budget
Society Year 2023-24

(in Thousands)		SY 23-24 Forecast	SY 23-24 Budget
Revenues		\$27,336.4	\$26,398.8
Expenses		\$27,142.9	\$26,493.6
Surplus/(Deficit)		\$193.6	(\$94.8)



Major Variations (Forecast vs. Budget)

Revenue - General Fund

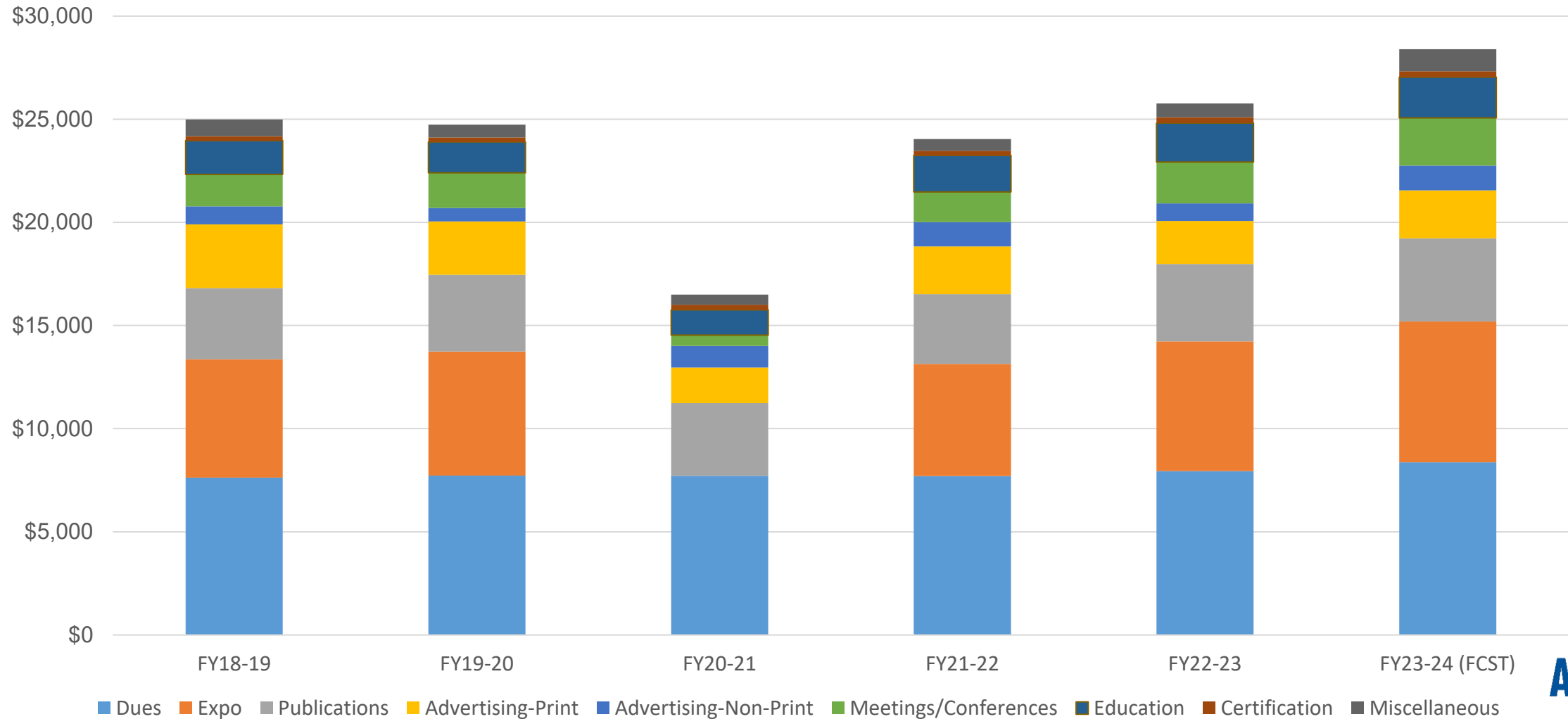
Forecast is Higher (Lower Than) Budget

- Dues \$150.0K or 1.8%
 - YTD trending higher than budget
- Publications \$105.0K or 2.7%
 - Stronger sales than budgeted, particularly Standards. In addition, strong sales of papers (downloads)
- Advertising (Non-Print) \$150.0K or 14.3%
 - HPB Revenue (\$150K) inadvertently not included in FY23-24 Budget; \$83K through first 6 months
- Meetings/Conferences \$71.3K or 3.2%
 - Higher topical meeting attendance than expected – this was primarily for Decarbonization conference.
- Education (\$100.0K) or 4.8%
 - In-Company/Chapter trainings are trending at ½ of last year and FY23-24 budget
- AHR Expo Royalty \$200.0K or 3.1%
 - Actual booked (as of 1/8) – 526,760 NSF vs. 500,000 NSF used for budget.
- Miscellaneous Income \$121.0K or 12.7%
 - Sponsorship Income much higher than budgeted – this was primarily due to the Decarbonization conference which alone was \$70K higher than budget.



Revenue Trends – General Fund

(in Thousands)



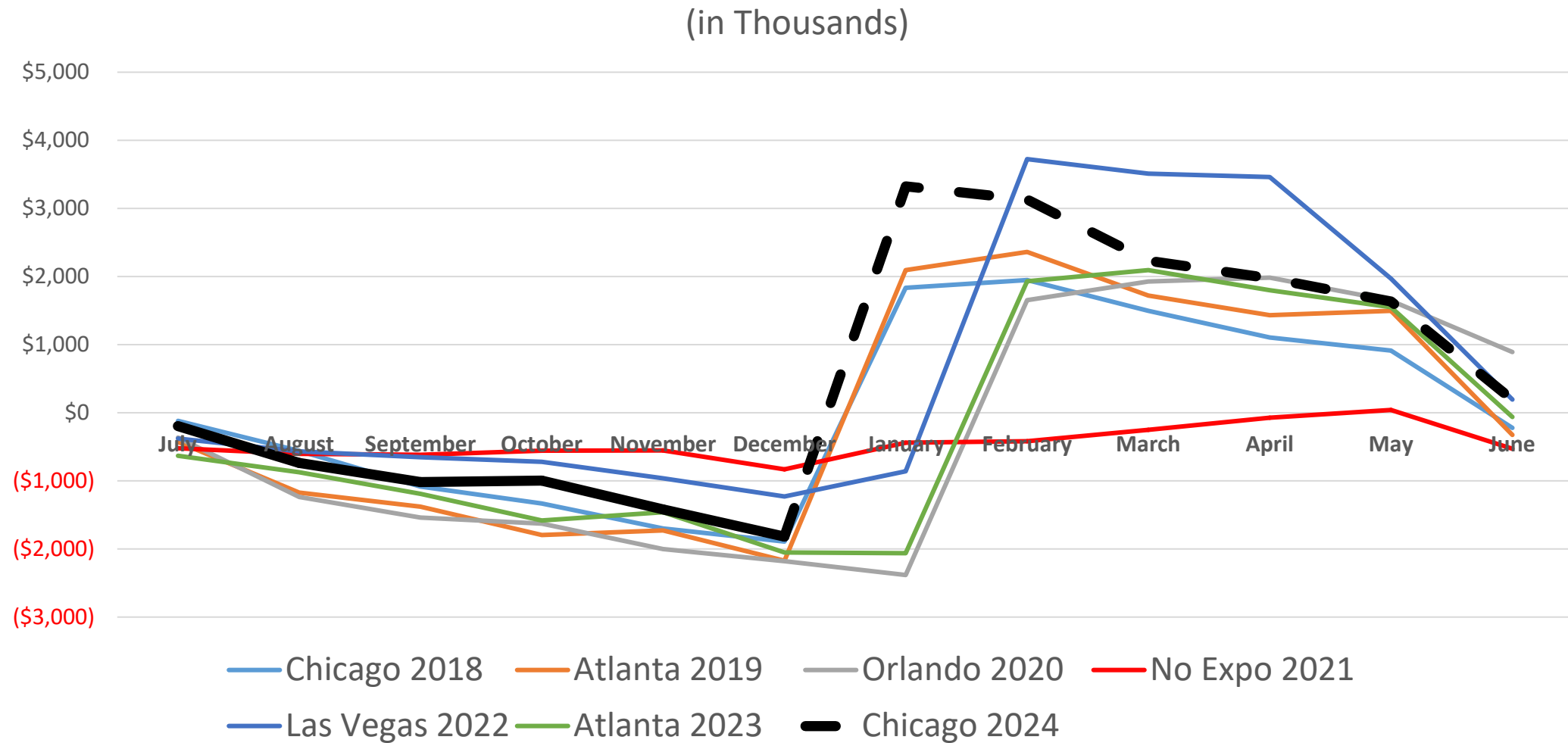
Major Variations (Forecast vs. Budget)

Expenses - General Fund

Forecast is Higher (Lower Than) Budget

- Salaries (\$124.0K) or 1.3%
 - More turnover/open positions than budget assumption in first six months
- Meetings/Conferences \$173.1K or 7.1%
 - Topical Conference expenses higher due primarily to greater than expected attendance at both the Decarb conference (\$97K over) and Bldg. Perf (\$38K over)
- Education Courses/Trainings (\$40.0K) or 5.7%
 - Fewer In-Company/Chapter courses
- Travel \$284.7K or 14.0%
 - Overall, travel costs are higher than budgeted, specifically ExCom and Regional travel costs

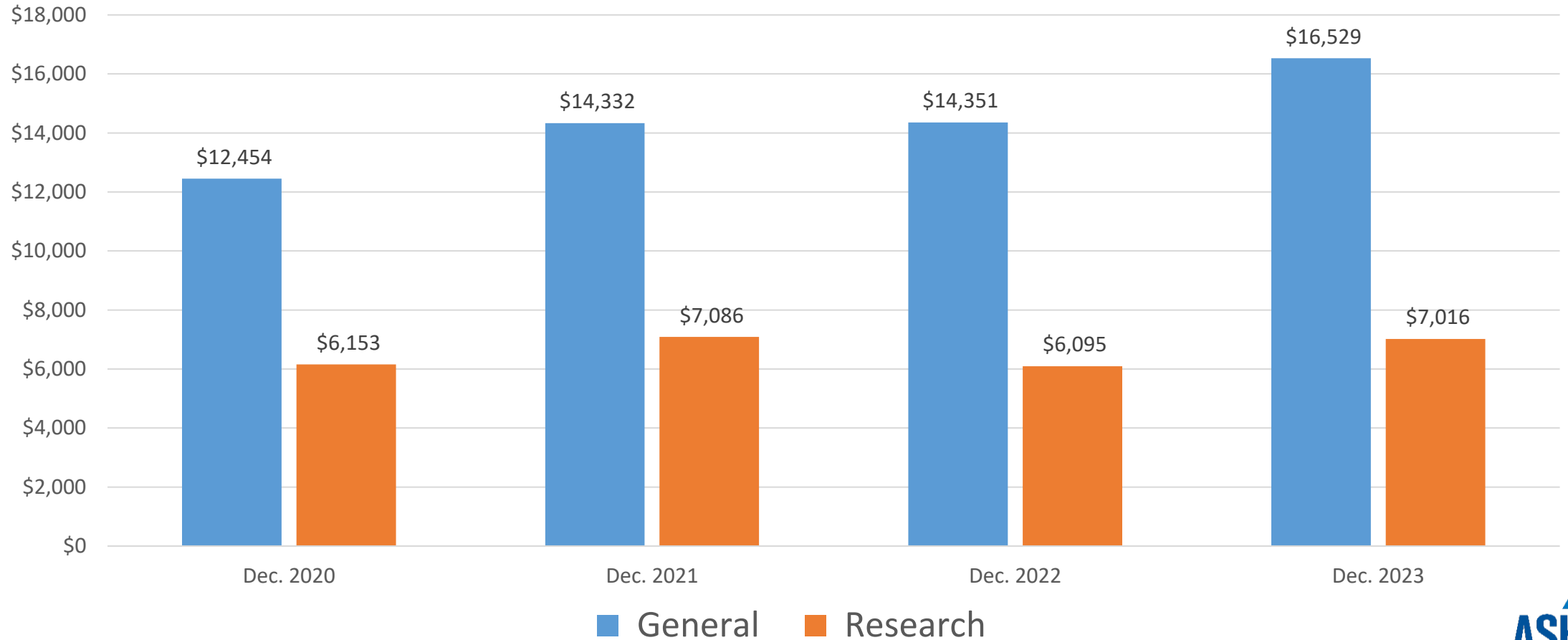
Cumulative Net Revenue and Expenses (General Fund)



Investments

Investments

Reserve Fund Balances (in thousands)



Questions?



ASHRAE
GENERAL, RESEARCH
STATEMENT OF FINANCIAL POSITION - COMPARATIVE
Sunday, December 31, 2023

		One Year Ago	Two Years Ago	Three Years Ago	Four Years Ago
	12/31/2023	12/31/2022	12/31/2021	12/31/2020	12/31/2019
Cash	\$727.0	\$1,331.2	\$10,210.2	\$3,613.2	\$3,625.7
Cash Equivalents	9,398.9	6,020.5			
Marketable Securities at Market Value	23,527.0	20,446.0	21,418.6	18,607.0	26,758.0
Accounts Receivable	1,156.1	1,070.7	1,322.2	1,012.3	1,054.1
Less: Allowance for Uncollectible Accounts	(277.4)	(219.0)	(277.8)	(180.8)	(100.7)
Contribution Pledge Receivables	2,500.0	3,018.3	3,681.1	4,503.9	35.4
Miscellaneous Receivables & Deposits	28.9	1.6	10.0	11.5	10.5
Inventory	266.8	261.9	631.7	531.2	646.8
Prepaid Expense	704.1	718.3	680.1	22,488.1	7,217.8
Property and Equipment-Remaining Value	22,420.2	22,953.4	23,617.9	1,714.1	1,121.5
Due To (From) Other Funds			5.0	2.5	1.5
TOTAL ASSETS	\$ 60,451.6	\$ 55,602.9	\$ 61,299.0	\$ 52,303.0	\$ 40,370.6
Accounts Payable & Accrued Expenses	3,784.8	4,117.3	3,840.6	4,336.6	5,242.6
Refundable Advances	18.1	11.0	21.4	15.0	11.0
Loans			4,270.3	6,191.4	
Deferred Income	12,684.0	11,431.9	10,803.4	4,881.7	11,308.2
TOTAL LIABILITIES	16,486.9	15,560.2	18,935.7	15,424.7	16,561.8
Net Assets Beginning of Year	45,490.1	42,547.7	41,204.9	35,580.5	25,241.1
Net Assets -Surplus/(Deficit) for Current Yr	(1,525.4)	(2,505.0)	1,158.4	1,297.8	(1,432.3)
TOTAL LIABILITIES & NET ASSETS	\$ 60,451.6	\$ 55,602.9	\$ 61,299.0	\$ 52,303.0	\$ 40,370.6
NET ASSETS TO DATE	\$ 43,964.7	\$ 40,042.7	\$ 42,363.3	\$ 36,878.3	\$ 23,808.8

Major Variations (Forecast vs. Budget)

Revenue - General Fund

	12 Months Ended				
	Forecast	Budget	Difference		Explanations
	FY 2024	FY 2024	\$	%	
REVENUES					
31 Membership Dues	\$ 8,372.8	\$ 8,222.8	\$ 150.0	1.8%	Dues are trending higher through the first 6 months
32 Publication Sales	4,015.7	3,910.7	105.0	2.7%	Stronger sales than budgeted, particularly Standards. In addition, strong sales of papers (downloads)
34 Advertising Income - Print	2,327.7	2,352.0	(24.3)	-1.0%	
34 Advertising Income - Non-Print	1,200.0	1,050.0	150.0	14.3%	HPB Revenue (\$150K) inadvertently not included in FY23-24 Budget; \$83K through first 6 months
35.1 Meetings/Conferences Registration	2,312.6	2,241.3	71.3	3.2%	Higher attendance than expected for Decarbonization conference
35.2 Certification Registration	280.0	280.0	-	0.0%	
35.3 Education Registration	1,983.0	2,083.0	(100.0)	-4.8%	In-Company/Chapter trainings significantly down through first half of FY23-24.
38 Contribution Income	41.8	41.8	-	0.0%	
41.1 AHR Exposition Income	6,600.0	6,400.0	200.0	3.1%	Original Estimate NSF - 500,000; Verified sold as of 1/8/24 - 526,760 NSF
41.2 Contributions and Matching Gifts	(1,330.6)	(1,359.6)	29.0	-2.1%	
41.3 Exposition Income - Other Countries	232.0	225.0	7.0	3.1%	Original Estimate NSF - 81,500; Actual NSF sold - 81,960
44 Reserve Transfers	228.7	-	228.7	100.0%	TFBD Reserve Transfers (approved by BOD); \$79K for Certification course development
46 Miscellaneous Income	1,072.8	951.8	121.0	12.7%	Sponsorship Income much higher than budgeted for Decarbonization conference
TOTAL REVENUES	\$ 27,336.5	\$ 26,398.8			

Major Variations (Forecast vs. Budget)

Expenses - General Fund

	12 Months Ended		Difference		Explanations
	Forecast FY 2024	Budget FY 2024	\$	%	
EXPENSES:					
51 Salaries	\$ 9,690.3	\$ 9,814.3	\$ (124.0)	-1.3%	More turnover/open positions than budget assumptions in first six months
52 Payroll Taxes, Benefits, Personnel	2,844.0	2,770.0	74.0	2.7%	
61 Publishing	1,349.6	1,360.1	(10.5)	-0.8%	
62 Promotion (All Depts)	1,323.3	1,335.9	(12.6)	-0.9%	
64 Meetings/Conferences	2,619.6	2,446.5	173.1	7.1%	Topical Meeting Costs higher than expected - primarily driven by higher attendance
64 Education Courses/Trainings	657.0	697.0	(40.0)	-5.7%	Education expense variance follows revenue
66 Travel	2,317.9	2,033.2	284.7	14.0%	ExCom Travel and travel costs, notably flights overseas, much higher than budgeted
68 Awards, Certif, Logo Cost of Goods Sold	169.1	164.0	5.1	3.1%	
71 Research Projects & Grants	182.7	182.7	-	0.0%	
73 Special Projects	150.0		150.0	100.0%	TFBD Projects
76 Public Relations	74.9	74.9	-	0.0%	
78 Occupancy & Insurance	881.0	881.0	-	0.0%	
82 Office Expense and Organizational Dues	1,544.9	1,548.3	(3.4)	-0.2%	
84 Outside Services	2,417.1	2,302.6	114.5	5.0%	Primarily related to TFBD Certification course development
88 Other Expenses	830.9	792.5	38.4	4.8%	
90 Depreciation	871.6	871.6	-	0.0%	
91 Allocation of Overhead & BOD	(781.0)	(781.0)			
TOTAL EXPENSES	\$ 27,142.9	\$ 26,493.6			

ASHRAE
ASHRAE CONSOLIDATED (excl Foundation)
For the Six Months Ending Sunday, December 31, 2023
(In Thousands)

A	B	C	D
Fiscal YTD Through Month of Dec			
Actual	Budget	Actual	Budget
FY 2023	FY 2023	FY 2024	FY 2024
\$3,974.9	\$3,990.6	\$4,215.7	\$4,113.4
1,610.6	1,527.3	1,789.3	1,659.9
1,073.8	1,224.4	1,189.1	1,186.3
413.2	597.4	499.2	500.0
330.6	224.0	361.8	265.3
117.4	127.2	142.9	119.1
886.1	672.7	848.8	964.2
652.3	523.0	574.1	586.2
140.9	130.3	45.0	130.4
102.2	58.0	232.0	225.0
		143.0	
176.2	136.2	512.0	471.8
9,478.2	9,211.1	10,552.9	10,221.6

4,952.0	4,917.7	5,122.4	5,312.4
1,425.2	1,404.9	1,508.7	1,483.7
560.0	567.2	492.2	507.3
471.9	460.6	586.6	599.9
370.7	322.8	630.9	479.9
243.4	273.6	241.3	301.8
951.3	1,040.7	1,079.7	846.1
108.7	110.2	105.1	82.6
612.4	654.3	609.8	892.1
		102.4	
22.5	27.6	32.0	36.8
389.4	352.8	432.7	443.2
538.6	586.7	550.9	653.0
781.2	866.0	1,053.0	984.7
284.1	299.3	273.1	306.7
460.8	440.5	403.5	436.6
	(0.5)	0.0	35.3
12,172.2	12,324.4	13,224.3	13,402.1
(2,694.0)	(3,113.3)	(2,671.4)	(3,180.5)

(2,505.1) (2,633.7) (1,525.4) (3,163.1)

REVENUES

31 Membership Dues	
32 Publication Sales	
34 Advertising Income - Print	
34 Advertising Income - Non-Print	
35.1 Meetings/Conferences Registration	
35.2 Certification Registration	
35.3 Education Registration	
37 Special Project Income	
38 Contribution Income	
41.1 AHR Exposition Income	
41.2 Contributions and Matching Gifts	
41.3 Exposition Income - Other Countries	
44 Reserve Transfers	
46 Miscellaneous Income	
TOTAL REVENUES	

EXPENSES:

51 Salaries	
52 Payroll Taxes, Benefits, Personnel	
61 Publishing	
62 Promotion (All Depts)	
64 Meetings/Conferences	
64 Education Courses/Trainings	
66 Travel	
68 Awards, Certif, Logo Cost of Goods Sold	
71 Research Projects & Grants	
73 Special Projects	
76 Public Relations	
78 Occupancy & Insurance	
82 Office Expense and Organizational Dues	
84 Outside Services	
88 Other Expenses	
88.1 Prepaid Expenses (contra acct)	
90 Depreciation	
91 Allocation of Overhead & BOD	
TOTAL EXPENSES	
SURPLUS (DEFICIT) before reserve income	

91.5 Contributions - HQ Building	
91.6 Interest Expense - HQ	
91.8 PPP Loan Forgiveness	

Reserve Investment Income:

95 Investmt Income - Reserves (net of exp)	
96 Transfer Reserves Portion Used Currently	

Remaining Reserve Investment Income

OVERALL SURPLUS (DEFICIT) after reserve incom

E	F	G	H	I
TWELVE MONTHS ENDING JUNE 30				
Actual	Actual	Actual	Forecast	Budget
FY 2021	FY 2022	FY 2023	FY 2024	FY 2024
\$7,870.7	\$7,865.7	\$8,108.7	\$8,540.0	\$8,390.0
3,521.4	3,383.5	3,757.8	4,015.7	3,910.7
1,723.3	2,313.4	2,084.3	2,327.7	2,352.0
1,047.5	1,178.8	849.3	1,200.0	1,050.0
532.5	1,453.9	2,005.8	2,312.6	2,241.3
248.7	227.2	276.0	280.0	280.0
1,218.3	1,777.2	1,889.7	1,983.0	2,083.0
	73.9	20.0		
1,962.3	2,092.6	2,108.2	1,951.8	1,951.8
	5,397.6	6,179.8	6,600.0	6,400.0
125.0	165.5	136.9	169.4	140.4
	34.3	102.2	232.0	225.0
1,000.0		155.1	468.7	240.0
494.3	566.7	675.8	1,072.8	951.8
19,744.0	26,530.3	28,349.6	31,153.7	30,216.0

9,016.4	9,118.6	9,834.9	10,305.3	10,429.3
2,084.0	2,628.4	2,906.2	3,023.0	2,949.0
1,123.4	1,507.5	1,356.4	1,356.2	1,366.7
890.8	1,102.1	1,041.6	1,333.5	1,346.1
119.3	2,265.9	2,203.1	2,665.1	2,466.9
233.4	529.3	615.7	657.0	697.0
38.0	951.0	2,186.6	2,463.6	2,178.9
135.9	234.5	233.7	208.5	203.4
1,326.6	1,744.0	1,100.1	2,031.9	2,057.0
61.5	21.2	149.8	150.0	
20.9	41.5	53.2	75.2	75.2
680.7	699.3	803.4	881.0	881.0
1,190.7	1,165.7	1,224.7	1,612.9	1,616.3
1,928.1	1,987.2	1,848.7	2,417.1	2,302.6
499.5	959.7	787.9	908.4	870.0
99.0				
666.7	912.9	888.8	871.6	871.6
			0.0	0.0
20,114.9	25,868.8	27,234.8	30,960.3	30,311.0
(370.9)	661.5	1,114.8	193.4	(95.0)

99.8	47.9	2.0	500.0	500.0
28.9	26.0			
2,215.2	2,009.3			

4,709.0	(2,347.0)	1,980.8	760.0	760.0
(1,000.0)		(155.1)	(240.0)	(240.0)

3,709.0	(2,347.0)	1,825.7	520.0	520.0
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5,624.2 345.7 2,942.5 1,213.4 925.0

**ASHRAE
GENERAL FUND
For the Six Months Ending Sunday, December 31, 2023
(In Thousands)**

A	B	C	D
Fiscal YTD Through Month of Dec			
Actual	Budget	Actual	Budget
FY 2023	FY 2023	FY 2024	FY 2024
\$3,895.4	\$3,910.8	\$4,131.3	\$4,031.3
1,610.6	1,527.3	1,789.3	1,659.9
1,073.8	1,224.4	1,189.1	1,186.3
413.2	597.4	499.2	500.0
330.6	224.0	361.8	265.3
117.4	127.2	142.9	119.1
886.1	672.7	848.8	964.2
31.1	17.9	68.6	23.0
140.9	130.3	45.0	130.4
102.2	58.0	232.0	225.0
		143.0	
176.2	136.2	512.0	471.8
8,777.5	8,626.2	9,963.0	9,576.3

REVENUES

31 Membership Dues	
32 Publication Sales	
34 Advertising Income - Print	
34 Advertising Income - Non-Print	
35.1 Meetings/Conferences Registration	
35.2 Certification Registration	
35.3 Education Registration	
37 Special Project Income	
38 Contribution Income	
41.1 AHR Exposition Income	
41.2 Contributions and Matching Gifts	
41.3 Exposition Income - Other Countries	
44 Reserve Transfers	
46 Miscellaneous Income	
TOTAL REVENUES	

EXPENSES:

51 Salaries	
52 Payroll Taxes, Benefits, Personnel	
61 Publishing	
62 Promotion (All Depts)	
64 Meetings/Conferences	
64 Education Courses/Trainings	
66 Travel	
68 Awards, Certif, Logo Cost of Goods Sold	
71 Research Projects & Grants	
73 Special Projects	
76 Public Relations	
78 Occupancy & Insurance	
82 Office Expense and Organizational Dues	
84 Outside Services	
88 Other Expenses	
88.1 Prepaid Expenses (contra acct)	
90 Depreciation	
91 Allocation of Overhead & BOD	
TOTAL EXPENSES	
SURPLUS (DEFICIT) before reserve income	

91.5 Contributions - HQ Building	
91.6 Interest Expense - HQ	
91.8 PPP Loan Forgiveness	

Reserve Investment Income:

95 Investmt Income - Reserves (net of exp)	
96 Transfer Reserves Portion Used Currently	

Remaining Reserve Investment Income

OVERALL SURPLUS (DEFICIT) after reserve income

E	F	G	H	I
TWELVE MONTHS ENDING JUNE 30				
Actual	Actual	Actual	Forecast	Budget
FY 2021	FY 2022	FY 2023	FY 2024	FY 2024
\$7,713.0	\$7,708.1	\$7,946.8	\$8,372.8	\$8,222.8
3,521.4	3,383.5	3,757.8	4,015.7	3,910.7
1,723.3	2,313.4	2,084.3	2,327.7	2,352.0
1,047.5	1,178.8	849.3	1,200.0	1,050.0
532.5	1,453.9	2,005.8	2,312.6	2,241.3
248.7	227.2	276.0	280.0	280.0
1,218.3	1,777.2	1,889.7	1,983.0	2,083.0
	73.9	20.0		
228.7	83.9	92.7	41.8	41.8
	5,397.6	6,179.8	6,600.0	6,400.0
125.0	(1,334.5)	(1,363.1)	(1,330.6)	(1,359.6)
	34.3	102.2	232.0	225.0
		155.1	228.7	
494.3	566.7	675.8	1,072.8	951.8
16,852.7	22,864.0	24,672.2	27,336.5	26,398.8

8,446.2	8,549.0	9,261.7	9,690.3	9,814.3
1,934.1	2,500.1	2,747.7	2,844.0	2,770.0
1,119.3	1,503.2	1,345.5	1,349.6	1,360.1
887.8	1,097.8	1,040.7	1,323.3	1,335.9
119.3	2,260.6	2,186.1	2,619.6	2,446.5
233.4	529.3	615.7	657.0	697.0
38.0	915.5	2,089.2	2,317.9	2,033.2
90.9	177.1	152.0	169.1	164.0
157.2	160.5	332.9	182.7	182.7
61.5	21.2	149.8	150.0	
20.9	41.5	53.1	74.9	74.9
680.7	699.3	803.4	881.0	881.0
1,172.2	1,145.7	1,212.7	1,544.9	1,548.3
1,928.1	1,987.2	1,848.7	2,417.1	2,302.6
460.8	909.0	738.6	830.9	792.5
99.0				
666.7	912.9	888.8	871.6	871.6
(647.2)	(740.9)	(733.8)	(781.0)	(781.0)
17,468.9	22,669.0	24,732.8	27,142.9	26,493.6
(616.2)	195.0	(60.6)	193.6	(94.8)

99.8	47.9	2.0	500.0	500.0
28.9	26.0			
2,215.2	2,009.3			

3,182.4	(1,571.2)	1,395.2	500.0	500.0
		(155.1)		

3,182.4	(1,571.2)	1,240.1	500.0	500.0
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(1,916.4)	(1,859.4)	(1,054.0)	(1,776.2)
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ASHRAE
BOARD OF DIRECTORS 2-5nn
For the Six Months Ending Sunday, December 31, 2023
(In Thousands)

A	B	C	D
Fiscal YTD Through Month of Dec			
Actual	Budget	Actual	Budget
FY 2023	FY 2023	FY 2024	FY 2024
\$8.8	\$4.6	\$50.0	\$4.6
		10.0	
0.1	3.9		
8.9	8.5	60.0	4.6
561.9	556.5	558.3	597.2
152.0	155.2	162.7	178.6
1.4	15.4	2.1	2.8
1.1		3.9	34.5
8.2	25.3	15.1	24.8
439.7	401.7	403.2	275.6
10.8	1.6	9.1	2.8
	4.7		4.7
7.2	17.3	4.0	25.5
50.1	60.4	8.7	63.3
	7.2	2.9	7.2
20.0	12.5		
(1,252.4)	(1,432.5)	(1,200.2)	(1,305.1)
	(174.7)	(30.2)	(88.1)
8.9	183.2	90.2	92.7

REVENUES

38 Contribution Income
41.2 Contributions and Matching Gifts
46 Miscellaneous Income

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
71 Research Projects & Grants
82 Office Expense and Organizational Dues
84 Outside Services
88 Other Expenses
90 Depreciation
91 Allocation of Overhead & BOD

TOTAL EXPENSES

SURPLUS (DEFICIT) before reserve income

E	F	G	H	I
TWELVE MONTHS ENDING JUNE 30				
Actual	Actual	Actual	Forecast	Budget
FY 2021	FY 2022	FY 2023	FY 2024	FY 2024
\$175.3	\$41.8	\$11.7	\$9.3	\$9.3
0.4	0.8	0.2		
175.7	42.6	11.9	9.3	9.3
1,160.0	1,045.7	1,133.1	1,153.2	1,153.2
234.5	332.1	307.9	335.8	335.8
2.4	2.5	1.9	3.9	3.9
70.7	13.5	1.6	65.7	65.7
0.1	155.4	87.7	88.3	88.3
32.6	438.2	979.7	1,028.0	802.8
4.7	12.3	18.7	4.4	4.4
			9.4	9.4
3.4	15.0	10.6	48.1	48.1
56.1	101.5	113.5	314.1	314.1
	12.9	6.3	16.1	16.1
40.0	40.0	25.0		
(1,621.7)	(2,116.5)	(2,685.9)	(2,748.5)	(2,748.5)
(17.2)	52.6		318.5	93.3
192.9	(10.0)	11.9	(309.2)	(84.0)

ASHRAE
OVERHEAD 2-9nn
For the Six Months Ending Sunday, December 31, 2023
(In Thousands)

A	B	C	D
Fiscal YTD Through Month of Dec			
Actual	Budget	Actual	Budget
FY 2023	FY 2023	FY 2024	FY 2024

102.2	58.0	232.0	225.0
89.2	55.7	261.3	266.4
191.4	113.7	493.3	491.4
1,117.9	1,160.2	1,139.1	1,260.3
356.0	342.1	359.3	265.0
20.0	3.4	1.2	10.9
7.6	10.8	10.7	12.8
3.9	4.7	3.4	6.9
24.5	53.3	105.9	43.4
7.8	17.5	9.9	8.5
22.5	27.5	32.0	36.8
381.1	335.4	407.5	407.9
141.9	175.6	101.0	179.1
330.9	399.0	417.8	468.1
32.7	39.4	29.0	48.2
422.7	410.5	396.0	397.1
(2,882.9)	(3,146.1)	(3,012.8)	(3,123.3)
(13.4)	(166.7)	21.7	
204.8	280.4	493.3	469.7

REVENUES

41.1 AHR Exposition Income	
41.2 Contributions and Matching Gifts	
41.3 Exposition Income - Other Countries	
44 Reserve Transfers	
46 Miscellaneous Income	

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	

TOTAL EXPENSES

SURPLUS (DEFICIT) before reserve income

E	F	G	H	I
TWELVE MONTHS ENDING JUNE 30				
Actual	Actual	Actual	Forecast	Budget
FY 2021	FY 2022	FY 2023	FY 2024	FY 2024

	\$5,397.6	\$6,179.8	\$6,600.0	\$6,400.0
	(1,500.0)	(1,500.0)	(1,500.0)	(1,500.0)
	34.3	102.2	232.0	225.0
		155.1		
95.0	196.1	203.3	420.9	420.9
95.0	4,128.0	5,140.4	5,752.9	5,545.9
2,118.1	2,147.9	2,183.6	2,419.4	2,459.4
464.2	600.0	729.4	682.0	607.0
19.5	8.4	10.4	7.4	7.4
9.3	32.9	55.0	95.2	95.2
0.3	4.6	9.9	13.5	13.5
4.8	59.4	84.6	151.9	101.9
8.6	23.5	28.1	30.4	30.4
20.9	41.5	53.1	74.9	74.9
626.9	668.4	751.1	820.5	820.5
271.8	270.1	264.4	393.7	393.7
687.8	816.4	641.3	797.2	797.2
78.1	127.8	13.5	96.3	96.3
590.5	836.7	828.0	792.6	792.6
(4,937.6)	(5,599.2)	(5,653.7)	(6,130.0)	(6,130.0)
(36.8)	38.4	(1.3)	245.0	160.0
131.8	4,089.6	5,141.7	5,507.9	5,385.9

ASHRAE
MEMBERS COUNCIL (2-2nn & 2-8nn)
For the Six Months Ending Sunday, December 31, 2023
(In Thousands)

A	B	C	D
Fiscal YTD Through Month of Dec			
Actual	Budget	Actual	Budget
FY 2023	FY 2023	FY 2024	FY 2024

\$3,895.4	\$3,910.8	\$4,131.3	\$4,031.3
330.6	224.0	361.8	265.3
14.1	8.6	10.1	15.1
8.5	10.0	35.0	10.0
30.4	37.8	196.6	132.2
4,279.0	4,191.2	4,734.8	4,453.9

945.8	883.5	995.0	944.0
257.7	246.3	284.6	281.7
9.4	19.1	6.9	15.9
130.4	112.1	190.2	138.9
343.0	276.0	570.5	422.9
372.4	389.4	419.5	335.1
41.1	52.6	25.2	32.9
161.1	169.4	(9.9)	
124.9	140.9	155.4	147.6
65.3	78.3	55.1	67.0
183.8	166.5	199.2	153.5
1,196.8	1,265.3	1,230.4	1,216.2
3,831.7	3,799.4	4,122.1	3,755.7
447.3	391.8	612.7	698.2

REVENUES

31 Membership Dues
35.1 Meetings/Conferences Registration
35.3 Education Registration
38 Contribution Income
41.2 Contributions and Matching Gifts
46 Miscellaneous Income

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
71 Research Projects & Grants
82 Office Expense and Organizational Dues
84 Outside Services
88 Other Expenses
88.1 Prepaid Expenses (contra acct)
91 Allocation of Overhead & BOD

TOTAL EXPENSES

SURPLUS (DEFICIT) before reserve income

E	F	G	H	I
TWELVE MONTHS ENDING JUNE 30				
Actual	Actual	Actual	Forecast	Budget
FY 2021	FY 2022	FY 2023	FY 2024	FY 2024

\$7,713.0	\$7,708.1	\$7,946.8	\$8,372.8	\$8,222.8
532.5	1,453.9	2,005.8	2,312.6	2,241.3
25.4	0.3			
26.6	14.4	51.7	21.0	21.0
25.0	49.0	4.5	49.0	20.0
133.5	205.2	262.6	470.5	349.5
8,456.0	9,430.9	10,271.4	11,225.9	10,854.6

1,502.8	1,667.2	1,883.7	1,872.9	1,872.9
334.0	479.8	540.0	545.3	545.3
17.1	19.0	22.1	36.6	36.6
146.3	266.4	314.4	327.4	335.0
118.8	2,082.6	2,068.3	2,487.7	2,314.6
0.1	339.8	814.2	808.8	799.2
77.3	140.6	105.0	131.1	126.0
157.2	160.5	332.9	173.3	173.3
300.8	290.3	273.0	368.0	368.0
339.4	285.6	159.5	212.3	206.6
259.0	431.1	391.7	439.8	446.5
19.4				
1,703.7	2,168.7	2,411.3	2,439.4	2,439.4
4,975.9	8,331.6	9,316.1	9,842.6	9,663.4
3,480.1	1,099.3	955.3	1,383.3	1,191.2

ASHRAE
PUBLISHING & EDUCATION COUNCIL (2-4nn & 5-5nn)
For the Six Months Ending Sunday, December 31, 2023
(In Thousands)

A	B	C	D
Fiscal YTD Through Month of Dec			
Actual	Budget	Actual	Budget
FY 2023	FY 2023	FY 2024	FY 2024

\$1,610.6	\$1,527.3	\$1,789.3	\$1,659.9
1,073.8	1,224.4	1,189.1	1,186.3
413.2	597.4	499.2	500.0
117.4	127.2	142.9	119.1
886.1	672.7	848.8	964.2
8.2	4.7	8.5	3.2
132.4	120.3		120.4
		21.0	
35.4	19.5	38.9	42.2
4,277.1	4,293.5	4,537.7	4,595.3

1,343.9	1,333.2	1,452.5	1,426.2
379.8	386.9	422.3	435.0
521.1	516.8	474.1	473.1
332.9	333.4	378.4	408.6
	0.6		11.5
243.4	273.6	241.3	301.8
40.2	41.3	37.1	57.7
	0.1		0.6
8.2	17.5	25.3	35.2
258.7	217.2	290.0	267.4
298.2	320.7	381.5	361.7
50.8	60.2	19.6	71.9
0.3			
1,695.2	1,894.3	1,796.7	1,842.7
5,172.7	5,395.8	5,518.8	5,693.4
(895.6)	(1,102.3)	(981.1)	(1,098.1)

REVENUES

32 Publication Sales	
34 Advertising Income - Print	
34 Advertising Income - Non-Print	
35.2 Certification Registration	
35.3 Education Registration	
38 Contribution Income	
41.2 Contributions and Matching Gifts	
44 Reserve Transfers	
46 Miscellaneous Income	

TOTAL REVENUES

EXPENSES:

51 Salaries	
52 Payroll Taxes, Benefits, Personnel	
61 Publishing	
62 Promotion (All Depts)	
64 Meetings/Conferences	
64 Education Courses/Trainings	
66 Travel	
68 Awards, Certif, Logo Cost of Goods Sold	
78 Occupancy & Insurance	
82 Office Expense and Organizational Dues	
84 Outside Services	
88 Other Expenses	
90 Depreciation	
91 Allocation of Overhead & BOD	

TOTAL EXPENSES

SURPLUS (DEFICIT) before reserve income

E	F	G	H	I
TWELVE MONTHS ENDING JUNE 30				
Actual	Actual	Actual	Forecast	Budget
FY 2021	FY 2022	FY 2023	FY 2024	FY 2024

\$3,521.4	\$3,383.5	\$3,757.8	\$4,015.7	\$3,910.7
1,723.3	2,313.4	2,084.3	2,327.7	2,352.0
1,047.5	1,178.8	849.3	1,200.0	1,050.0
248.7	227.2	276.0	280.0	280.0
1,193.0	1,776.8	1,889.7	1,983.0	2,083.0
26.8	27.8	29.2	11.5	11.5
100.0	116.5	132.4	120.4	120.4
			78.7	
224.2	162.9	145.7	127.0	127.0
8,084.9	9,186.9	9,164.4	10,144.0	9,934.6

2,453.3	2,387.5	2,699.2	2,830.7	2,830.7
588.8	690.3	771.2	844.8	845.8
1,080.3	1,473.3	1,310.8	1,301.8	1,312.3
661.4	785.0	669.6	824.8	829.7
	17.4	10.1	23.1	23.1
233.4	529.3	615.7	657.0	697.0
0.6	43.2	95.5	123.7	123.7
0.1	0.3		1.2	1.2
53.8	30.9	52.2	60.5	60.5
496.9	471.7	562.5	612.4	615.8
837.3	744.4	818.6	1,044.1	935.4
123.7	337.3	318.1	278.5	233.5
0.6	0.6	0.3		
2,784.3	3,115.7	3,450.7	3,686.9	3,686.9
9,314.5	10,626.9	11,374.5	12,289.5	12,195.6
(1,229.6)	(1,440.0)	(2,210.1)	(2,145.5)	(2,261.0)

**ASHRAE
TECHNOLOGY COUNCIL**
For the Six Months Ending Sunday, December 31, 2023
(In Thousands)

A	B	C	D
Fiscal YTD Through Month of Dec			
Actual	Budget	Actual	Budget
FY 2023	FY 2023	FY 2024	FY 2024
		122.0	
21.0	19.3	15.1	30.9
21.0	19.3	137.1	30.9
689.9	694.2	729.2	770.6
199.9	193.5	208.6	229.8
	(1.6)	0.0	
	0.2	1.7	5.1
4.4	4.2	10.1	4.0
15.3	60.9	40.9	44.1
			0.8
		102.4	
	1.4	0.0	1.4
36.6	7.6	189.8	24.6
0.6	0.1	1.2	0.1
17.8	17.5	7.4	39.5
873.3	1,003.6	877.0	1,008.7
1,837.8	1,981.6	2,168.3	2,128.7
(1,816.8)	(1,962.3)	(2,031.2)	(2,097.8)

REVENUES

37 Special Project Income
44 Reserve Transfers
46 Miscellaneous Income

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
73 Special Projects
82 Office Expense and Organizational Dues
84 Outside Services
88 Other Expenses
88.1 Prepaid Expenses (contra acct)
90 Depreciation
91 Allocation of Overhead & BOD

TOTAL EXPENSES

SURPLUS (DEFICIT) before reserve income

E	F	G	H	I
TWELVE MONTHS ENDING JUNE 30				
Actual	Actual	Actual	Forecast	Budget
FY 2021	FY 2022	FY 2023	FY 2024	FY 2024
	\$73.9	\$20.0		
			150.0	
41.2	1.6	64.0	54.4	54.4
41.2	75.5	84.0	204.4	54.4
1,212.0	1,300.7	1,362.1	1,414.1	1,498.1
312.5	398.0	399.3	436.2	436.2
0.0	0.0	0.1		
			10.2	10.2
	0.6	10.1	7.1	7.1
	34.8	115.2	205.6	205.6
0.1	0.4	0.2	1.9	1.9
61.5	21.2	149.8	150.0	
99.2	98.5	102.2	122.6	122.6
7.6	39.4	115.9	49.3	49.3
		9.0	0.2	0.2
79.7				
35.5	35.5	35.5	79.0	79.0
1,424.0	1,690.4	1,743.7	1,971.2	1,971.2
3,232.1	3,619.5	4,043.1	4,447.4	4,381.4
(3,190.9)	(3,544.0)	(3,959.1)	(4,243.0)	(4,327.0)

**ASHRAE
RESEARCH**
For the Six Months Ending Sunday, December 31, 2023
(In Thousands)

A	B	C	D
Fiscal YTD Through Month of Dec			
Actual	Budget	Actual	Budget
FY 2023	FY 2023	FY 2024	FY 2024
\$79.5	\$79.8	\$84.3	\$82.1
582.1	505.0	459.2	563.2
661.6	584.8	543.5	645.3
292.6	290.1	248.3	314.0
79.7	80.9	71.2	93.6
8.2	14.2	7.9	4.6
	4.1	1.6	
11.2	12.0	31.8	9.7
59.2	94.2	73.2	90.3
43.9	38.4	46.0	37.0
451.3	480.2	619.7	887.4
	0.1	0.1	
5.9	34.2	0.5	32.0
16.1	26.0	21.2	25.8
370.1	414.9	308.8	396.1
1,338.2	1,489.3	1,430.3	1,890.5
(676.6)	(904.5)	(886.8)	(1,245.2)

REVENUES

31 Membership Dues
38 Contribution Income
41.2 Contributions and Matching Gifts
44 Reserve Transfers

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
71 Research Projects & Grants
76 Public Relations
82 Office Expense and Organizational Dues
88 Other Expenses
91 Allocation of Overhead & BOD

TOTAL EXPENSES

SURPLUS (DEFICIT) before reserve income

E	F	G	H	I
TWELVE MONTHS ENDING JUNE 30				
Actual	Actual	Actual	Forecast	Budget
FY 2021	FY 2022	FY 2023	FY 2024	FY 2024
\$157.7	\$157.6	\$161.9	\$167.2	\$167.2
1,685.8	1,945.9	1,960.0	1,910.0	1,910.0
	1,500.0	1,500.0	1,500.0	1,500.0
1,000.0			240.0	240.0
2,843.5	3,603.5	3,621.9	3,817.2	3,817.2
570.2	569.5	573.2	614.9	614.9
149.9	128.3	158.5	179.0	179.0
4.1	4.4	10.9	6.6	6.6
3.0	4.2	0.9	10.2	10.2
	5.2	17.0	45.5	20.3
	35.5	97.4	145.7	145.7
29.9	42.5	46.7	39.4	39.4
1,169.5	1,583.5	767.2	1,849.2	1,874.3
		0.1	0.3	0.3
17.7	19.3	12.0	68.0	68.0
38.6	49.4	49.3	77.5	77.5
647.2	740.9	733.8	781.0	781.0
2,630.1	3,182.7	2,467.0	3,817.3	3,817.2
213.4	420.8	1,154.9	(0.1)	0.0

REPORT TO BOARD OF DIRECTORS
From the Finance Committee
Meeting as of Friday, January 19, 2024

RECOMMENDATIONS FOR BOARD APPROVAL: None

INFORMATION ITEMS:

1. The Finance Investment Subcommittee presented their report to the Finance Committee.

The General Reserve Fund as of December 31, 2023, had total assets of \$16.5 million. The General Reserve Fund represents 59% of the forecasted General Fund total expenses for FY23-24. 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, 2023, had total assets of \$7.0 million. There is no ROB target range established for the Research Reserve Fund.

The General and Research Reserve Funds have increased in value by 15.2% over the last 12 months.

Finance Committee discussed and approved a motion (6,0,1 CNV) from the Finance Investment Subcommittee to Finance Committee to request annual funding from the Foundation Board of Trustees for reimbursement of administrative services provided by ASHRAE Society. This request will be presented to Foundation ExCom during the 2024 Winter Meeting.

2. The Consolidated Audited Financial Statements for FY 2022-23 were presented to the Finance Committee for informational purposes only as they were previously approved by the Audit Committee in their November 20, 2023 meeting (will be presented to the BOD from the Audit Committee as an information item at the January 24, 2024 BOD meeting).
3. Finance Committee discussed requiring all members who are eligible to be reimbursed for travel to use ASHRAE's travel agency ATC. The goal of this is to eliminate a volunteer member going out of pocket for travel, submitting a request for reimbursement and then waiting on a reimbursement. There was a lengthy discussion and it was determined there should be an action item for staff to look at automating the entire expense reimbursement process to become more efficient which may or may not involve the use of ATC.
4. Finance Committee also reviewed and discussed:
 - MBO #1 – Financial Dashboards/KPIs and financial performance review – Ongoing
 - MBO #2 – Financial Training, dashboards, and project valuation tools review and development Society-wide – Ongoing
 - MBO #3 – Dues analysis and Government Membership – Transferred to Ad-hoc and Ongoing
 - MBO #4 – Feasibility study of the Foundation to fund their own administrative expenses – Complete
 - MBO #5 – Review total staff compensation and quantify impacts from pandemic and how to rectify any gaps that remain unaddressed – Complete

5. Finance Committee discussed an action item from the Board of Directors related to a request for multi-currency acceptance worldwide outside of U.S. Finance Committee voted and approved the following response:

ASHRAE Staff has investigated this in the past due to Regional Motions and found the following: To accept payments in local currencies using credit cards and electronic fund transfers (EFTs), it would take an extensive and complex system of e-commerce merchants, the establishment of new bank accounts in each country, the creation of new legal entities around the world, and local tax liability and associated reporting requirements. In addition, transaction fees and foreign exchange rate conversion fees would be required to convert payments into US dollars. Without active management and hedging of exchange markets, ASHRAE would take on considerable inflation and currency exchange rate risk.

In addition, staff estimates at least one additional headcount would be required to manage the Treasury functions associated with the above for the 134 countries in which ASHRAE has chapters. Plus, there would be additional work by the Member Services group to manually update Netforum records to indicate a member has paid dues since the transactions would be disconnected from our current systems and processes.

To offset the additional costs and headcount addition, a service fee would need to be assessed to the membership costs of all members who live outside the United States. It is estimated that this service fee would far exceed the costs of a member paying dues, fees, and publications with a credit card that charges an exchange rate for US dollar transactions. The Finance Committee therefore recommends against accepting any additional payments in foreign currency.

6. Finance Committee had a discussion regarding the movement of short-term investments not needed for operations over the next 6-9 months to investment reserves. Finance Committee voted and approved moving \$6 million to investment reserves and providing this to Fiducient Advisors to invest based on their recommendations.
7. The Chair of Finance Committee has identified a possible funding source from the TFBF for the additional funds (\$16,800) requested and approved by the Board of Directors for the Decarbonization Challenge Fund due to higher than expected submissions for awards.



January 19, 2024

Date

Bill McQuade, Chair



REPORT TO THE BOARD OF DIRECTORS FROM
THE BOD DEI ADVISORY SUBCOMMITTEE
January 2024

Chair: Kishor Khankari

DEI Advisory Subcommittee Goals 2023 -24

Major Goals/MBOs

- Enhance **organizational awareness** related to DEI.
- Recommend **policies** to increase and improve inclusion within ASHRAE and the HVAC&R Industry.
- Develop appropriate **metrics** for evaluation.
- Review yearly and update the recommended **publications showcasing** the work of inspirational HVAC&R engineers from **under-represented groups**.
- Facilitate **communications** between ASHRAE and **other relevant organizations**, and to work in collaboration with them to promote DEI.
- Review the need for **Women-In-ASHRAE chair and any other affinity group** dependent on the DEI needs.



Highlights

- **Engagement of DEI consultant** in the ASHRAE Winter Meeting in Chicago: presentation in Women-In-ASHRAE Breakfast, presentation to the BOD, participation in the DEI forum.
- Working on developing **appropriate metrics** for evaluation of **equity, inclusion and diversity**. It is a long-term process.
- Proposing a **motion to BOD** to incorporate ASHRAE DEI statement as part of ASHRAE official meeting agenda – a recommendation for **a new policy**.
- On-going activity of the **BOD study group** to review DEI training videos.
- Procedure is in place for the **evaluation of DEI related requests** for agreements and MOUs
- Developing plans for regular **engagement with the DEI Regional Chairs**.
- Working with PubEd Council in finding ways to **showcase work of under represented groups**.
- Working on a **Cultural Appreciation Event** for the Annual Conference in Indianapolis. Need help from CEC and staff on the logistics. We have a budget for this.
- Subcommittee realizes a need **for better communication** with Councils to enhance organizational awareness among all groups of the Society.



REPORT TO THE BOARD OF DIRECTORS
From the BOD DEI Advisory Subcommittee
As of October 25, 2023

Recommendations for Board Approval:

1. **MOTION:** That the Board Advisory DEI Subcommittee recommends to the ASHRAE Board of Directors that the ASHRAE Diversity Statement be included on all agendas and read during all official ASHRAE meetings.

BACKGROUND: To promote inclusiveness and reinforce the principles of Diversity, Equity, and Inclusion, we invite members to volunteer for the reading of the ASHRAE Diversity Statement at the commencement of each ASHRAE official meeting and to incorporate it into all meeting agendas. This simple act establishes a welcoming tone for an inclusive meeting.

VOTE: 4-0-0, CV

FISCAL IMPACT: None.

STAFF IMPACT: None.

Information Items:

- 1.

12/13/2023 _____ Kishor Khankari _____
Date Chair



Board of Directors

Open Session

Sunday, January 21, 2024 | 1:30 – 5:30 PM CST (UTC-05:00) | Grand Horizon C(4)

<https://ashrae.webex.com/ashrae/j.php?MTID=m1c1f15c24ca0b1c52225e426b374c848>

Meeting Number: 2343 258 0767 | **Meeting Password:** ChicagoBOD1

1. **CALL TO ORDER** - Scoggins
2. **CODE OF ETHICS** – Scoggins
In this and all other ASHRAE meetings, we will act with honesty, fairness, courtesy, competence, inclusiveness and respect for others, which exemplify our core values of excellence, commitment, integrity, collaboration, volunteerism and diversity, and shall avoid all real or perceived conflicts of interest.
(Code of Ethics: <https://www.ashrae.org/about/governance/code-of-ethics>)
(Core Values: <https://www.ashrae.org/about/ashrae-s-core-values>)
3. **DIVERSITY STATEMENT**
ASHRAE is committed to providing a welcoming environment. Our culture is one of inclusiveness, acknowledging the inherent value and dignity of each individual. We proactively pursue and 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 people regardless of age, gender, ethnicity, physical appearance, thought styles, religion, nationality, socioeconomic status, belief systems, sexual orientation or education.
4. **ROLL CALL/INTRODUCTIONS** - Scoggins
5. **REVIEW OF MEETING AGENDA** – Scoggins
6. **APPROVAL OF MINUTES** – Scoggins
A.* January 5, 2024
- 7.* **REVIEW OF ACTION ITEMS** - Scoggins
8. **OPEN SESSION** – Addresses to the Board of Directors
9. **NOMINATING COMMITTEE REPORT**
10. **TREASURER’S REPORT** – McQuade
A. 2023-24 Financial Update
B. Financial Statements and Major Variations – December 2023
C. Finance Committee Report
- 11.* **BOD DEI ADVISORY SUBCOMMITTEE REPORT AND PRESENTATION** – Khankari (Mindy Gulati)

**Report to Board of Directors
From Task Force on Building Decarbonization ExCom
January 21, 2023**

Kent Peterson, Chair	Bing Liu
Don Colliver, Vice-Chair	Clay Nesler
Carrie Brown	Bill McQuade
Blake Ellis	Stet Sanborn
Luke Leung	Stephanie Reiniche
Jeff Littleton	

MOTIONS REQUIRING APPROVAL:

Information Items

TFBD is providing a quarterly update on the actions assigned.

1. Facilitate and oversee the work of TExCom subcommittees to ensure decarbonization goals are accomplished within the established timeframe.

The ExCom has continued to oversee the development of the guides, the updating of the website, and the development of the training/education and certification material. The following is an update on the status of projects:

Technical Guides

- A. Building Performance Standards:** A Technical Resource Guide – **published in February and has had 2,856 downloads to date!** This includes 1,493 identifying themselves as ASHRAE members.
- B. Grid Interactive Buildings for Decarbonization:** Design and Operation Resource Guide – The document has been published, and a Request for Proposal for developing training has been issued.
- C. Building Decarbonization Retrofits for Commercial and Multifamily Buildings:** The 90% version of the guide is targeted for submission on January 24, 2024, for review. The project is on target for publication in May 2024.
- D. Heat Pump Application, Design, and Operation Guide:** TExCom is working jointly with DOE through NREL to develop the Heat Pump Guide. The 80% review of the guide will be released for review in mid to late January 2024. Staff is still working on a contract for the co-development of the guide.
- E. Whole Life Carbon Guide for Building Systems:** A contractor has been hired to edit the guide after the 90% version is submitted for review and comment. The estimated completion of the 90% is expected in March 2024.
- F. TM65 for North America:** The agreement has been completed with CIBSE. The 90% version is expected in February 2024 and the estimated publication date is July 2024.
- G. Decarbonizing Hospital Buildings:** This project is being co-developed with ASHE, and the contract was awarded in March 2023. The contractor has submitted the 100% guide. The project is on target for publication in March 2024. The Working Group would like to assist in creating training materials.

Website and Social Media Outreach

- A.** ASHRAE has contracted with a content developer to create additional content for the website and social media platforms. The ad hoc is prioritizing the tasks for the contractor.
- B.** The website continues to be updated with new material as it has become available. The Task Force is working on finalizing presentations to be posted on the website for use by

chapters on the following topics:

- i. The Decarbonization Strategy Game
 - ii. Intro to Whole Life Carbon
 - iii. Intro to Cold Climate Decarb
 - iv. Intro to Efficient Electrification
- C. In continuance of ASHRAE's decarbonization social media campaign, "*Join us on the journey to zero!*" videos were created at the Tampa meeting to showcase decarbonization and how ASHRAE can be part of the solution. The first was launched on August 15th, the second video on October 17th, and the newest on December 19th. The next video will launch on February 13th. In addition to these videos, two new videos were added from ASHRAE's Decarbonization Conference, highlighting the Building Industry Collaboration Panel and Industry Leaders Q&As.

Training, Certification and Education

- A. The Certification Committee has begun developing a decarbonization certification with a target launch at the Annual meeting in Indianapolis. The committee has begun crafting questions.
- B. TExCom is taking a different approach on the development of the training and education materials and looking at potentially one developer developing all the educational content for all the guides. An RFP was issued, and bids are due at the end of January to develop educational materials.

2. Coordinate TFBD work with ASHRAE Councils, Committees and Task Forces to align goals and eliminate bottlenecks.

TExCom has been working with multiple committees within ASHRAE to reduce bottlenecks and to align the goals. For example:

- A. Continued work with the Standards Committee to assist when needed in coordinating the development of standards on decarbonization.
- B. As a result of the motion approved by the Board to develop a standard on a common carbon calculation method, a proposed title, purpose, and scope has been submitted for consideration at this meeting. The anticipated development timeline is 18 months, with the committee chaired by staff.
- C. TExCom has worked with TAC to improve communication and coordination with interest functional groups.
- D. If the motion to transition the TFBD into the Center of Excellence for Building Decarbonization is approved, the TFBD requests feedback and coordination from the Councils at this meeting.

3. Coordinate joint building decarbonization initiatives with other organizations deemed beneficial to ASHRAE's building decarbonization work.

- A. TExCom has been coordinating with the following organizations:
 - Global Alliance for Buildings and Construction
 - Department of Energy
 - Environmental Protection Agency
 - General Services Administration
 - National Research Council Canada
 - AiCARR
 - AIA
 - CLF & MEP 2040
 - ULI
 - CIBSE
 - USGBC
 - BOMA
 - IFMA

- B. TExCom has been coordinating with the Carbon Leadership Forum and working on transferring MEP2040 administration under the ASHRAE umbrella. MEP 2040 is now administered by ASHRAE, and MEP 2040 is meeting at the Winter Conference.
- C. TExCom has participated in two White House briefings relative to building decarbonization. The 11/8/23 briefing was to provide input to the National Definition of a Zero-Emissions Building. The 12/19/23 briefing was to provide a Refrigerants briefing and its impact on GHG emissions. Many thanks to Doug Reindl for sharing his expertise on refrigerants.

4. Expedite the delivery of technical resources that help design engineers deliver and operate low-carbon buildings.

The TFBD has two outreach groups that will provide insight into the needs of the industry.

- A. **The Global Advisory Panel** – this group met with international representatives at the Athens Decarbonization Conference and the Atlanta Winter Conference and will be meeting again at this conference. Several common themes were found including creating better ways to share data for collaboration and to speak one common language.
- B. **Building Industry Decarbonization Collaborative** – Representatives from AIA, BOMA, IFMA, USGBC, and ULI met at the Atlanta meeting. The group submitted a panel proposal for inclusion in the ASHRAE October 2023 Decarbonization Conference, which was accepted. The Panel presentation was recorded, as well as individual interviews of each of the panelists. A special thank you to the Development Team for securing a grant to make this possible.

5. Project and publicize ASHRAE's decarbonization work globally to establish ASHRAE's leadership position, in partnership with the Society marketing team.

TExCom and the Website/Knowledge Hub Working Group have worked closely with the marketing team to rebrand the ASHRAE TFBD website, providing technical resources to help design engineers deliver and operate low-carbon buildings. The group has contracted a web content developer to help develop more material for the website.

6. Develop the Society year 2022-2024 budget for decarbonization projects.

This is complete. The board of Directors approved the budget through 2025.

7. Coordinate with and assist the Planning Committee in incorporating ASHRAE's decarbonization goals into the Society's Strategic Plan.

For the current Society Strategic Plan, this is complete. TExCom will continue to work with the Planning Committee as it begins developing the next Society Strategic Plan. In the interim, work is being done with CEC to develop a decarbonization conference strategic plan,

8. Provide a comprehensive plan for integrating TFBD work into the ASHRAE structure. This plan would include recommendations for any changes required to the ASHRAE structure and streamlining current processes for speed and efficiency.

This transition proposal was submitted to the Board in November and discussed at the December Board meeting. The Board postponed this motion to the Sunday Board meeting in Chicago.

Respectfully Submitted,

Kent Peterson, PE FASHRAE

Kent Peterson, PE, FASHRAE
TFBD Chair



ASHRAE Center of Excellence for Building Decarbonization

Motion: Transition the activities of the Task Force for Building Decarbonization (TFBD) to the ASHRAE Center of Excellence for Building Decarbonization (CEBD).

Background: See the attached report on the Proposed Transition Plan for the TFBD.

Fiscal Impact: The ASHRAE Board of Directors originally approved \$500,000 for the work of the TFBD and approved an additional \$1,285,000 on June 26, 2022. These funds were approved to support TFBD activities from July 1, 2021 – June 30, 2025. As of January 1, 2024, \$986,557 of that budget remains.¹ This motion proposes utilizing \$470,943 of the TFBD funding savings to initially fund the ASHRAE Center for Decarbonization from July 1, 2024 through June 30, 2025.

Staff Impact: Add 1.0 Full Time Equivalent (FTE) per the attached Proposed Transition Plan for the Task Force for Building Decarbonization.

¹ Note: The remaining budget takes into account money committed for programs that have begun but not complete.

Proposed Transition Plan for the Task Force for Building Decarbonization

November 21, 2023 – v1.1

Objective

The ASHRAE Task Force for Building Decarbonization (TFBD) was charged to transition its activities as a temporary ad hoc organization into the ASHRAE Society Structure. It was determined that the strategic work of the TFBD should be moved into a new group within society called the ***Center of Excellence for Building Decarbonization*** - focused on strategy, thought-leadership, and industry collaboration – with operational execution integrated into existing ASHRAE councils, and committees.

Organizational Structure

It is proposed that the Center of Excellence for Building Decarbonization (CEBD) report to the ASHRAE Board of Directors Executive Committee and be led by a chair and vice-chair. The center will include up to eight additional appointed members with annually staggered two-year terms.

Members Council, Technology Council and Publishing and Education Council will each appoint a Council Decarbonization Lead to facilitate Council coordination and drive operational execution. These individuals will serve as liaisons to the CEBD.

For continuity, a number of the existing TFBD executive committee members will transition as part of the initial group of CEBD appointed chairs and members. The CEBD will initially be supported by one dedicated full-time ASHRAE staff –focused on ASHRAE functional integration, operational coordination, decarbonization strategy, thought-leadership, and collaboration with U.S. and international organizations whose work is complementary to ASHRAE's building decarbonization activities.

The current ASHRAE structure of councils, committees, and task groups will be responsible for operational activities, such as educational resources, training, and website materials. Councils will manage the development of specific deliverables and the Council Decarbonization Leads.

- Deliverables, such as technical resource guides and research reports, will be managed by project-specific Decarbonization Task Groups reporting to Technology Council and the Council Decarbonization Lead. Decarbonization Task Groups (DTGs) are envisioned to be governed under the rules of Multidisciplinary Task Groups (MTGs) with regards to membership and voting, and to focus on a specific project and disband after that deliverable is completed.
- Deliverables, such as training and education, will be managed by Pub and Ed Council and the Council Decarbonization Lead.
- Grassroots member engagement in building decarbonization will be managed by Members Council and the Council Decarbonization Lead.

Primary Responsibilities

The CEBD will take a leading role in a number of strategic activities. The following is a summary of primary activities where the CEBD will take on a leading role.

- **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 will be updated annually to keep up with the rapid pace of change in this area. Develop, lead and/or participate in strategic initiatives, generally

with partner organizations, that accelerate and advance building decarbonization on a global basis.

- **Thought Leadership.** Monitor future issues and trends and publicize ASHRAE's decarbonization work globally to establish ASHRAE's leadership position, in partnership with Marketing.
- **Collaboration.** Coordinate joint initiatives, events, and projects with other U.S. and international organizations whose work is complementary to ASHRAE's building decarbonization activities.
- **Public Advocacy.** Work with Government Affairs to provide reliable technical information on decarbonization to policymakers, media, and the public.

Supporting Activities

The CEBD will take a supporting role in a number of operational activities. In each case, these activities will be led by one or more relevant councils, committees, or Decarbonization Task Groups (DTGs) across the global ASHRAE organization. Coordination of these activities will be provided by ASHRAE staff, with further assistance provided by CEBD members as needed. The following is a summary of primary activities where the CEBD will have a supporting role.

- **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.
- **Technical Review.** Review technical content related to building decarbonization which is submitted to ASHRAE for comment and approval.
- **Standards Coordination.** Coordination of ASHRAE and other industry standards for consistency in decarbonization related terminology, definitions and guidance.
- **Training Development.** Develop on-demand and in-person building decarbonization related training seminar materials for society and chapter level audiences.
- **Resource Internationalization.** Tailor existing technical resources and training materials for application outside of North America.
- **Member Engagement.** Encourage ASHRAE membership to embrace decarbonization-related practices and provide appropriate opportunities for volunteer engagement.
- **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.

Budget

The initial budget for the CEBD will consist of the carry-over from the current board approved TFBD funding. The current TFBD-approved budget can fund the one FTE staff position through June 30, 2025.

Transition Timing

The proposed timing for the TFBD transition and launch of the ASHRAE Center of Excellence for Building Decarbonization is the period between the 2024 Winter Meeting and Annual Meeting.

Item	Total ASHRAE Funding	Spent to date	Expenses not yet counted	Savings	Notes
Resource Development					
BPS Resource Technical Guide	\$ 39,000.00	\$ -	\$ -	\$ 39,000.00	Funding provided by DOE
Building Decarbonization Retrofit Guide	\$ 250,000.00	\$ 124,800.00	\$ 124,639.00	\$ 561.00	
Heat Pump Application and Operation Guide (also cover refrigerants)	\$ 150,000.00	\$ -	\$ -	\$ 150,000.00	Funding provided by DOE. No expenses for ASHRAE Guide Development.
Guide for Applying TM 65 to North America	\$ 30,000.00	\$ -	\$ 3,500.00	\$ 26,500.00	Anticipated \$3500 total cost.
White Paper on Estimating MEP Embodied Carbon Emissions	\$ -	\$ -	\$ -	\$ -	
Develop one set of aligned carbon definitions	\$ -	\$ -	\$ -	\$ -	Completed - no cost
Building Decarbonization Whole Life Design Guide	\$ 75,000.00	\$ -	\$ 10,000.00	\$ 65,000.00	Done by volunteers. Contractor hired to do editing with a cap of \$10,000.
Guide for Designing and Operating Grid-interactive Buildings for Decarbonization	\$ 100,000.00	\$ 67,425.00	\$ 22,475.00	\$ 10,100.00	Final approved bid savings of \$10,100
Healthcare Decarbonization Design Guide	\$ 75,000.00	\$ 40,000.00	\$ 40,000.00	\$ 15,000.00	Total bid was \$80,000. ASHE has contributed 25% in the amount of \$20,000. So net savings of \$15,000.
Subtotal	\$ 719,000.00	\$ 232,225.00	\$ 200,614.00	\$ 306,161.00	
Standards					
ASHRAE/ICC Whole Life Carbon Standard (240P)	\$ 200,000.00	\$ 4,717.52	\$ 50,000.00	\$ 145,282.48	This doesn't include October meeting expenses which should be an additional \$4000.
Standard 90.1 Informative Code--intended language	\$ 37,500.00	\$ -	\$ -	\$ 37,500.00	
Standard 90.2 Code--intended language	\$ 37,500.00	\$ -	\$ 37,500.00	\$ -	
Standard 100 Building Performance Standard	\$ 37,500.00	\$ -	\$ 3,500.00	\$ 34,000.00	Should have expenses here for meeting in September. Should be food expenses and travel for members
Standard 211 Commercial Building Energy Audits	\$ 10,000.00	\$ -	\$ 10,000.00	\$ -	Nothing spent yet.
Expediting other carbon-related standards	\$ -	\$ -	\$ 50,000.00	\$ (50,000.00)	
Subtotal	\$ 322,500.00	\$ 4,717.52	\$ 151,000.00	\$ 166,782.48	
Training, Education & Certification					
Decarbonization 101 -45 minutes	\$ 5,000.00	\$ -	\$ -	\$ 5,000.00	Developed by Kent
Expand 3-hour ALI courses	\$ 30,000.00	\$ -	\$ 30,000.00	\$ -	Not started
Heat Pump Application and Operation full-day PDS	\$ 25,000.00	\$ -	\$ 25,000.00	\$ -	Not started RFPS to go out
Building Decarbonization Retrofits for Existing Buildings	\$ 75,000.00	\$ -	\$ 75,000.00	\$ -	Not started RFPS to go out
Building Decarbonization Audit full-day PDS	\$ 25,000.00	\$ -	\$ 25,000.00	\$ -	Not started RFPS to go out
Building Decarbonization Design Professional Certification	\$ 78,677.00	\$ -	\$ 78,677.00	\$ -	Started with an estimated completion of June 2024
Additional Course Material TBD	\$ 65,000.00	\$ -	\$ 65,000.00	\$ -	Not started
Collaboration Workshop in DC					Budgeted at 5K but put in Development budget
Subtotal	\$ 303,677.00	\$ -	\$ 298,677.00	\$ 5,000.00	
Web Site and Marketing					
Web site development	\$ 13,000.00	\$ -	\$ -	\$ 13,000.00	All in house development to date
Social media 3m videos - <i>Join us on the road to ZERO</i>	\$ 60,000.00	\$ 13,400.00	\$ 46,600.00	\$ -	Decarb Videos from Tampa
Pivot in branding & marketing	\$ 75,000.00	\$ -	\$ 75,000.00	\$ -	Money to be used with content developer contract
Web site 5-10m topical videos	\$ 30,000.00	\$ -	\$ 30,000.00	\$ -	Money to be used with content developer contract
Web site 3m policy videos	\$ -	\$ -	\$ -	\$ -	
Subtotal	\$ 178,000.00	\$ 13,400.00	\$ 151,600.00	\$ 13,000.00	
	\$1,523,177.00	\$ 250,342.52	\$ 801,891.00	\$ 490,943.48	
20% Contingency	\$ 304,635.40		\$ 304,635.40		
Total TFBD Budget Approved	\$1,827,812.40	\$ 250,342.52	\$1,106,526.40	\$ 490,943.48	Savings to Date

ASHRAE & IGBC Workplan for 2024-26

ASHRAE and Indian green Building Council (IGBC) are entering into a MoU and as part of the same, this Work Plan is developed to ensure smooth implementation of planned activities which will be helpful to promote the mutual interests of respective members and to help in the advancement their respective missions of serving the humanity. This Work Plan outlines specific activities the organizations have agreed to implement. The organizations will review and update this Work Plan once in two years. A list of staff contacts for various elements of the Workplan is provided as an Attachment.

At the start of this relationship, the focus is to leverage ASHRAE's technical leadership and IGBC's premier position in India as an organization promoting sustainability. The main focus areas will be de-carbonization, energy efficiency policies, thermal comfort, indoor air quality, design tools, research activities and build upon each other strengths.

Activity/Task	Responsible Party	Timing	Status And Comments
Consistent Communication			
Leadership Meetings	ASHRAE/IGBC nominated leaders	Annually	Meeting either at the IGBC Congress, ACREX or the ASHRAE Winter Meeting
Staff Liaison Meetings (Review of workplan status)	ASHRAE: Insert name IGBC: Dr Shivraj Dhaka	Twice a year	Meetings shall be governed by pre-agreed agenda and appropriate members/staff shall be invited to each call. Action items and responsibilities shall be assigned at the end of each meeting.
Special meetings for joint initiatives	Assigned Members	As per pre-agreed schedule	As needed to achieve the goals of the joint initiative
Conferences And Meetings			
Provide meeting invitation and a complimentary registration to a primary annual meeting	ASHRAE: Insert name IGBC: Mr Himanshukumar Shah	Once a year	ASHRAE –Winter meeting; IGBC Annual Congress
Promote joint meetings between local Chapters of ASHRAE and IGBC in India.	ASHRAE: Insert name IGBC: Mr Himanshukumar Shah	Throughout the year	Activities may include: a. Panelist or presenters at each other's conferences b. Promote education offerings of the other organization in newsletters, website, social media and other member communications, when and where it is relevant, and space is available
Local chapters of ASHRAE & IGBC will endorse & promote the events/programs organized by the other Society.			

ASHRAE & IGBC Workplan for 2024-26

Activity/Task	Responsible Party	Timing	Status And Comments
Publications and Education			
Engage key stakeholders to discuss utilization of mutual resources for promoting education programs & publications	Ms Sri Rekha Mavulati		Focus area will be those relating to de-carbonization, IEQ and energy efficiency.
Investigate opportunities to utilize ASHRAE Distinguished Lecture Programs.			
Develop list of potential publications, webinars, courses, and workshops related to mutual interest			
Develop list of potential blogs, articles, social media, and newsletter content related to collaborative efforts and post to respective websites			
Technical			
Reference ASHRAE Standards, wherever applicable into the implementation of IGBC’s certification and ratings.	ASHRAE: Insert name IGBC: Dr Shivraj Dhaka	Once a year	Participation of ASHRAE relevant experts when the Green Building rating systems are developed/updated.
Policy and Advocacy			
Inputs into public policy documents & local Codes & Standards	ASHRAE: Insert name IGBC: Dr Shivraj Dhaka	Once a year	IGBC may reference ASHRAE Standards & Publications, wherever required while providing inputs or developing public policy documents, codes & standards.
Research			
Explore opportunities for joint research	ASHRAE: Insert name IGBC: Dr Shivraj Dhaka	Once a year	Interest areas may include to promote decarbonization, energy efficiency and indoor air quality in India
Student Activities			
Interaction between Student Chapters	ASHRAE: Insert name IGBC: Mr Himanshukumar Shah	Once a year	Joint meetings & programs between local student chapters to be organized.
Supporting mutual Activities			Support & promote programs organized by local Chapters of each of the Society and also invite ASHRAE DL, if needed.

ASHRAE & IGBC Workplan for 2024-26

Key Staff/Member Contacts for Implementing ASHRAE-IGBC Workplan

IGBC Staff/Member Leads:	
Chief Executive	Mr M Anand, Dy Executive Director, IGBC.
MOU Manager	Dr Shivraj Dhaka, Senior Counsellor, IGBC.
ASHRAE Staff/Member Leads:	
Chief Executive	
MOU Manager	

REPORT TO THE BOARD OF DIRECTORS
From the Executive Committee
As of January 20, 2024

Recommendations for Board Approval:

None.

Information Items:

1. ExCom unanimously approved a renewed MOU and work plan with CAMEE (Coalition of American Mechanical and Electrical Engineers). The approved MOU and work plan are included in ATTACHMENT A.

CAMEE is very strong in government advocacy and ExCom feels that this relationship is a great opportunity for Society in this area.

The MOU signing will take place in Chicago on Monday, January 22nd.

2. ExCom unanimously defeated a motion to enter into an MOU with U3ARC (Union of Associations of African Actors in Refrigeration and Air Conditioning).

This motion was defeated because ExCom felt that additional discussions are needed. Mr. Rakheja and Mr. Littleton will be meeting with representatives from U3ARC in Chicago to determine if there is collaboration potential and a desire from both organizations to move forward.

3. ExCom had extensive discussions of the roundtable discussions findings and review. Mr. Littleton prepared a summary of roundtable discussions that were held between May 2022 and December 2023.

There was consensus that both Members Council (or a subcommittee of Members Council) and Planning Committee should be involved in organizing future roundtables. There was consensus that having the same two or three questions asked at each roundtable and having those questions be different from year to year would be very powerful.

Mr. Littleton, Mr. Knight, and Mr. McQuade will work to develop a path forward for roundtables and will provide recommendations for how feedback is addressed and what the flow of information throughout the organization will be.

January 20, 2024

Date



Chair



**ASHRAE
and
ACEC's Coalition of American Mechanical
and Electrical Engineers (CAMEE)
Memorandum of Understanding**



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.

The Coalition of American Mechanical and Electrical Engineers (CAMEE) is a coalition of mechanical/electrical engineering firms within American Council of Engineering Companies (ACEC) providing business practice products, assessing industry trends, and engaging in advocacy efforts to help its member firms improve management and profitability.

ASHRAE and CAMEE 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:

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/CAMEE senior representatives to:

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

CONFERENCES AND MEETINGS

Each organization agrees to provide the other with a meeting invitation and one complimentary registration to the primary annual meeting.

ASHRAE and CAMEE 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/MEMBER COLLABORATION

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



**ASHRAE
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ACEC's Coalition of American Mechanical
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Memorandum of Understanding**



ADVOCACY

Where mutually beneficial and to the extent allowed by laws and corporate policies, ASHRAE and CAMEE 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 CAMEE 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 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 CAMEE agree to:

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

TECHNICAL ACTIVITIES COORDINATION

ASHRAE and CAMEE 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.



**ASHRAE
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Memorandum of Understanding**



RESEARCH

Recognizing the importance research plays in accelerating the transformation to a more sustainable built environment, ASHRAE and CAMEE 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.

WORK PLAN

To focus on agreed upon collaborative initiatives, ASHRAE and CAMEE agree to develop, implement and periodically review a work plan with assigned responsibilities and timelines. The inaugural work plan is attached to this agreement as Addendum A.

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 CAMEE 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 CAMEE. 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

FOR CAMEE

Printed Name/Title



**ASHRAE
and
ACEC's Coalition of American Mechanical
and Electrical Engineers (CAMEE)
Memorandum of Understanding**



Signature

Date

Printed Name/Title

Signature

Date

Signature

Date

Printed Name/Title

Signature

Date



**ASHRAE
and
ACEC's Coalition of American Mechanical
and Electrical Engineers (CAMEE)
2024-2027 WORKPLAN**



ASHRAE and the American Council of Engineering Companies Coalition of American Mechanical and Electrical Engineers (CAMEE) are entering into a Work Plan 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 activities and tasks outlined. 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.

The Coalition of American Mechanical and Electrical Engineers (CAMEE) represents mechanical/electrical engineering firms and is focused on enhancing business practices through education, risk management, advocacy, and connecting creative business solutions to common problems.

Initial focus area will be to leverage ASHRAE's technical leadership and CAMEE's business practices leadership as it relates to implementing decarbonization and energy efficiency policies and strategies.

ACTIVITY/TASK	RESPONSIBLE PARTY	TIMING	STATUS and COMMENTS
CONSISTENT LEADERSHIP COMMUNICATION FOR THE MOU			
Main Liaison Meeting	ASHRAE/CAMEE Representatives	Annually –	Either at the ACEC Fall or Spring Conventions, or the ASHRAE Winter Meeting
Quarterly Check-In Meetings (communications and technical components of workplan)	ASHRAE: Billy Austin CAMEE: Brad Lentz	March, June, September, December	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.
Regularly scheduled working meetings to advance joint initiatives			Groups as needed to achieve the goals of this work plan



**ASHRAE
and
ACEC's Coalition of American Mechanical
and Electrical Engineers (CAMEE)
2024-2027 WORKPLAN**



1. CONFERENCES AND MEETINGS			
Provide meeting invitation and a complimentary registration to a primary annual meeting	ASHRAE: Lizzy Seymour CAMEE: Michelle Kroeger	ASHRAE –Winter meeting; CAMEE/ACEC Fall or Spring Conventions- ACEC proposes Spring event	
CAMEE/ACEC and ASHRAE to promote collaborative efforts being conducted at respective conferences/meetings	ASHRAE: Vanita Gupta / Billy Austin CAMEE: Michelle Kroeger	ASHRAE Conferences are generally held in Jan. and June ACEC/CAMEE conferences in May and October, winter coalition meeting in February	Activities may include: Panelist or presenters at each other's conferences Promote education offerings of the other organization in newsletters, website, social media and other member communications, when and where it is relevant, and space is available
2. PUBLICATIONS, COMMUNICATIONS and EDUCATION			
ASHRAE and CAMEE will engage key stakeholders to discuss working collectively on business practices related to the decarbonization and energy efficiency initiatives.	ASHRAE: Billy Austin CAMEE: Brad Lentz		Efforts will include addressing, standard contract language to mitigate risk to engineers who design and implement decarbonization and energy efficiency initiatives. Focus areas may include: Engineering contract language guidance to mitigate risk to engineers who design and implement decarbonization and energy efficiency initiatives. Guidance to building and facility operators on best practices to achieve intended results Educate engineering firm owners and senior management on decarbonization/energy efficiency best practices for broad industry adoption and leadership.



**ASHRAE
and
ACEC's Coalition of American Mechanical
and Electrical Engineers (CAMEE)
2024-2027 WORKPLAN**



Investigate opportunities to collaborate on educational sessions and conference programming	ASHRAE: Billy Austin CAMEE: Michelle Kroeger	Discuss in Quarterly Meeting	
Develop list of potential publications, webinars, courses, and workshops related to mutual interest	ASHRAE: Billy Austin CAMEE: Brad Lentz	Discuss in Quarterly Meeting	
CAMEE to communicate and co-market ASHRAE's webinars and other courses related to shared interest	ASHRAE: Vanita Gupta CAMEE: Brad Lentz	Discuss in Quarterly Meeting	
Develop priority list of potential blogs, articles, social media, and newsletter content related to collaborative efforts and post to respective websites	ASHRAE: Vanita Gupta CAMEE: Brad Lentz	Discuss in Quarterly Meeting	
3. POLICY AND ADVOCACY			
Be subject matter experts for policy makers	ASHRAE: Alice Yates CAMEE: Brad Lentz	Discuss in quarterly meeting	Identify common issues for collaboration between ACEC and ASHRAE
Advocate / educate on public policy priorities	ASHRAE: Alice Yates CAMEE: Brad Lentz		Joint advocacy be encouraged where public policy priorities align
Collaborate to understand business risk engineering firms may incur when incorporating decarbonization and energy efficiency initiatives	ASHRAE: Insert name CAMEE: Brad Lentz	Discuss in quarterly meeting	
Collaborate to protect and promote credential, certification and licensing requirements for design professionals			



**ASHRAE
and
ACEC's Coalition of American Mechanical
and Electrical Engineers (CAMEE)
2024-2027 WORKPLAN**



RESERVED ITEMS PENDING FURTHER DEVELOPMENT			

KEY STAFF CONTACTS FOR CAMEE-ASHRAE WORKPLAN

<i>CAMEE Staff Leads:</i>					
MOU Executive Oversight				<u>Adam Rickey</u>	
MOU Project Manager				<u>Brad Lentz</u>	
Forum Communication Education Watchlists				<u>Michelle Kroeger</u>	
State and Local Government Codes and Policies Research				<u>Steve Hall</u>	
<i>ASHRAE Staff Leads:</i>					
Executive Oversight				Jeff Littleton	
Government Affairs and Advocacy				Alice Yate (Overall) Matt Young (Federal) Emily Porcari (State)	
Marketing and Promotion				Vanita Gupta	
Grassroots/Chapter Outreach/Member Services				Lizzy Seymour	
Education/Publications				Mark Owen	
Standards/Guidelines/Research				Stephanie Reiniche	



Planning Committee Report to the BOD

Stephanie L. Kunkel, P.E.

Planning Committee Chair

2024 ASHRAE Winter Conference | January 2024

Planning Committee Recommendations to BOD

The Planning Committee has no recommendations for BOD consideration at this time.

2023-24 Planning Committee



Meeting Highlights

- McKinley Advisors, selected consulting firm, presented their proposed action plan for the 2025-28 strategic plan.
 - Strategic planning session with the BOD in March 2024
 - Stake holder interviews
 - Plan is expected to be presented to the BOD in 2024
 - Will be shared with ASHRAE membership in early 2025.



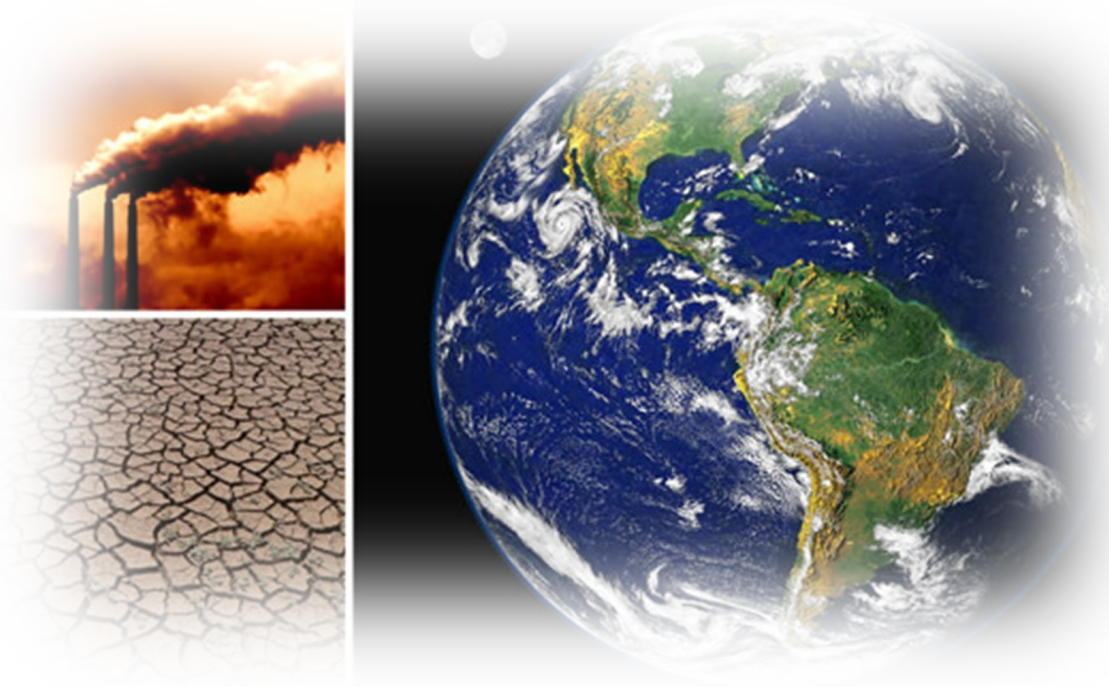
Meeting Highlights Continued

Membership Survey - Sent in Fall 2023

Key Takeaways

- ☐ Access to technical resources, access to learning and training, and keeping updated about the latest industry trends continue to be considered the main reasons for being an ASHRAE member.
- ☐ Handbook, publications, standards and chapter meetings and events continue to be considered the most valuable services ASHRAE provides.
- ☐ 50% of respondents' dues are paid by their employers and 2% receive partial employee reimbursement.
- ☐ 80% of these members would potentially pay for their own ASHRAE membership dues if they had to.
- ☐ 88% of respondents would recommend ASHRAE membership to others in the industry.

Meeting Highlights Continued



Top critical industry issues as noted from Survey (same from 2022):

1. Energy Security **60%**
2. Climate Crisis Mitigation **55%**
3. Decarbonization **54%**
4. Workforce Development **43%**

Meeting Highlights Continued

- In 2023, **86%** of respondents indicated that it was **important to be knowledgeable about Decarbonization** in our industry.
- **68%** of respondents selected **Design Guides** as a valuable decarbonization tool.
 1. Design Guides **68%** ★
 2. Updating Standards to include Carbon **50%**
 3. ASHRAE Journal Articles **50%**
 4. Training Classes **43%**
 5. Handbook Chapter **40%**

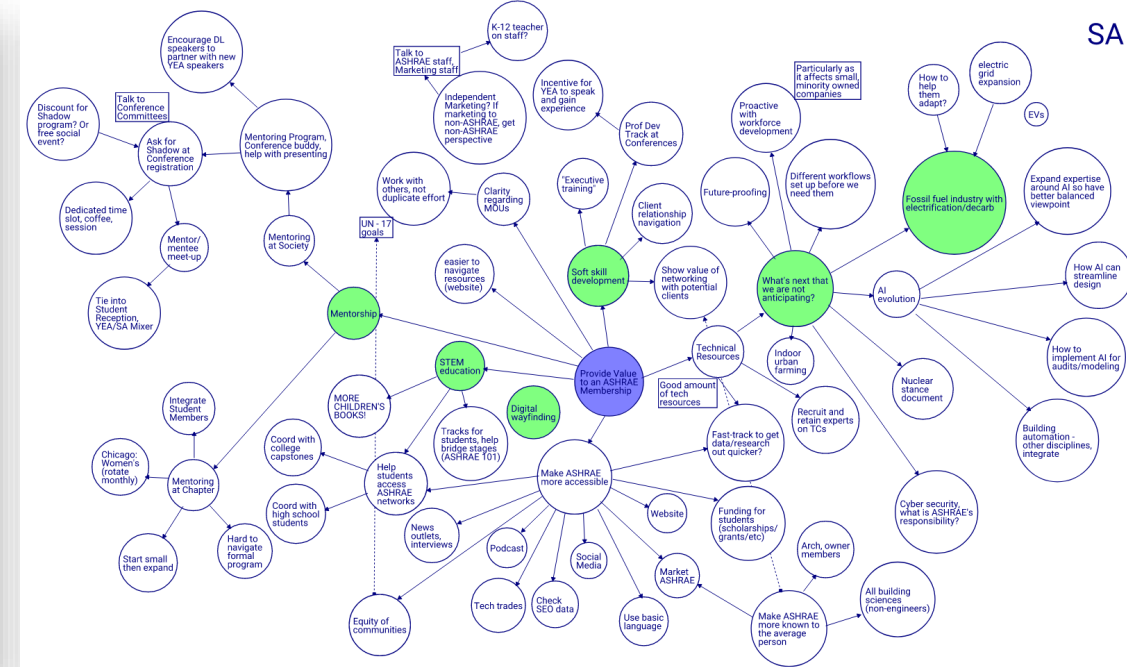
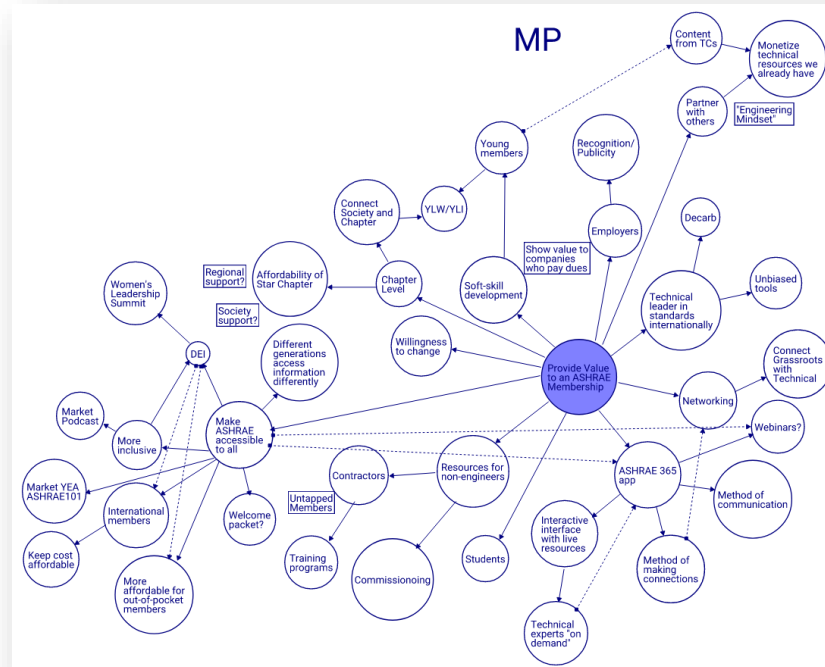


Meeting Highlights Continued

Mind mapping activities were conducted among various committees and regional leadership in ASHRAE to increase the awareness of the strategic plan and to ensure ideas are heard.

Consistent themes of the mind maps were categorized into the following groups:

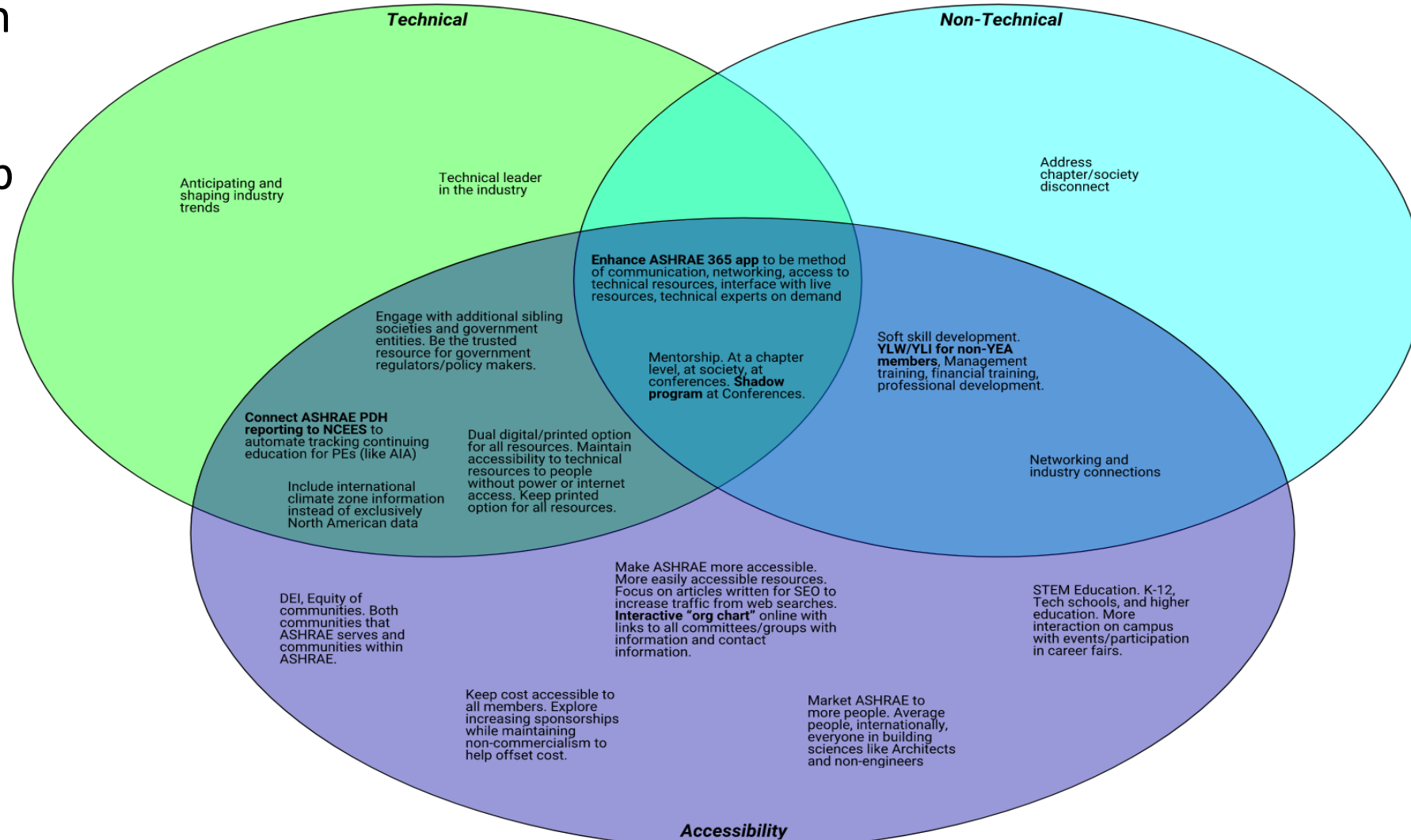
- Technical
- Non-Technical
- Accessibility



Meeting Highlights Continued

The following were common themes noted:

- Enhance ASHRAE 365 app
- Shadow program
- YLW/YLI for non-YEA members
- Connect ASHRAE PDH reporting to NCEES
- Interactive “org chart”



Questions?

Thank You!



REPORT TO THE BOARD OF DIRECTORS
From the Planning Committee
January 21, 2024

Recommendations for Board Consideration:

No recommendations for Board consideration.

Information Items:

1. McKinley Advisors, selected 2025-28 ASHRAE strategic plan consulting firm, attended the Planning Committee meeting and presented their proposed action plan as noted in **ATTACHMENT A**. McKinley representatives will also be visiting various committees to gather insight on the value of ASHRAE to its members and to observe operations.

As a part of the firms' efforts, a strategic planning session with the BOD will take place in March 2024. McKinley will be attending the session to facilitate discussion surrounding the following:

- What **could** ASHRAE pursue given our current environment?
- Why **should** ASHRAE pursue certain priorities (and not others)?
- What **will** ASHRAE accomplish and how can we best get there?

The completed ASHRAE Strategic plan is expected to be presented to the BOD in 2024. The plan will be shared with ASHRAE membership in early 2025.

2. Results of the Membership Survey as sent in the fall of 2023 and recommendations for future strategic plans and communication have been provided as presented in **ATTACHMENT B**. It should be noted that the survey initially owned by the Planning Committee, is now owned by the Membership Promotion Committee with Planning serving as liaison.

The intent of the survey was to determine member satisfaction, member reasons for participating in ASHRAE, and other organizational involvement of members to provide valuable feedback regarding how ASHRAE can better serve its members. Responses from 2022 and 2023 are very similar, not much variance.

The following is a summary of main feedback received:

- Access to technical resources, access to learning and training and keeping updated about the latest industry trends continue to be considered the main reasons for being an ASHRAE member. [Slide 16]
- Handbook, publications, standards and chapter meetings and events continue to be considered the most valuable services ASHRAE provides. [Slide 22]
- 50% of respondents' dues are paid by their employers and 2% receive partial employee reimbursement. 80% of these members would potentially pay for their own ASHRAE membership dues if they had to. [Slides 17-18]
- 88% of respondents would recommend ASHRAE membership to others in the industry. [Slide 28]

The following are also the top critical issues in the industry as noted from the survey:

1. Energy Security 60%
 2. Climate Crisis Mitigation 55%
 3. Decarbonization 54%
 4. Workforce Development 43%
3. A subcommittee of Planning conducted mind mapping activities among various committees and regional leadership in ASHRAE to increase the awareness of the strategic plan and to ensure their ideas are heard. The following are several common themes that were noted as presented in **ATTACHMENT C**:

- **Enhance ASHRAE 365 app** to be method of communication, networking, access to technical resources, interface with live resources, technical experts on demand.
- Mentorship. At a chapter level, at society, at conferences. **Shadow program** at Conference.
- Soft skill development. **YLW/YLI for non-YEA members**, Management training, financial training, professional development.
- **Connect ASHRAE PDH reporting to NCEES** to automate tracking continuing education for PEs (like AIA).
- Make ASHRAE more accessible. More easily accessible resources. Focus on articles written for SEO to increase traffic from web searches. **Interactive “org chart”** online with links to all committees/groups with information and contact information.

4. In an effort to continuously strategic plan, Council Chairs and Vice Chairs, COs, and ExOs were asked, on behalf of the Planning Committee, to bring attention to their committee’s strategic planning activities as noted per the following ROB excerpt:

ROB Section 1.130.001.3

*The Strategic Plan will be reviewed and monitored by the Planning Committee on a continuous basis by **annually incorporating feedback from councils, standing committees, technical committees, standards project committees, members, allied societies, and governmental organizations, as found in the Rules of the Board.** Monitoring and reviewing the progress of councils and committees in achieving the goals found in the Strategic Plan assures the strategic plan is kept relevant and current. Where necessary, the Planning Committee will make recommendations for changes and revisions, as found in the Rules of the Board.*

Committees and councils that have strategic planning efforts noted in their ROB have been contacted to provide input for current strategic planning efforts. These groups are expected to share their discussion with the Planning Committee after the conference.



Chair

January 21, 2024

Date

Attachments:

- A. 2025 -28 ASHRAE Strategic Plan and Presentation (Action Plan)
- B. Membership Survey Results (Fall 2023)
- C. Mind Mapping Activity

ASHRAE Strategic Planning 2024

January 19, 2024

Agenda

- **Project and Team Overview**
- **Project Phases and Timeline**
- **McKinley's Approach to Strategic Planning**
- **Next Steps**

About Us

McKinley Advisors is an award-winning association consulting firm dedicated to accelerating mission-driven organization's positive impact on the world.

Our team provides unparalleled expertise in:

- Strategy and Innovation
- Organizational Excellence
- Business Transformation
- Research and Insights

400+
Association
Partners

250+
Years of
Collective
Experience

40+
Team
Members

6
Certified
Association
Executives

3
ASAE
Fellows

Our Team



Alexandra Isham, PMP
Senior Project Manager



Jay Younger, FASAE
President and CEO



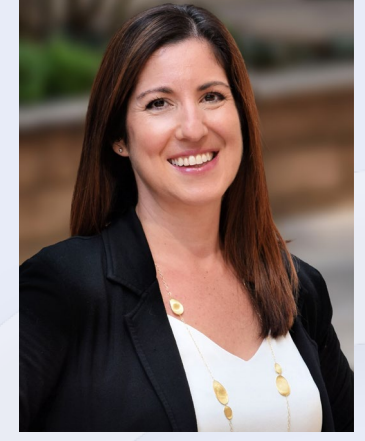
Jennifer Dickinson, MBA
Senior Consultant



Julia Riordan, M.A.
Associate Consultant



Kristi Langham
Associate Project Manager



Megan Cruz, CAE
Practice Director

Project Objectives

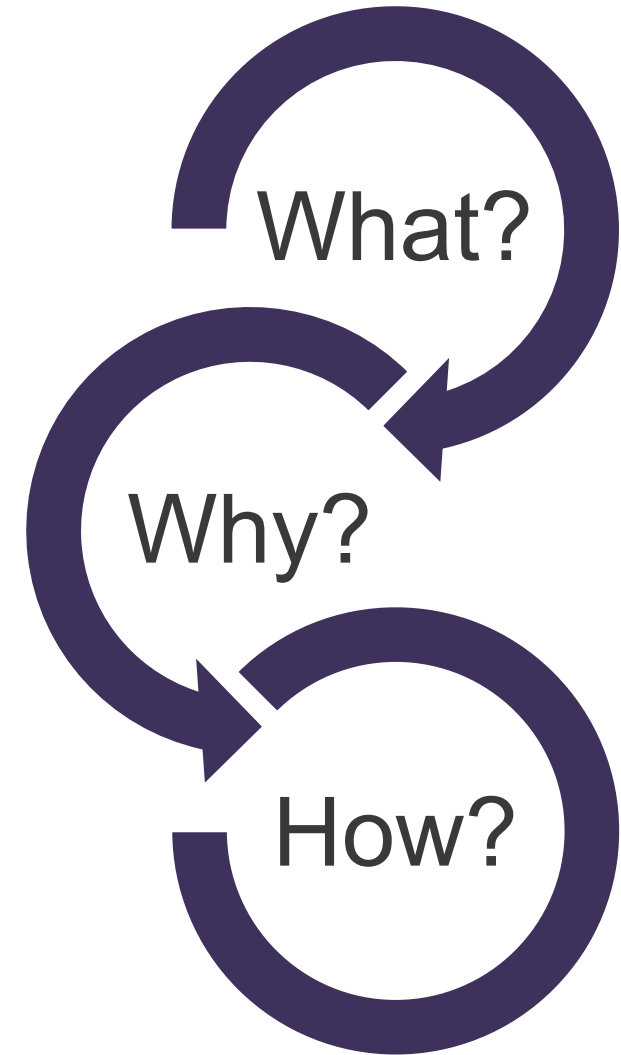
- Collaborate with ASHRAE stakeholders and members to secure a **range of quantitative and qualitative insights to inform strategy development.**
- Coordinate a strategic planning process that leverages **recent efforts**, adds **tailored new research inputs**, and **codifies ASHRAE's key priorities.**
- Develop and deliver a compelling and **impactful strategic plan** that drives long-lasting success for ASHRAE, its members, and the world.
- Engage in data-driven operationalization to support **successful implementation** of the strategic plan.

Strategic Planning Simplified

First: what **COULD** we pursue given our current environment?

Next: why **SHOULD** we pursue certain priorities (and not others)?

Last: what **WILL** we accomplish and how can we best get there?



Leadership

“The challenge of a leader is looking around the corner and making the change before it’s too late to make the change.”

— Indra Nooyi

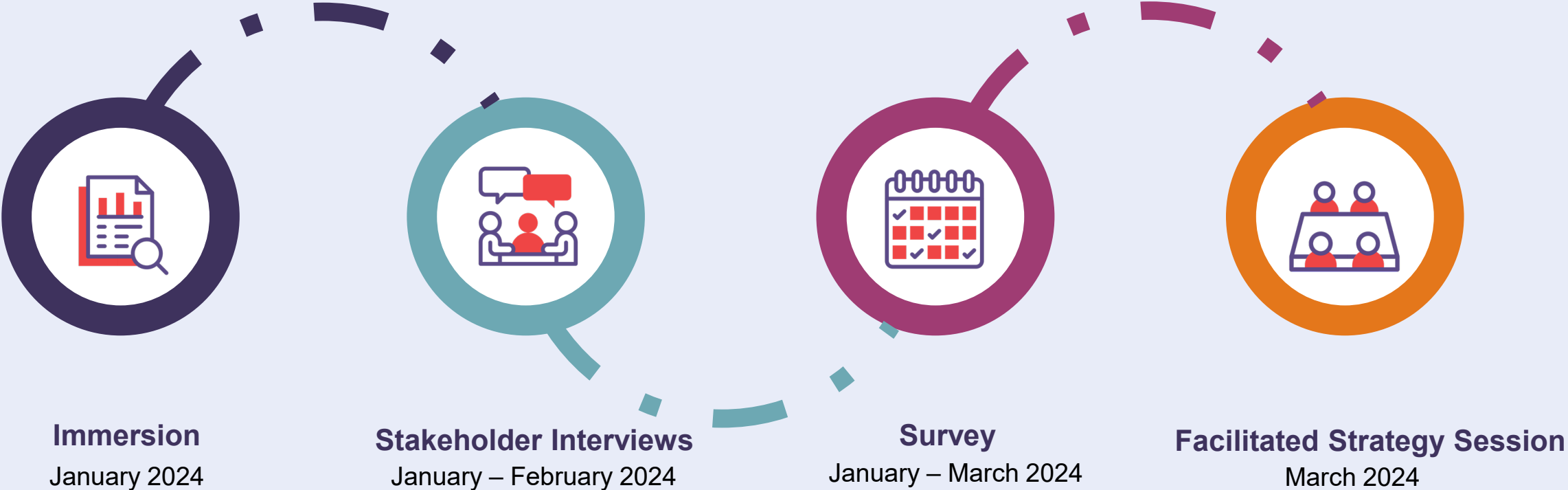
Former CEO of PepsiCo



Project Stages

01	Immersion <i>January 2024</i>	05	Facilitated Strategy Session <i>March 2024</i>
02	Planning Committee Engagement <i>Ongoing</i>	04	Strategic Plan Development <i>April – June 2024</i>
03	Stakeholder Interviews <i>January – February 2024</i>	07	Operationalization <i>July – August 2024</i>
04	Survey Questionnaire <i>January – March 2024</i>	06	Strategic Plan Finalization and Approval <i>December 2024</i>

Next Steps



Thank you!

Megan Cruz, CAE | Practice Director
mcruz@mckinley-advisors.com

Julia Riordan, M.A. | Associate Consultant
jriordan@mckinley-advisors.com

Tasks Report

Project Start Date: 01/08/2024 End Date: 01/24/2025

Generated: 16 Jan 2024 17:37

Project Immersion

Milestone: A project workplan (Due: 16 Jan 2024)

Active Tasks

	Task	Start Date	Due Date	Responsible	Created By	Priority	Progress	Status
	McKinley to deliver project milestone report	01/09/2024	01/16/2024	Megan Cruz, Julia Riordan, Jennifer Dickinson, Jay Younger	Kristi Langham		0%	Due today (Not started)
	General Project Management	01/08/2024	01/24/2025	Kristi Langham	Kristi Langham		0%	Upcoming (Not started)
	McKinley to attend & present at the ASHRAE Conference	01/19/2024	01/22/2024	Megan Cruz, Julia Riordan, Jennifer Dickinson, Client .	Kristi Langham		0%	Upcoming (within 7 days) (Not started)
	Planning Committee Engagement #1: McKinley to share project timeline, Planning Committee role, etc.	01/22/2024	02/02/2024	Megan Cruz, Julia Riordan, Jennifer Dickinson, Client .	Kristi Langham		0%	Upcoming (Not started)

Electronic Survey

Milestone: A finalized survey; Real-time top line data; Cross-tab analysis of survey results (Due: 27 Mar 2024)

Active Tasks

	Task	Start Date	Due Date	Responsible	Created By	Priority	Progress	Status
	McKinley to deliver contact list request and draft of survey	01/10/2024	01/24/2024	Jennifer Dickinson	Kristi Langham		0%	Upcoming (Not started)
	<ul style="list-style-type: none">Draft survey	01/10/2024	01/19/2024	Jennifer Dickinson	Kristi Langham		0%	Upcoming (within 7 days) (Not started)

	• Review draft survey	01/22/2024	01/23/2024	Megan Cruz, Julia Riordan	Kristi Langham		0%	Upcoming (Not started)
	• Finalize and send survey	01/24/2024	01/24/2024	Jennifer Dickinson	Kristi Langham		0%	Upcoming (Not started)
	Client to review and provide contact list and feedback on draft survey	01/25/2024	02/02/2024	Client .	Kristi Langham		0%	Upcoming (Not started)
	McKinley to revise and upload survey, upload contacts, send preview link and survey contact links	02/05/2024	02/09/2024	Jennifer Dickinson	Kristi Langham		0%	Upcoming (Not started)
	Planning Committee Engagement #2: McKinley to share survey & analysis plan, high-level interview findings	02/09/2024	02/15/2024	Megan Cruz, Julia Riordan, Jennifer Dickinson, Client .	Julia Riordan		0%	Upcoming (Not started)
	Client to preview survey	02/12/2024	02/15/2024	Client .	Kristi Langham		0%	Upcoming (Not started)
	Finalize Survey	02/16/2024	02/20/2024	Jennifer Dickinson	Kristi Langham		0%	Upcoming (Not started)
	McKinley to field survey	02/20/2024	03/05/2024	Jennifer Dickinson	Kristi Langham		0%	Upcoming (Not started)
	• Client to send survey invitation email	02/20/2024	02/20/2024	Client .	Kristi Langham		0%	Upcoming (Not started)
	• Client to send reminder email	02/26/2024	02/26/2024	Client .	Kristi Langham		0%	Upcoming (Not started)
	• McKinley to send reminder links	02/25/2024	02/25/2024	Jennifer Autry	Kristi Langham		0%	Upcoming (Not started)
	• Client to send final reminder email	03/01/2024	03/01/2024	Client .	Kristi Langham		0%	Upcoming (Not started)
	• McKinley to send reminder links	02/28/2024	02/28/2024	Jennifer Autry	Kristi Langham		0%	Upcoming (Not started)
	• McKinley to close survey	03/05/2024	03/05/2024	Jennifer Dickinson	Kristi Langham		0%	Upcoming (Not started)
	McKinley to deliver final survey response statistics and initial data	03/06/2024	03/07/2024	Jennifer Dickinson	Kristi Langham		0%	Upcoming (Not started)
	McKinley to deliver interim deliverable	03/07/2024	03/15/2024	Jennifer Dickinson	Kristi Langham		0%	Upcoming (Not started)
	McKinley deliver full survey analysis	03/07/2024	03/27/2024	Jennifer Dickinson	Kristi Langham		0%	Upcoming (Not started)

Interviews with Key Stakeholders (~20)

Milestone: Drafts and final versions of interview guide; Summary of themes from interviews (Due: 23 Feb 2024)

Active Tasks

	Task	Start Date	Due Date	Responsible	Created By	Priority	Progress	Status
	McKinley to deliver draft interview guide, correspondence and contact list request	01/22/2024	01/25/2024	Julia Riordan	Kristi Langham		0%	Upcoming (Not started)
	<ul style="list-style-type: none">Create a QI request card	01/22/2024	01/25/2024	Julia Riordan	Kristi Langham		0%	Upcoming (Not started)
	Client to review and provide feedback on draft interview guide and correspondence and deliver contact list	01/25/2024	01/29/2024	Client .	Kristi Langham		0%	Upcoming (Not started)
	Client to send invite email	01/25/2024	01/29/2024	Client .	Kristi Langham		0%	Upcoming (Not started)
	McKinley to deliver final interview guide and correspondence	01/30/2024	01/31/2024	Megan Cruz	Kristi Langham		0%	Upcoming (Not started)
	McKinley to conduct qualitative interviews	02/01/2024	02/15/2024	Megan Cruz, Julia Riordan	Kristi Langham		0%	Upcoming (Not started)
	McKinley to deliver summary of interview themes	02/15/2024	02/23/2024	Megan Cruz, Julia Riordan	Kristi Langham		0%	Upcoming (Not started)

Facilitated Strategy Session

Milestone: Draft and final versions of the retreat agenda; Professional facilitation services & supporting materials (Due: 17 Mar 2024)

Active Tasks

	Task	Start Date	Due Date	Responsible	Created By	Priority	Progress	Status
	McKinley to draft session agenda	02/08/2024	02/14/2024	Megan Cruz, Julia Riordan	Kristi Langham		0%	Upcoming (Not started)
	Client to review and share feedback on session agenda	02/15/2024	02/19/2024	Client .	Kristi Langham		0%	Upcoming (Not started)
	McKinley to edit session agenda & develop draft session materials	02/20/2024	02/23/2024	Megan Cruz, Julia Riordan	Kristi Langham		0%	Upcoming (Not started)
	Client to review session materials and provide feedback	02/26/2024	02/29/2024	Client .	Kristi Langham		0%	Upcoming (Not started)
	McKinley to finalize session materials	03/01/2024	03/08/2024	Megan Cruz	Kristi Langham		0%	Upcoming (Not started)
	Client to send session materials to committee	03/11/2024	03/11/2024	Client .	Kristi Langham		0%	Upcoming (Not started)

	McKinley to share high level survey analysis to implement in strategy session	03/11/2024	03/13/2024	Jennifer Dickinson	Kristi Langham		0%	Upcoming (Not started)
	Strategic Planning Retreat (Location: Peachtree Corners, GA ; Date: March 17th)	03/17/2024	03/17/2024	Megan Cruz, Kristi Langham, Julia Riordan, Client .	Kristi Langham		0%	Upcoming (Not started)

Strategic Plan Development

Milestone: Up to (2) virtual sessions; Strategic plan development with (2) rounds of revisions (Due: 28 Jun 2024)

Active Tasks

	Task	Start Date	Due Date	Responsible	Created By	Priority	Progress	Status
	McKinley to deliver preliminary strategic plan concepts	03/18/2024	03/29/2024	Megan Cruz, Julia Riordan	Kristi Langham		0%	Upcoming (Not started)
	Client to review preliminary strategic plan concepts	04/01/2024	04/10/2024	Client .	Kristi Langham		0%	Upcoming (Not started)
	Session 1 to review preliminary concepts (Date: TBD)	04/11/2024	04/18/2024	Megan Cruz, Kristi Langham, Julia Riordan, Jay Younger, Client .	Kristi Langham		0%	Upcoming (Not started)
	Planning Committee Engagement #3: McKinley to share survey findings & preliminary strategic plan concepts	04/11/2024	04/18/2024	Megan Cruz, Julia Riordan, Jennifer Dickinson, Client .	Julia Riordan		0%	Upcoming (Not started)
	McKinley to deliver first strategic plan draft	04/19/2024	05/02/2024	Megan Cruz, Julia Riordan	Kristi Langham		0%	Upcoming (Not started)
	Session 2 to review strategic plan draft (Date: TBD)	05/03/2024	05/10/2024	Megan Cruz, Kristi Langham, Julia Riordan, Jay Younger, Client .	Kristi Langham		0%	Upcoming (Not started)
	McKinley to deliver final strategic plan	05/13/2024	05/27/2024	Megan Cruz, Julia Riordan	Kristi Langham		0%	Upcoming (Not started)
	McKinley to present strategic plan (Date: TBD)	05/28/2024	06/07/2024	Megan Cruz, Kristi Langham, Julia Riordan, Client .	Kristi Langham		0%	Upcoming (Not started)
	Planning Committee Engagement #4: Share and discuss strategic plan draft	06/10/2024	06/19/2024	Megan Cruz, Kristi Langham, Julia Riordan, Client .	Kristi Langham		0%	Upcoming (Not started)

Operating Plan and Metrics Dashboard

Milestone: Operating plan and metrics virtual workshop (Due: 27 Sep 2024)

Active Tasks

	Task	Start Date	Due Date	Responsible	Created By	Priority	Progress	Status
	McKinley to fill in operations plan template & draft Metrics	06/24/2024	06/28/2024	Julia Riordan, Alexandra Isham	Kristi Langham		0%	Upcoming (Not started)
	McKinley to host launch meeting with ASHRAE Staff (Date: TBD) Agenda: Review the process, terminology and roles Solidify the framework Execute Now, Next, Later Review KPI's	07/08/2024	07/12/2024	Megan Cruz, Kristi Langham, Julia Riordan, Client ., Alexandra Isham	Kristi Langham		0%	Upcoming (Not started)
	ASHRAE Staff to complete homework assignment #1 Homework: Fill in operations plan template (Columns: Timing, Resources and funding, RACI)	07/15/2024	07/26/2024	Client .	Kristi Langham		0%	Upcoming (Not started)
	McKinley to host checkpoint #1 with ASHRAE Staff (Date: February 6th) Agenda: Review first set of milestones Build first set of initiatives	07/29/2024	08/02/2024	Megan Cruz, Kristi Langham, Julia Riordan, Client ., Alexandra Isham	Kristi Langham		0%	Upcoming (Not started)
	ASHRAE Staff to complete homework assignment #2	08/05/2024	08/16/2024	Client .	Kristi Langham		0%	Upcoming (Not started)
	McKinley to host checkpoint #2 with ASHRAE Staff (Date: TBD) Agenda: Process check in Review second set of milestones Build second set of initiatives	08/19/2024	08/23/2024	Megan Cruz, Kristi Langham, Julia Riordan, Client ., Alexandra Isham	Kristi Langham		0%	Upcoming (Not started)
	ASHRAE Staff to complete homework assignment #3 Agenda: Process check in Review second set of milestones Build second set of initiatives	08/26/2024	09/06/2024	Client .	Kristi Langham		0%	Upcoming (Not started)
	McKinley to finalize final Year One Operating Plan and KPI Dashboard	09/09/2024	09/18/2024	Megan Cruz, Kristi Langham, Julia Riordan, Client ., Alexandra Isham	Kristi Langham		0%	Upcoming (Not started)
	McKinley to host close out meeting with ASHRAE Staff (Date: TBD) Agenda:	09/19/2024	09/27/2024	Megan Cruz, Kristi Langham, Julia Riordan, Client ., Alexandra Isham	Kristi Langham		0%	Upcoming (Not started)

Process check-in	Gain consensus on deployment parameters	Discuss next steps	Reflect on the engagement					
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Strategic Plan Finalization and Approval

Milestone: A finalized strategic plan and summary slide deck; Presentation support for (1) Board of Directors approval presentation (Due: 13 Dec 2024)

Active Tasks

	Task	Start Date	Due Date	Responsible	Created By	Priority	Progress	Status
	McKinley to finalize strategic plan based on prior project phases including Planning Committee engagements	09/30/2024	10/24/2024	Megan Cruz, Julia Riordan, Jennifer Dickinson, Client .	Julia Riordan		0%	Upcoming (Not started)
	Planning Committee Engagement #5: McKinley to share final strategic plan, operationalization before Board approval. Gather final feedback	10/25/2024	11/01/2024	Megan Cruz, Julia Riordan, Client .	Julia Riordan		0%	Upcoming (Not started)
	<ul style="list-style-type: none"> McKinley to send ASHRAE staff the final strategic plan, operating plan and presentation for review 	09/20/2024	10/11/2024	Megan Cruz, Julia Riordan, Client .	Julia Riordan		0%	Upcoming (Not started)
	<ul style="list-style-type: none"> ASHRAE staff to provide review of final strategic plan, operating plan, slide deck 	10/11/2024	10/18/2024	Megan Cruz, Julia Riordan, Client .	Julia Riordan		0%	Upcoming (Not started)
	<ul style="list-style-type: none"> McKinley to make final edits to slide deck, send to ASHRAE staff for distribution 	10/21/2024	10/25/2024	Megan Cruz, Julia Riordan, Client .	Julia Riordan		0%	Upcoming (Not started)
	McKinley to make final edits and share Board meeting materials with client	11/04/2024	12/06/2024	Megan Cruz, Julia Riordan, Client .	Julia Riordan		0%	Upcoming (Not started)
	<ul style="list-style-type: none"> ASHRAE staff to review Board meeting materials 	11/04/2024	11/18/2024	Megan Cruz, Julia Riordan, Client .	Julia Riordan		0%	Upcoming (Not started)
	<ul style="list-style-type: none"> McKinley to make revisions, send to ASHRAE staff for distribution 	11/19/2024	11/26/2024	Megan Cruz, Julia Riordan, Client .	Julia Riordan		0%	Upcoming (Not started)
	<ul style="list-style-type: none"> McKinley offices closed for Thanksgiving 	11/25/2024	11/29/2024	Megan Cruz, Julia Riordan	Julia Riordan		0%	Upcoming (Not started)
	<ul style="list-style-type: none"> ASHRAE to send materials to Board ahead of Board meeting 	12/02/2024	12/06/2024	Client .	Julia Riordan		0%	Upcoming (Not started)
	McKinley to present final strategic plan to ASHRAE Board for approval (Date: TBD)	12/09/2024	12/13/2024	Megan Cruz, Julia Riordan, Client .	Julia Riordan		0%	Upcoming (Not started)



2023 ASHRAE Member Satisfaction Survey Summary Draft

Membership Promotion Committee
January 2024

Information Items

Validation and Documentation Subcommittee requested ASHRAE Membership Promotion Committee to take over ownership of the 2023 survey.

Activities:

- Survey questions review
- Avoid open ended questions
- Reach out to BOD DEI SC, PEAC, MC and Chapters
- Reminders

Adopted decisions:

- Survey questions remained the same to generate trend analysis
- ASHRAE staff managed survey
- Survey duration, timing follow up in real time
- Grassroot campaign
- Incentives
- Development of a Marketing Campaign
- Reminder's frequency vs target groups

Marketing Campaign

[Campaign to Chapter/Regions](#) to bring **awareness and provide resources** in October in preparation of *sending the survey* to members.

- Emails, Newsletters, PowerPoint Slides, Graphics, Content to forward to their membership

2023 Annual Membership Survey



Quick Five-Minute Survey



3 Participants will win \$100 off any ASHRAE Product or Service (Publications, Courses, Conferences, etc.)



Free conference registration will be offered to one member within the chapter with the highest *number* of participants, and one member within the chapter with the highest *percentage* of participation.



Complete by Nov. 30, 2023



[Communications to members](#) throughout November to encourage responses. Emails from President Ginger Scoggins encouraged submissions with incentives and info.



Shaping Tomorrow's
Built Environment Today

Friendly Reminder!

If you have not completed the [2023 ASHRAE Membership Survey](#) please take 5 minutes to provide your feedback by **Wednesday, Nov. 30**.

Thank you to those who have already submitted this survey, no further action is needed.

[Take Survey](#)

To show our appreciation, Society will randomly select 3 survey respondents to receive \$100 off an ASHRAE product or service of your choice (such as a winter conference, publication, or course registration). Winners will be randomly selected in December, and contacted via email. Please remember to include your email address on the form if you'd like to participate in the drawing.

I look forward to your valuable feedback.



Ginger Scoggins
2023-24 ASHRAE President



General Information

- Survey Conducted from 1 Nov 2023 to 30 Nov 2023 (4 weeks)
- Sent to all ASHRAE Members
- 3,171 respondents, 6% of membership (2022: 3,275)
- Incentives: rewarding three respondents and two Chapters
- Questions:
 - Very similar to last year
 - Formulated to force a choice
 - Could be skipped
 - A last question was added asking if there was anything else respondents would like to add



Results Summary: Incentives



Three respondents won \$100 credit off any ASHRAE product.



There were two Chapter winners who will be able to send a chapter member to an upcoming Winter or Annual Conference. Chapter Winners have been notified.

Main Themes

Responses from 2022 and 2023 are very similar, not much variance.

- Access to **technical resources**, access to **learning and training** and keeping updated about the **latest industry trends** continue to be considered the **main reasons for being an ASHRAE member**. [Slide 16]
- **Handbook, publications, standards and chapter meetings and events** continue to be considered the **most valuable services** ASHRAE provides. [Slide 22]
- **50%** of respondents' **dues are paid by their employers** and **2%** receive partial employer reimbursement. **80%** of these members *would potentially* pay for their own ASHRAE membership dues if they had to. [Slides 17-18]
- **88% of respondents would recommend ASHRAE membership to others** in the industry. [Slide 28]



Critical Issues

Respondents selected the same top four **Critical Issues in the Industry** in the same order from 2022 to 2023.

60% of respondents selected **Energy Security** as a Critical Issue.

2022

1. Energy Security **60%**
2. Climate Crisis Mitigation **54%**
3. Decarbonization **51%**
4. Workforce Development **41%**



2023

1. Energy Security **60%** ★
2. Climate Crisis Mitigation **55%**
3. Decarbonization **54%**
4. Workforce Development **43%**

Valuable Decarbonization Tools

In 2023, **86%** of respondents indicated that it was **important to be knowledgeable about Decarbonization** in our industry.

- Respondents selected the same top four **Decarbonization Tools** in the same order as most valuable from 2022 to 2023.
- **68%** of respondents selected **Design Guides** as a valuable decarbonization tool.

2022

1. Design Guides **65%**
2. Updating Standards to include Carbon **49%**
3. ASHRAE Journal Articles **48%**
4. Handbook Chapter **41%**
5. Training Classes **41%**

2023

1. Design Guides **68%** ★
2. Updating Standards to include Carbon **50%**
3. ASHRAE Journal Articles **50%**
4. Training Classes **43%**
5. Handbook Chapter **40%**



Recommendations for the future

- Some questions should be kept from year-to-year to track trends.
- Some questions should be revised to be sustainable over time, and the total number of questions should be reduced.
- Respondent age trends to those 50 years or older. Need to revise our strategy to find a way to engage in younger members that may have different needs, but don't participate in surveys.
- Staff manages the strategy for distribution and question formation starting in 2024 and beyond. Staff will share results with Planning Committee in advance of Winter Conference.



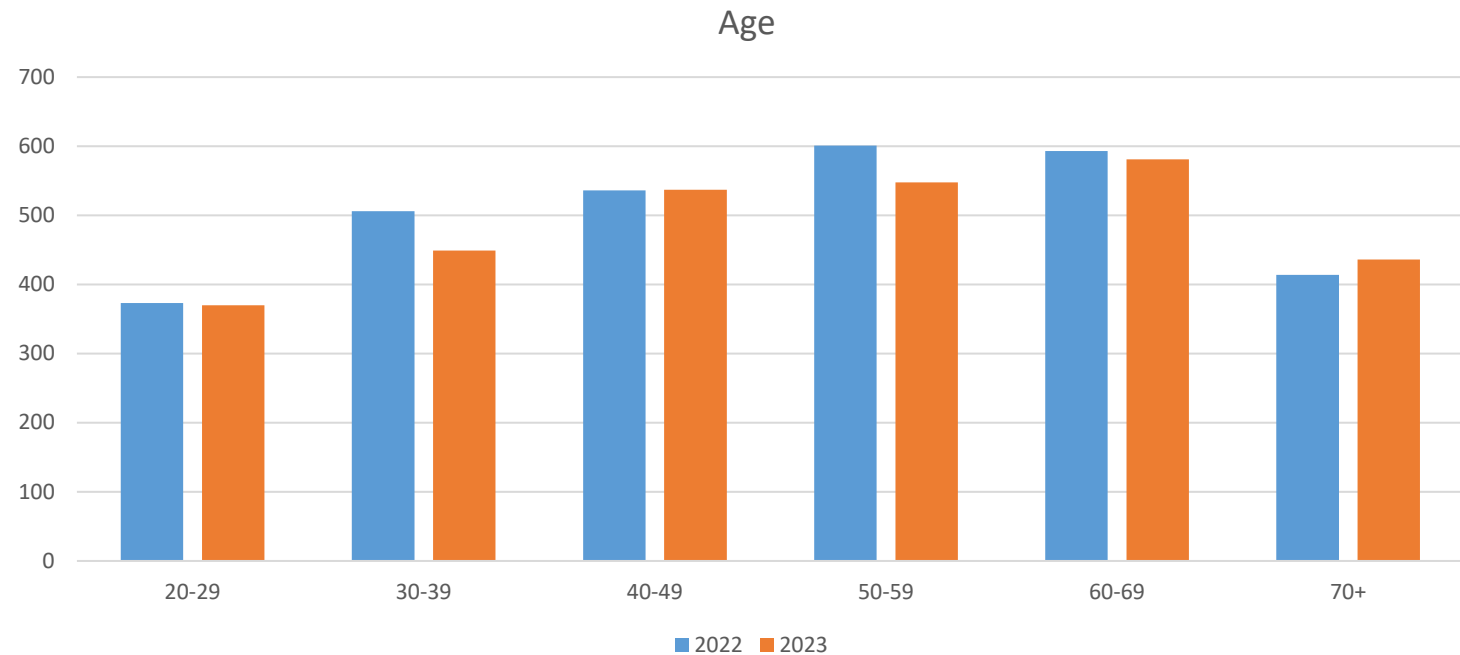


Appendix A

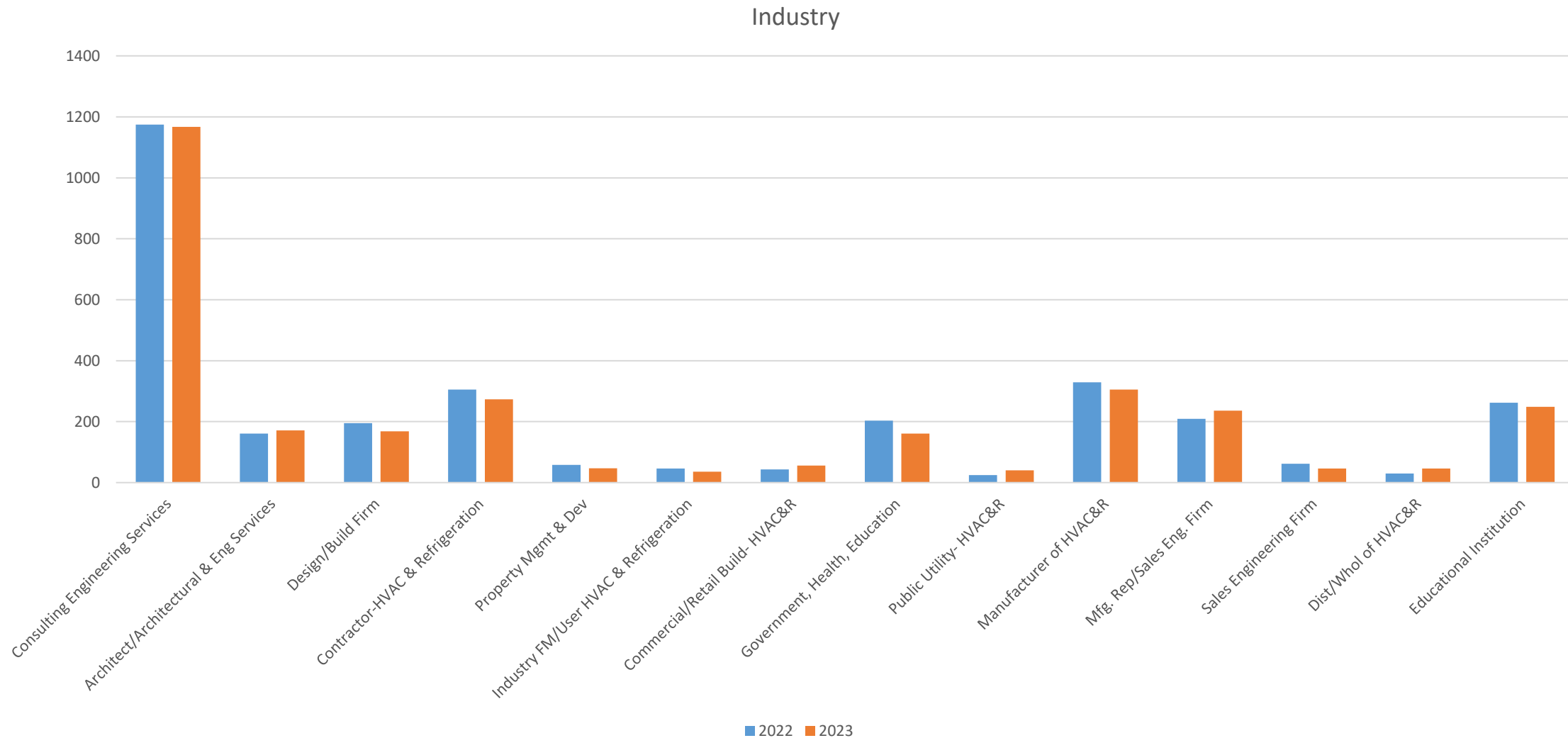
Demographics of Respondents

Age of Survey Respondents

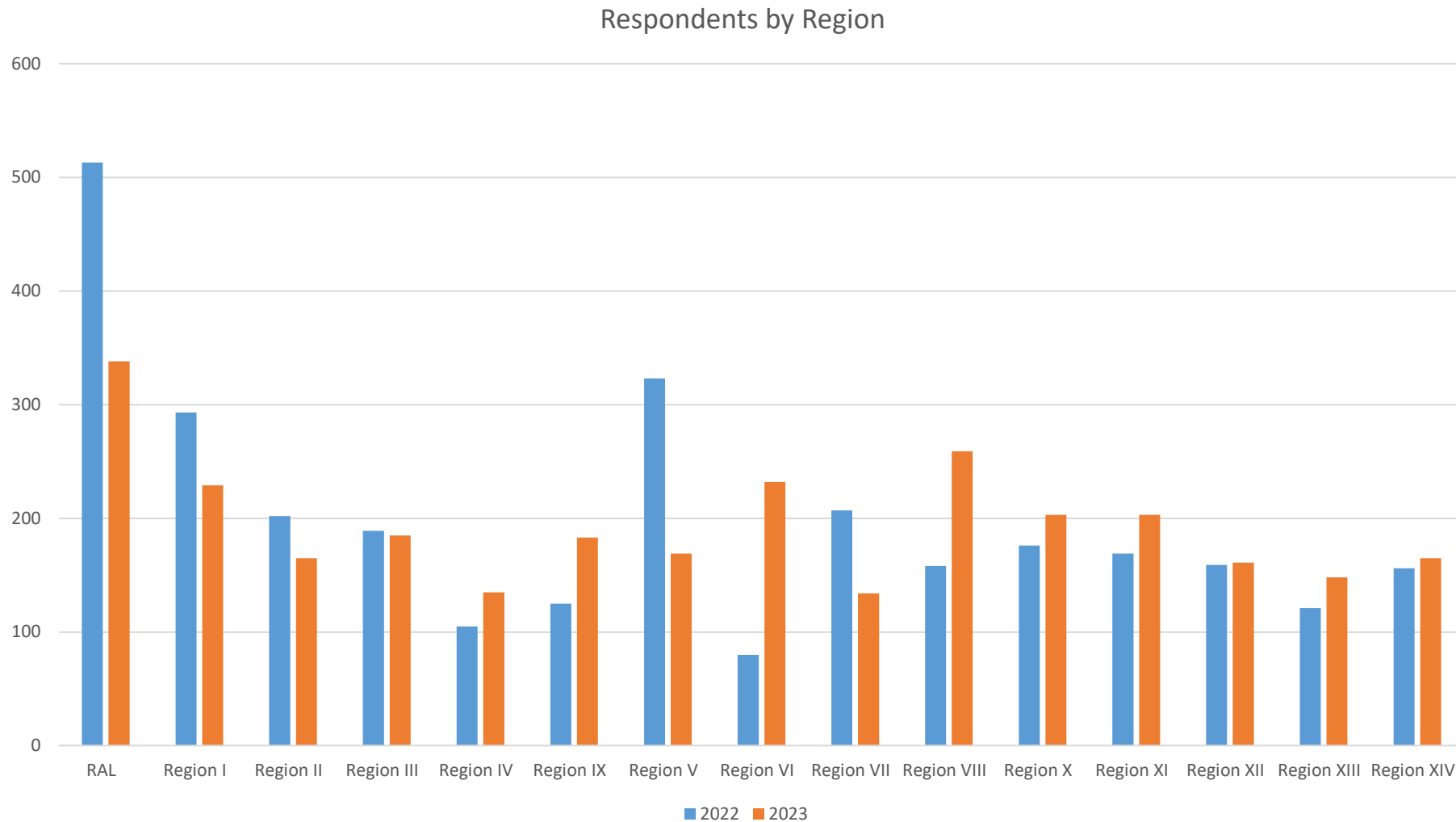
- Survey Respondents age is similar last year.



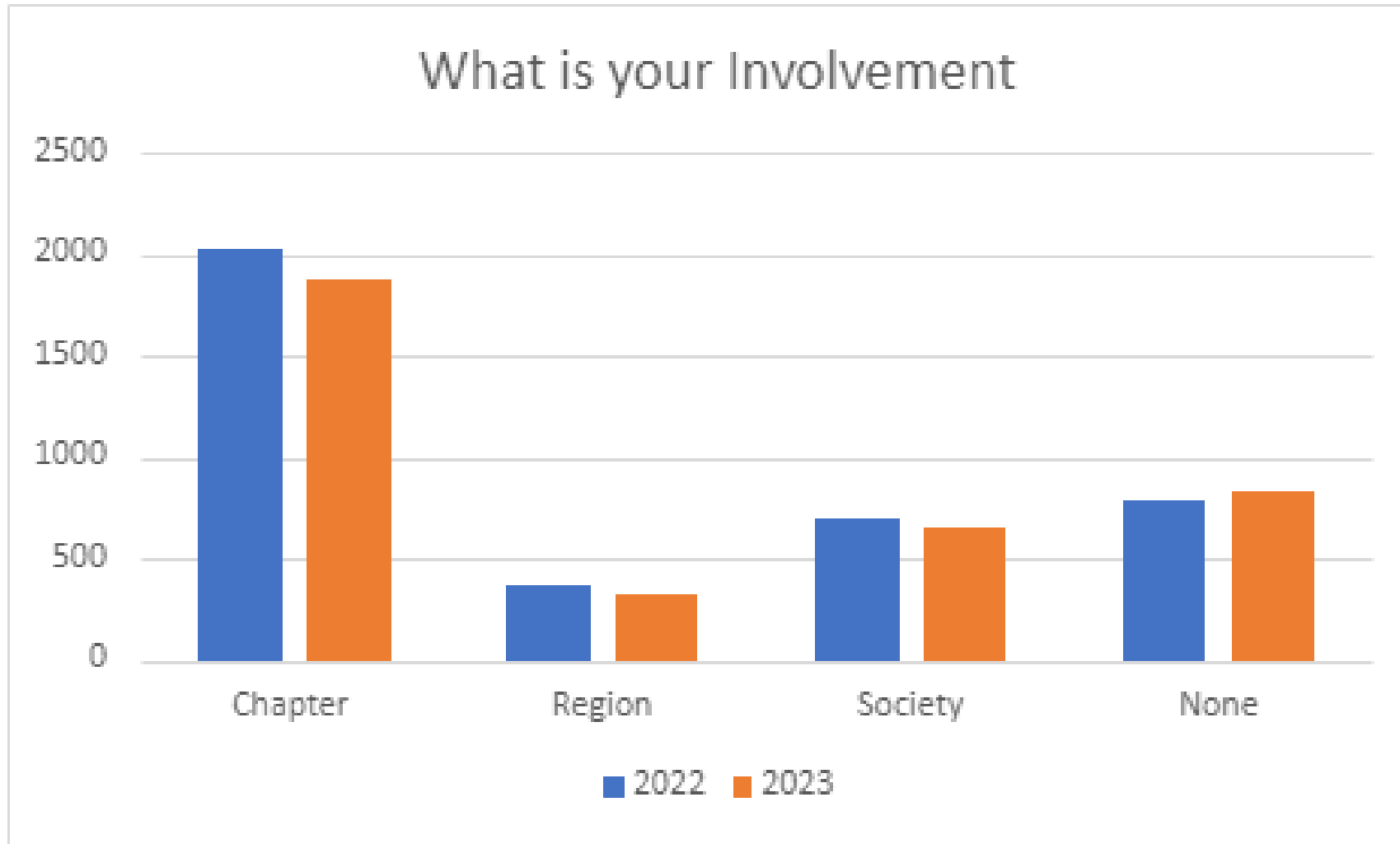
Occupation of Survey Respondents



Region of Survey Respondents



ASHRAE Member Involvement

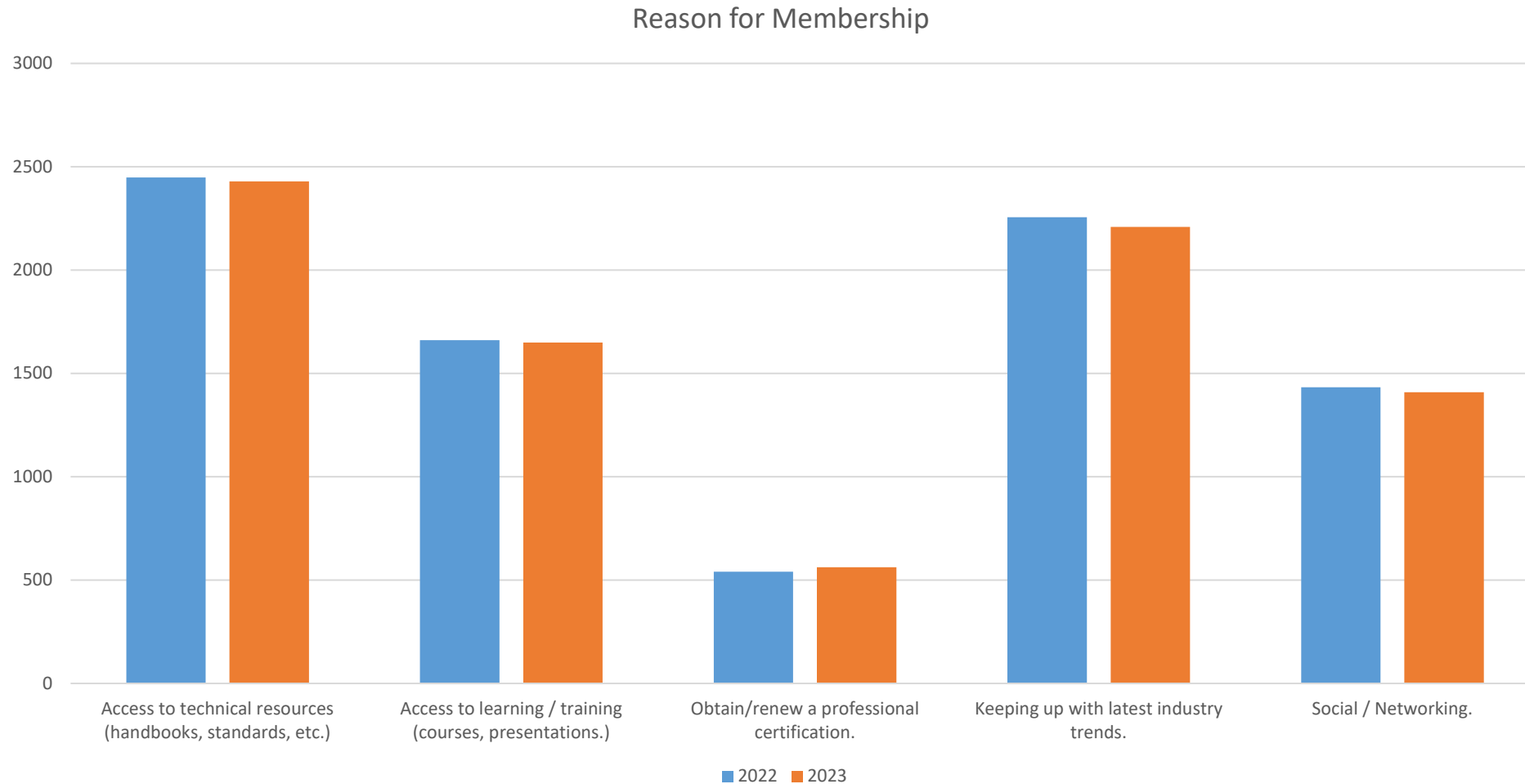




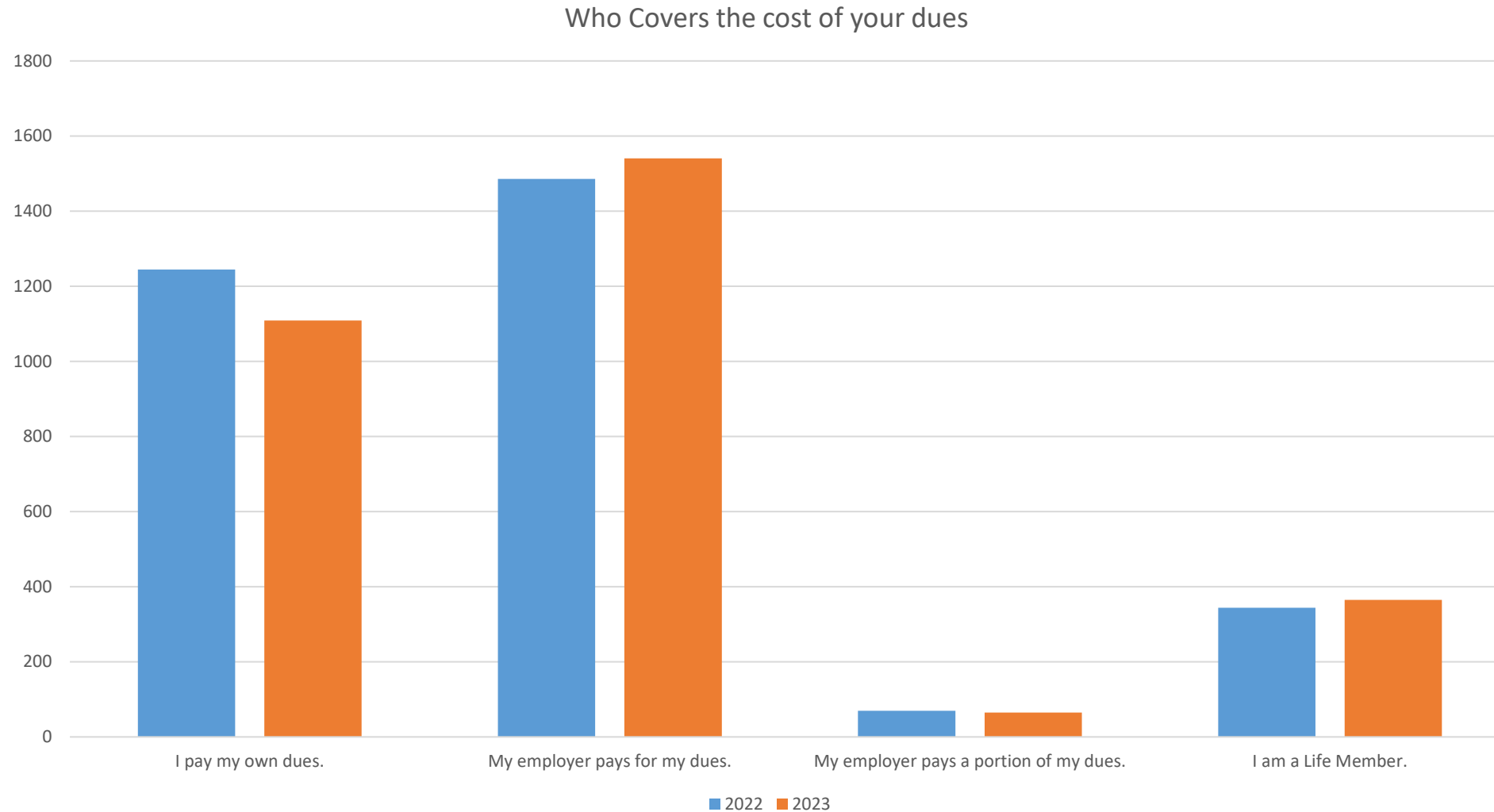
Appendix B

Individual Question Responses

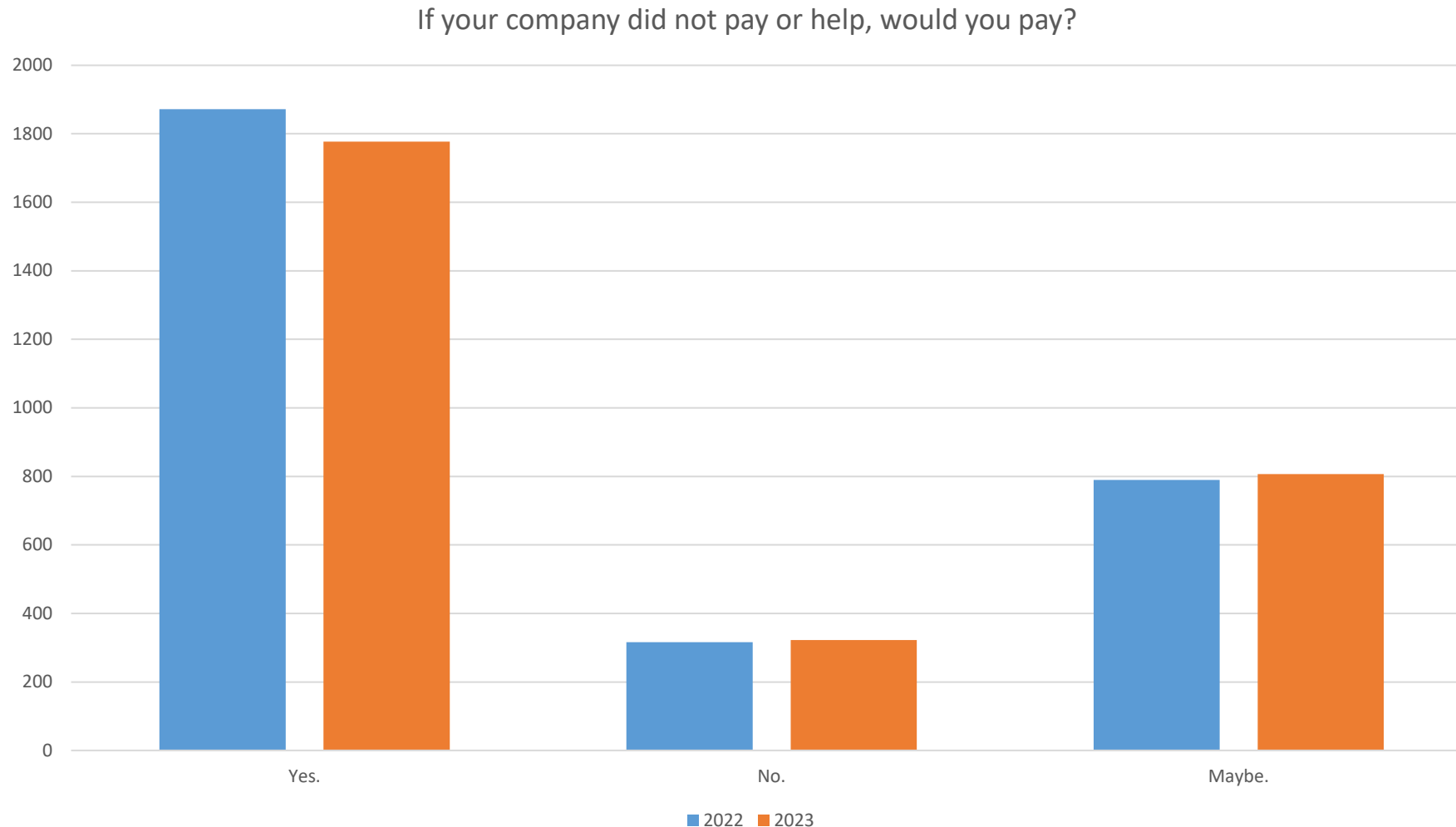
What is your primary reason for being a member of ASHRAE?



Who covers the cost of your ASHRAE membership dues?

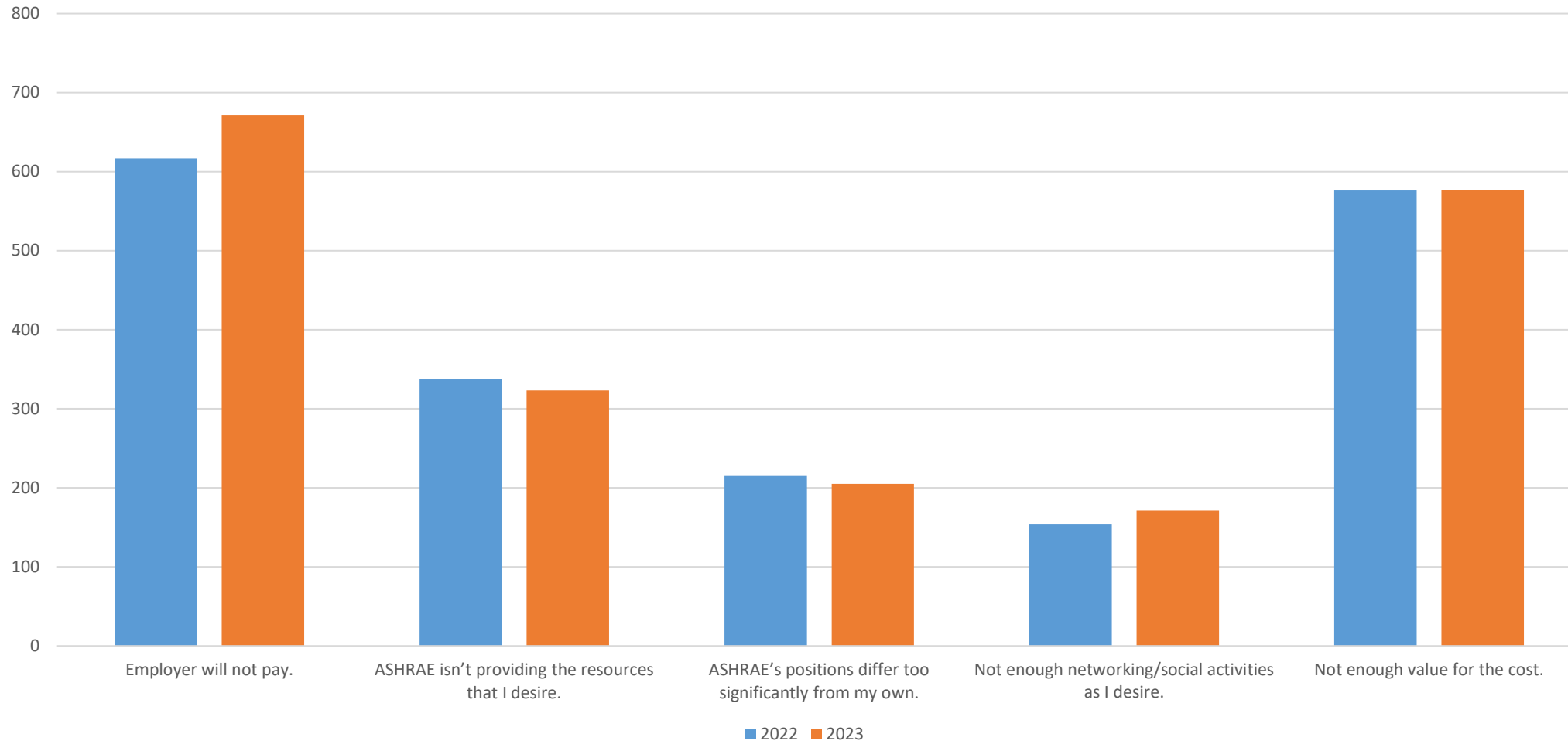


If your company did NOT pay or help pay for your membership in ASHRAE, would you pay for membership yourself?



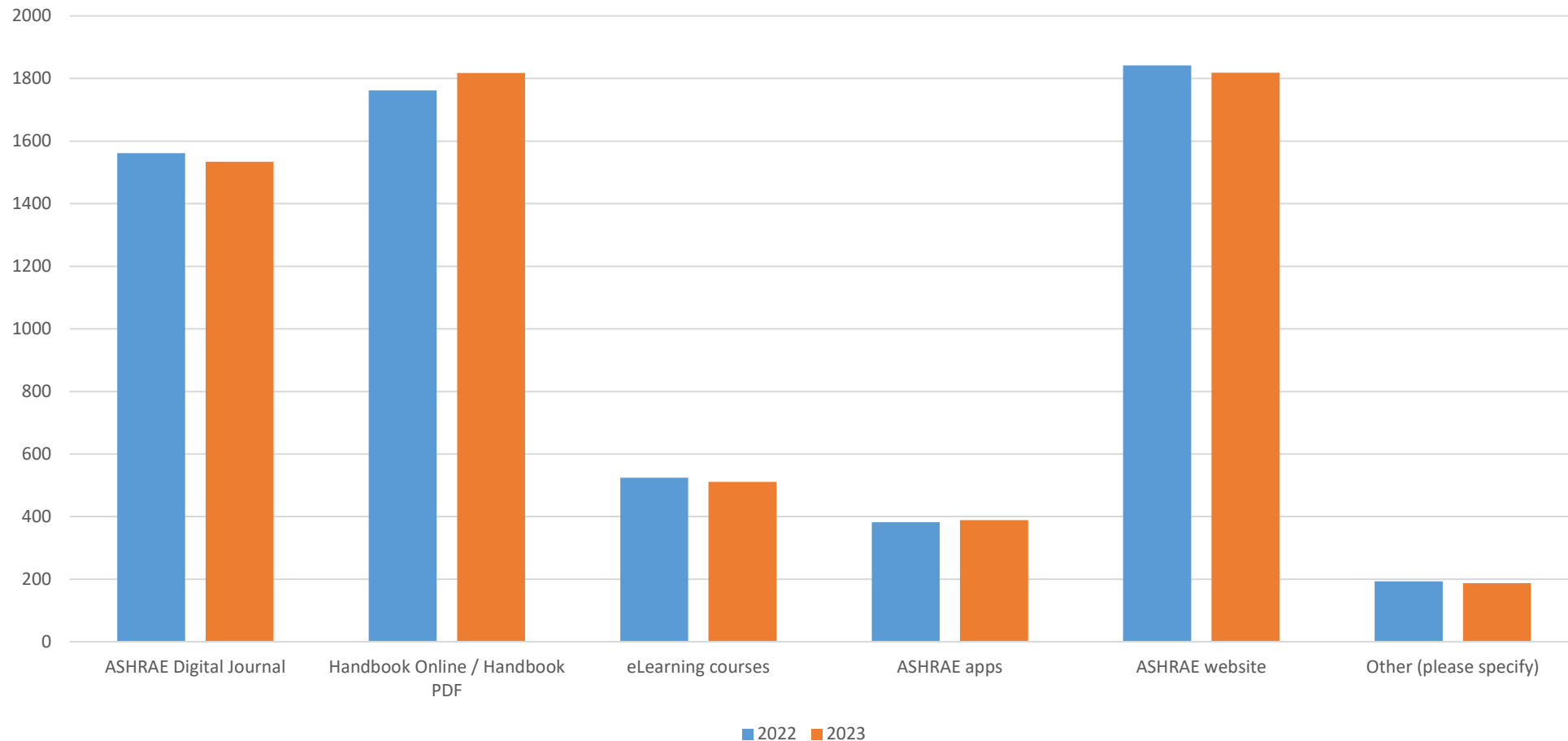
What are some reasons that would cause you not to renew next year?

Reasons that would cause you to not renew

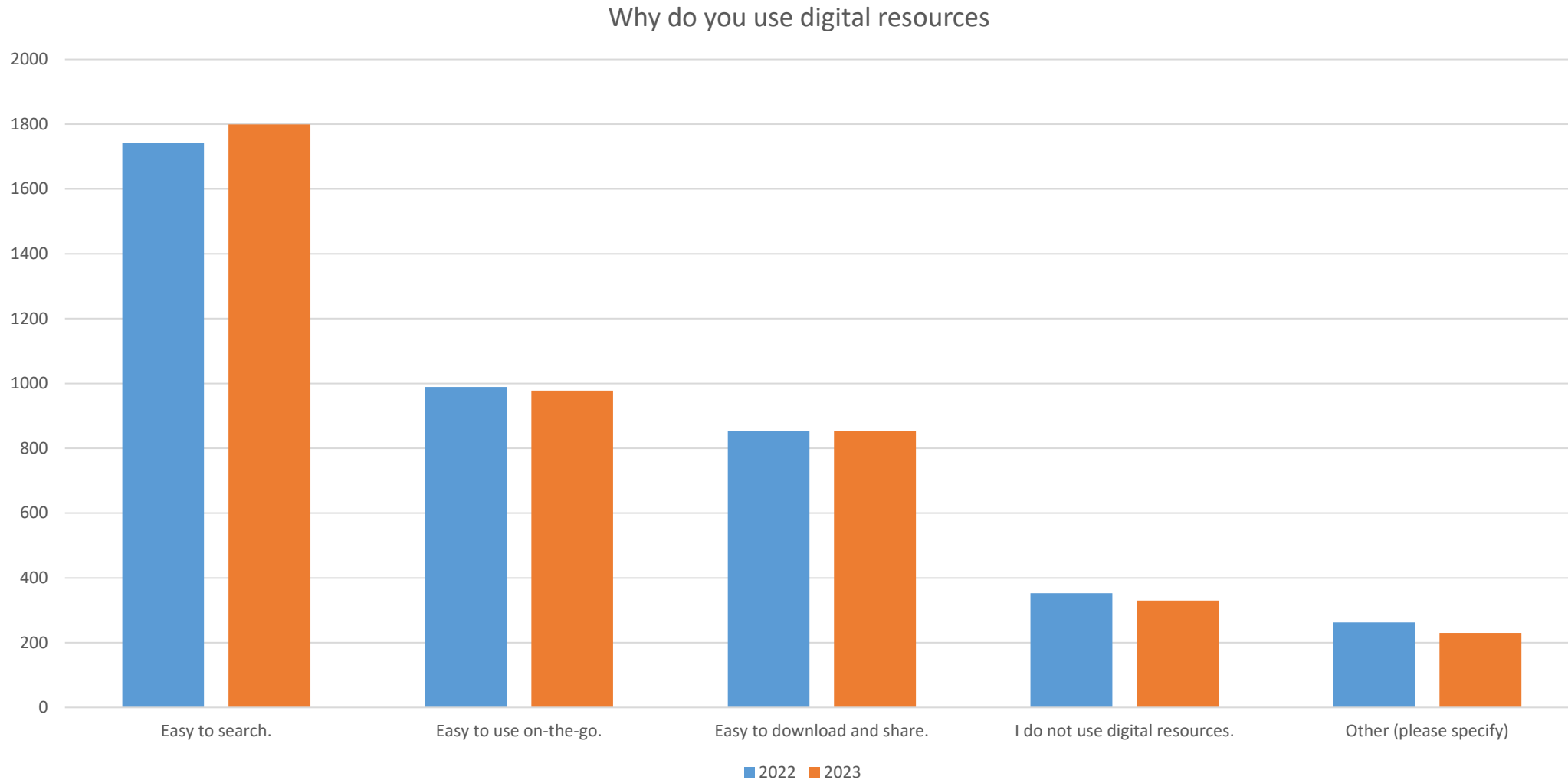


What ASHRAE digital resources are you actively using?

Digital resources you actively use

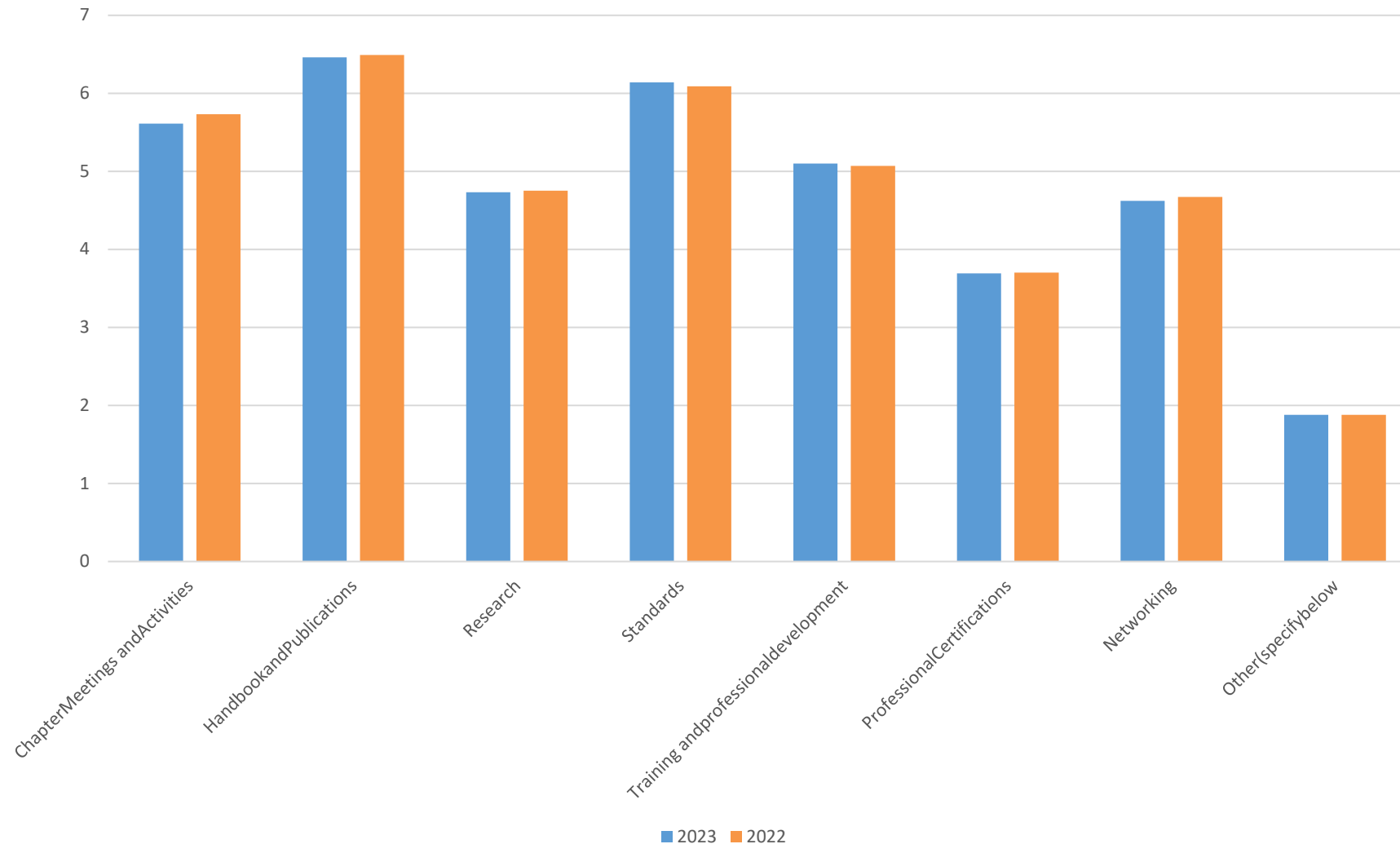


Why do you use ASHRAE digital resources?

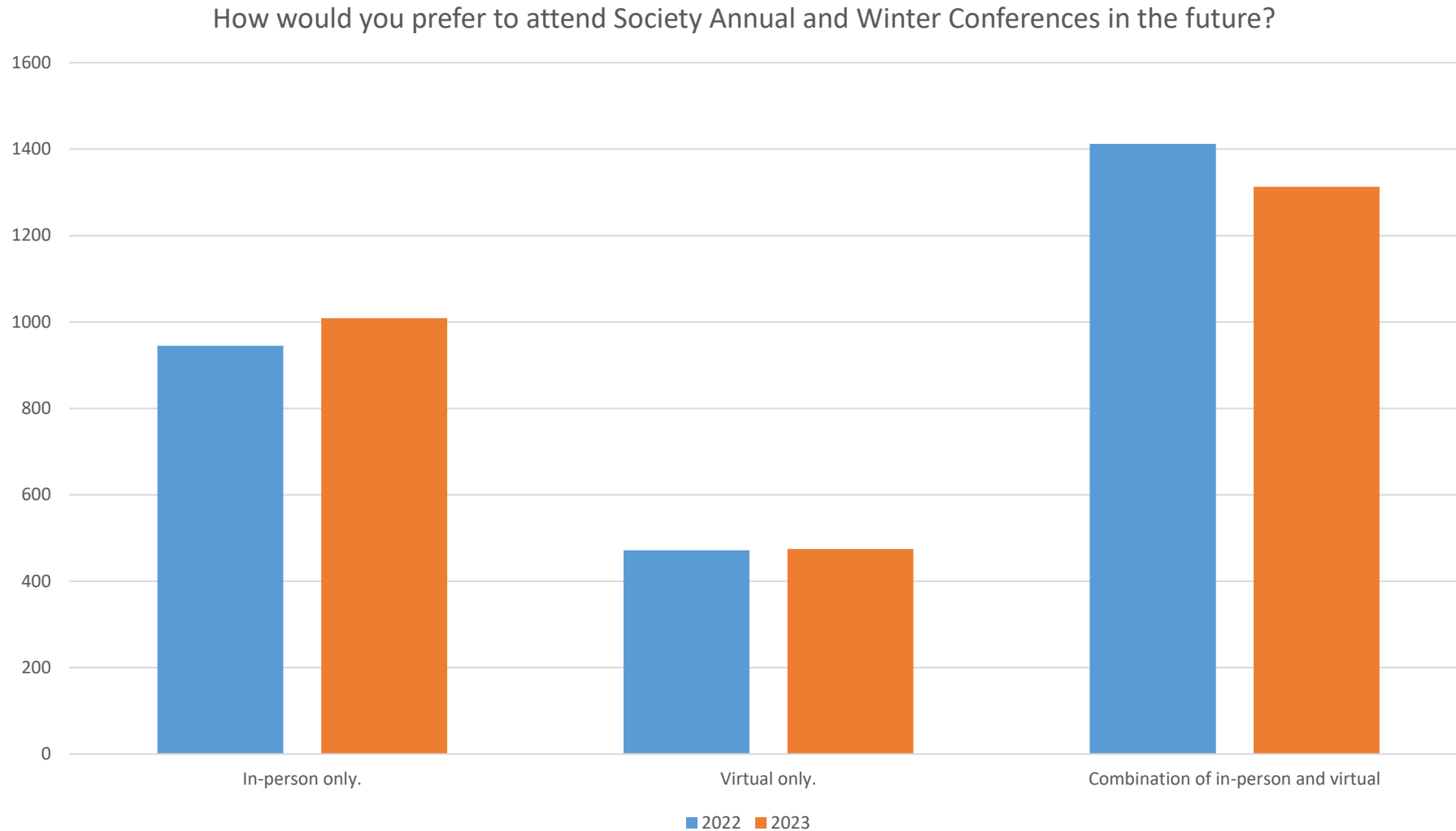


What ASHRAE service provides the most value to you?

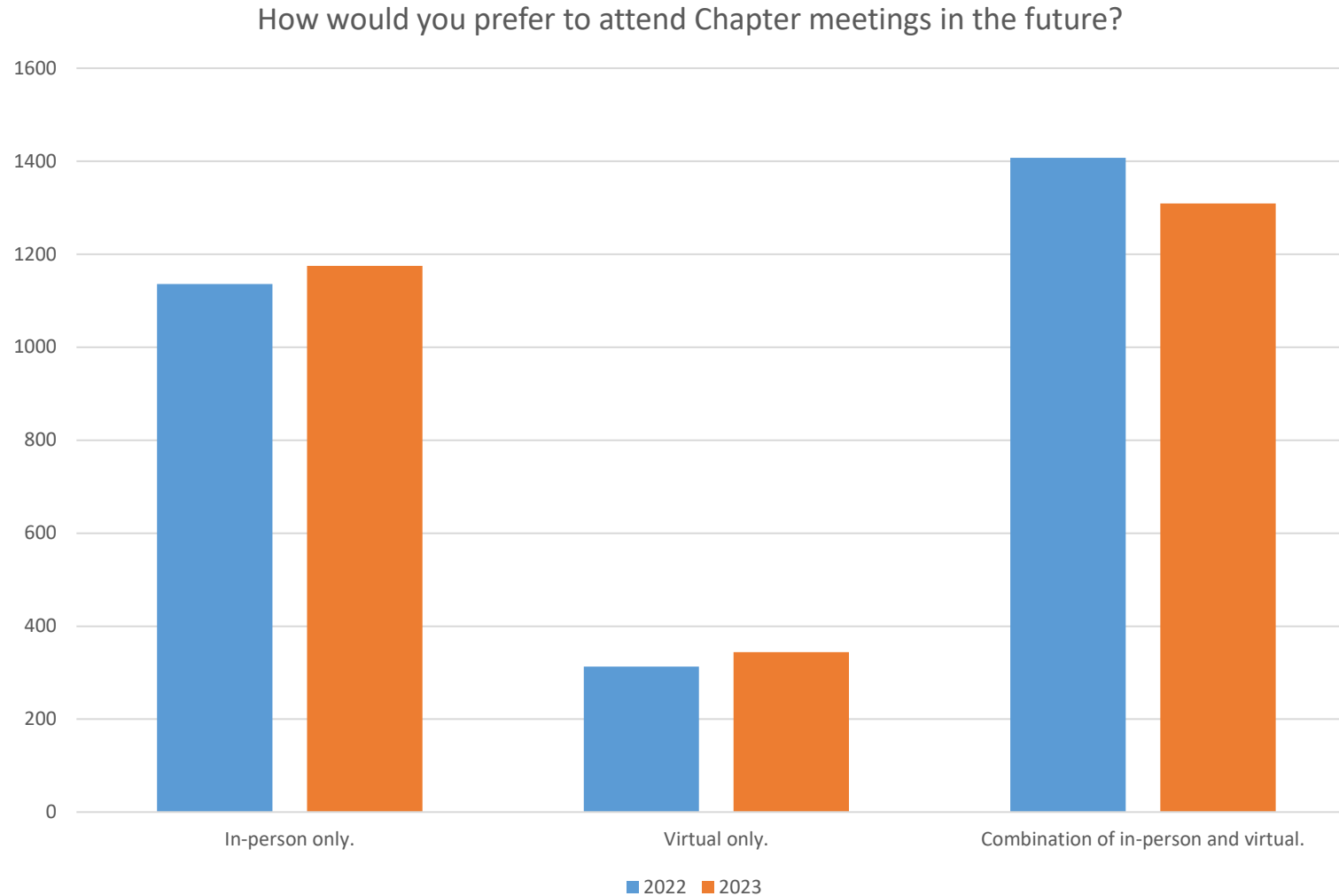
What ASHRAE service provides the most value to you?



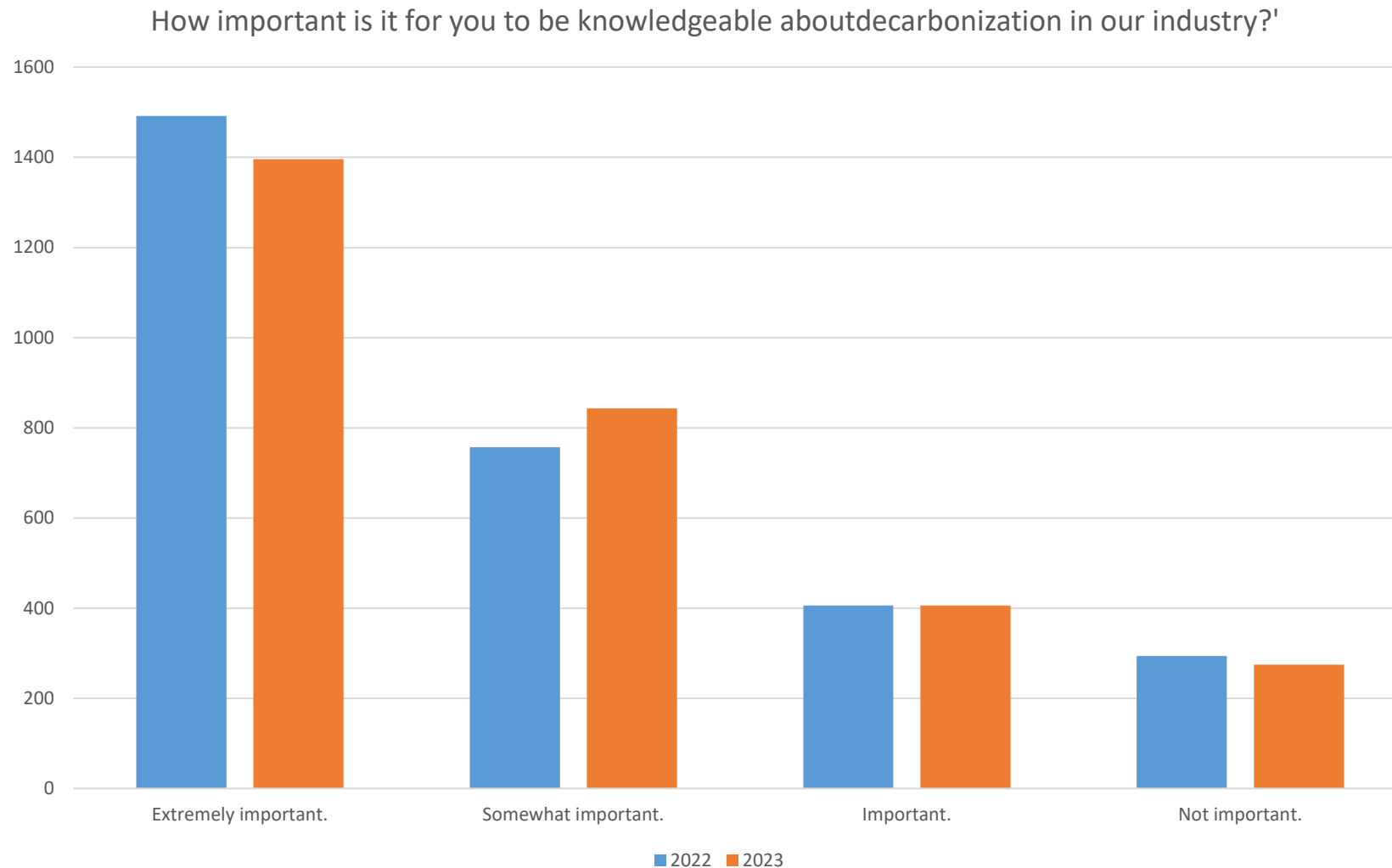
How would you prefer to attend Society Annual and Winter Conferences in the future



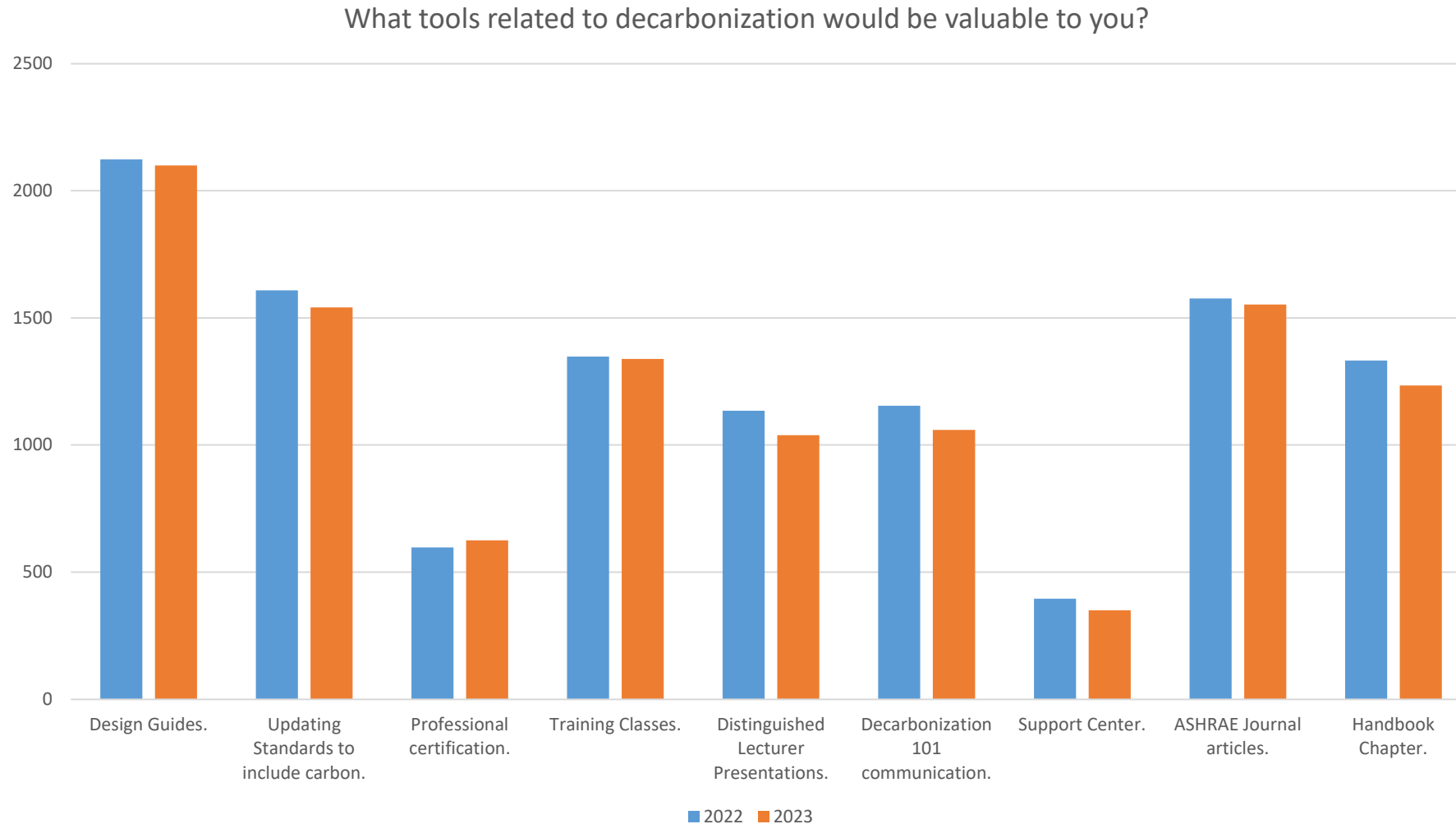
Q 18.8. How would you prefer to attend Chapter meetings in the future?



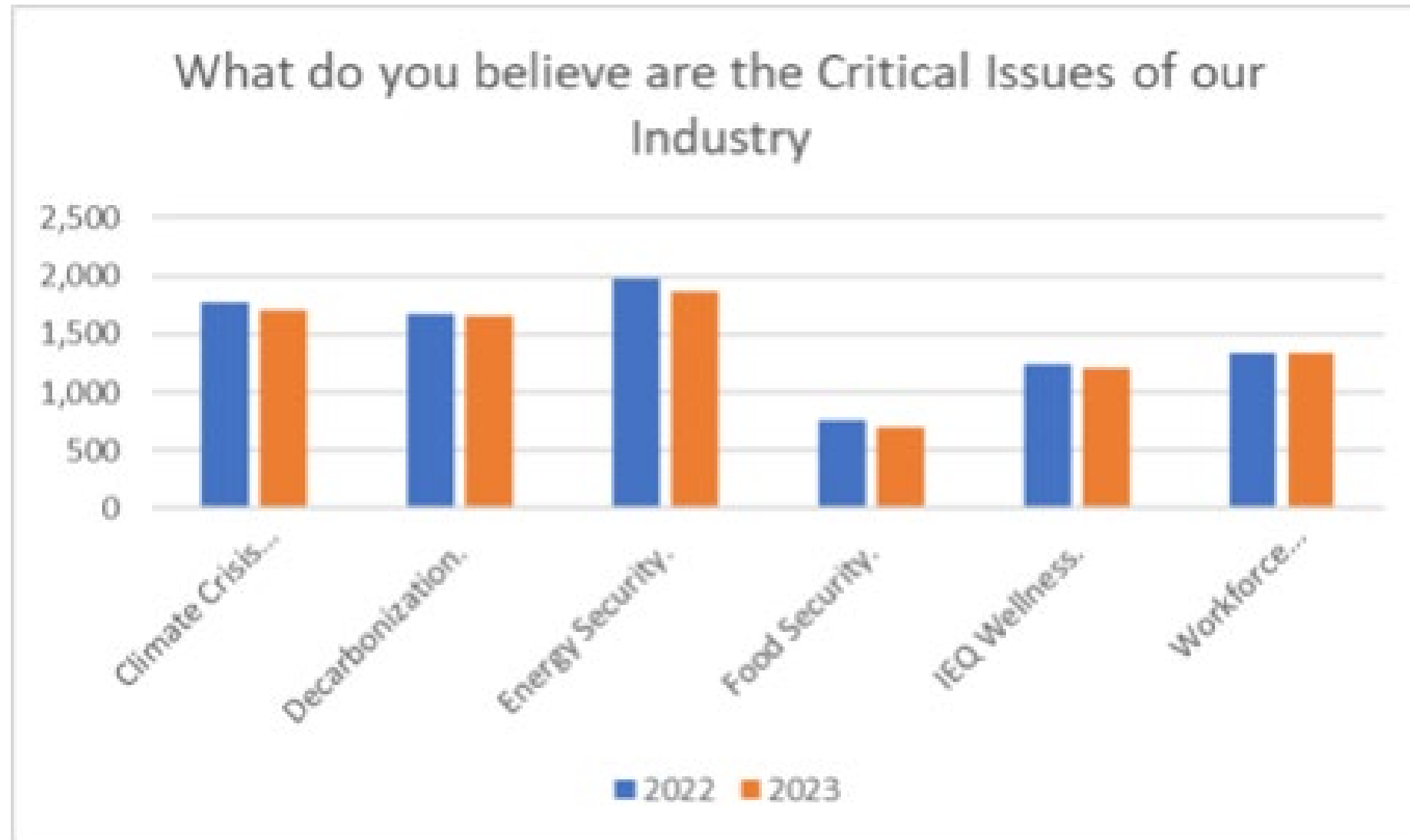
Q 19.9. How important is it for you to be knowledgeable about decarbonization in our industry?



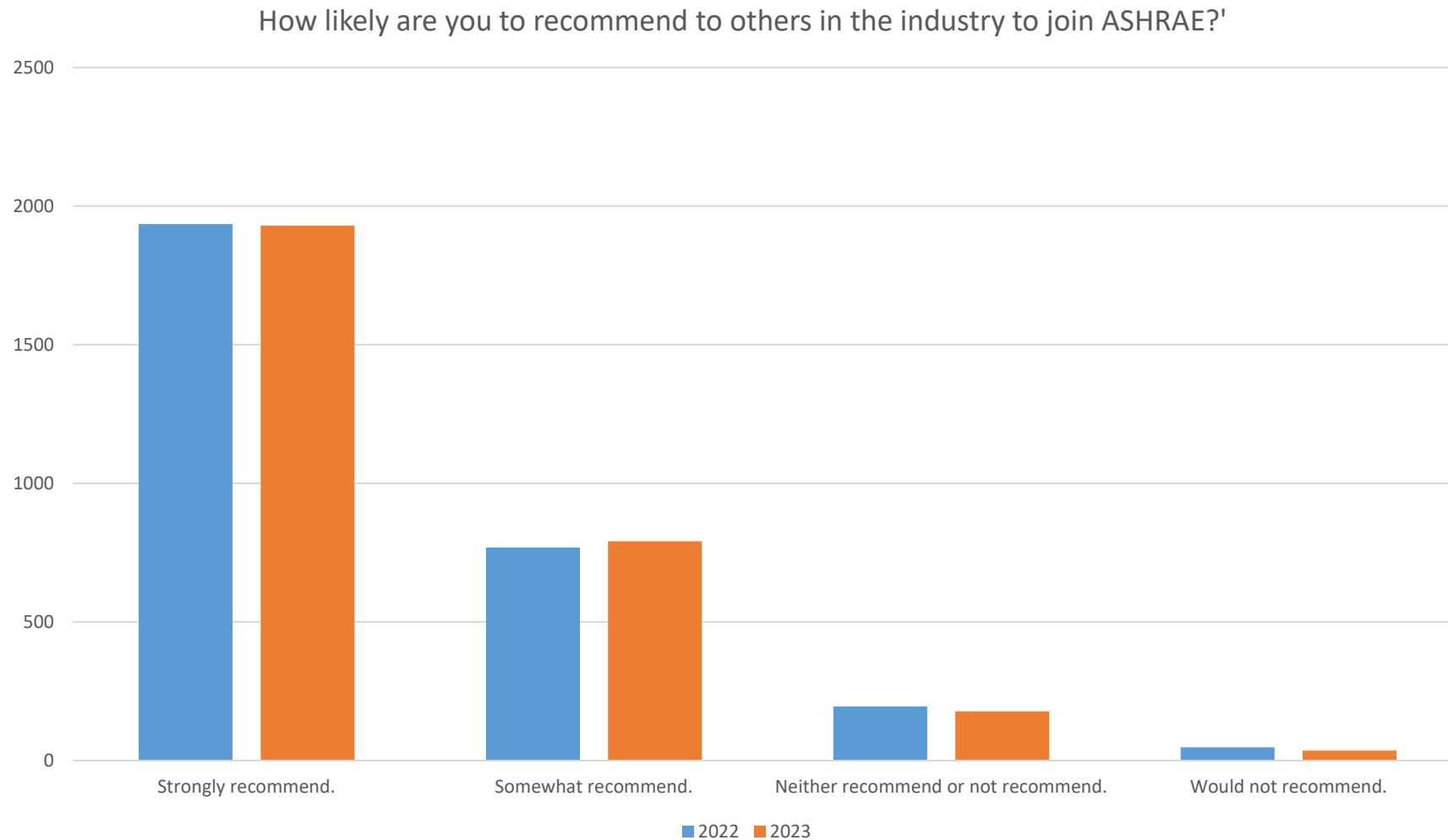
Q 20.10. What tools related to decarbonization would be valuable to you?



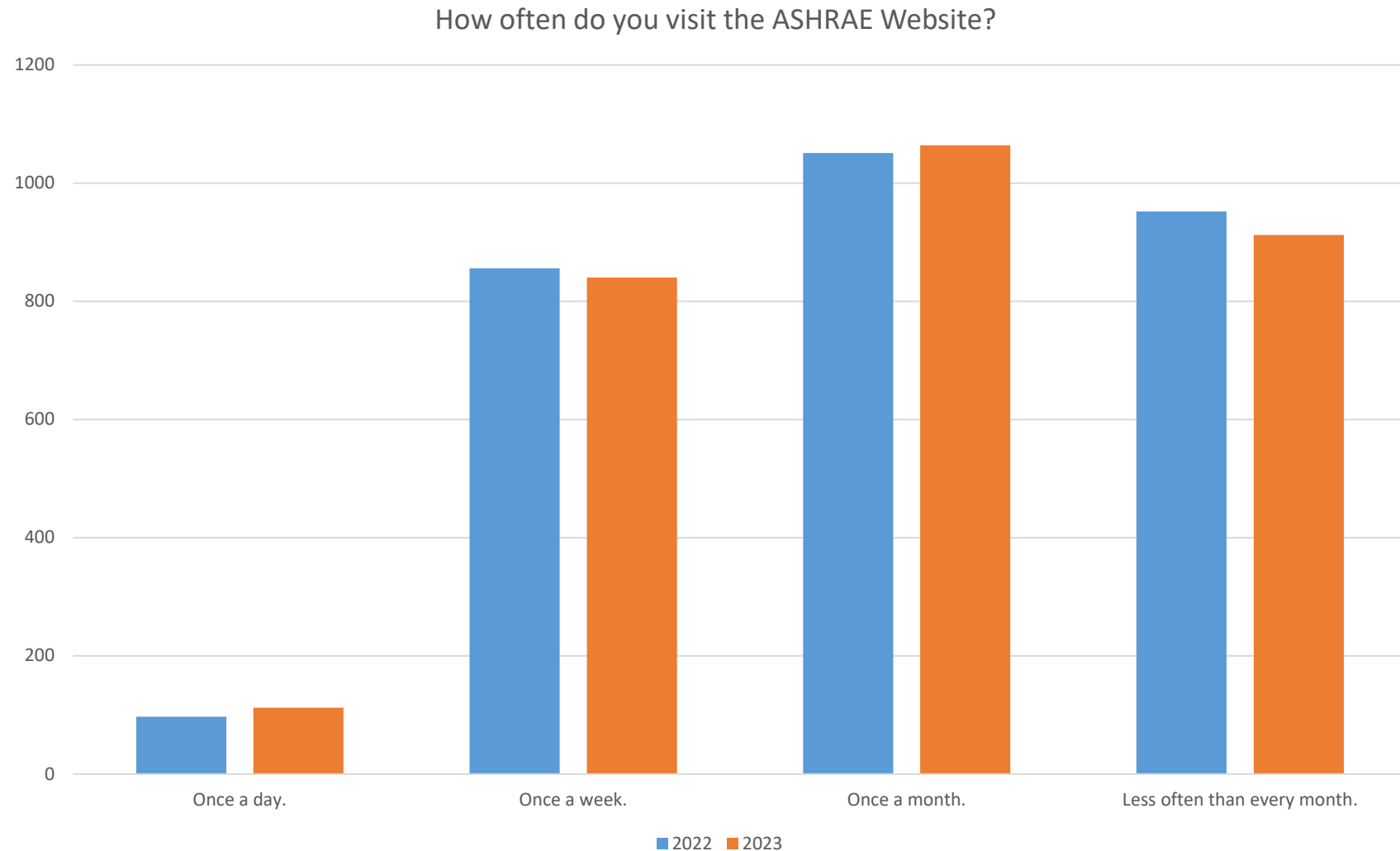
Q 21.11. What do you believe are the Critical Issues of our Industry?



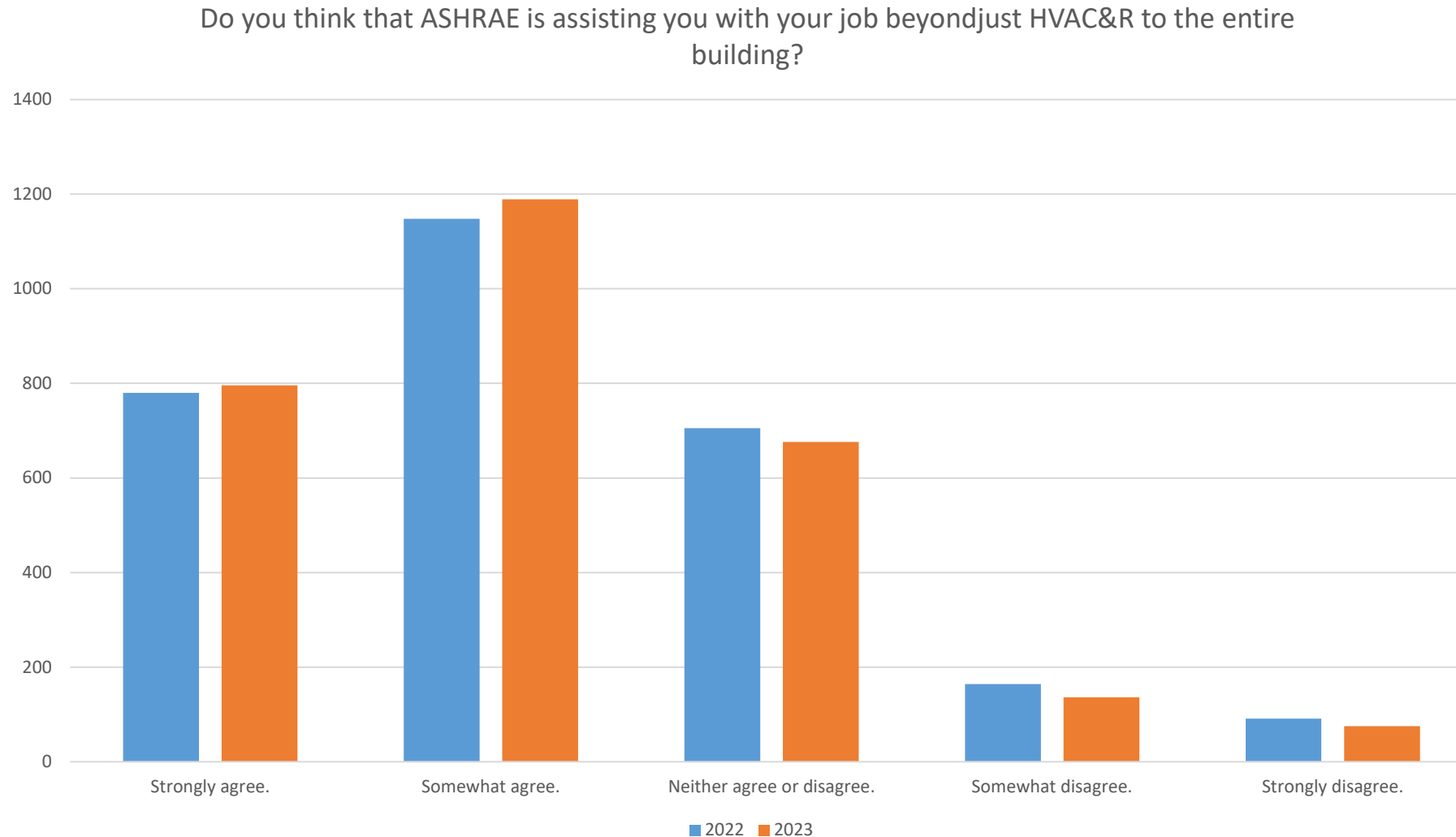
Q 22.12. How likely are you to recommend to others in the industry to join ASHRAE?



Q 23.13. How often do you visit the ASHRAE Website?



Q 24.14. Do you think that ASHRAE is assisting you with your job beyond just HVAC&R to the entire building?



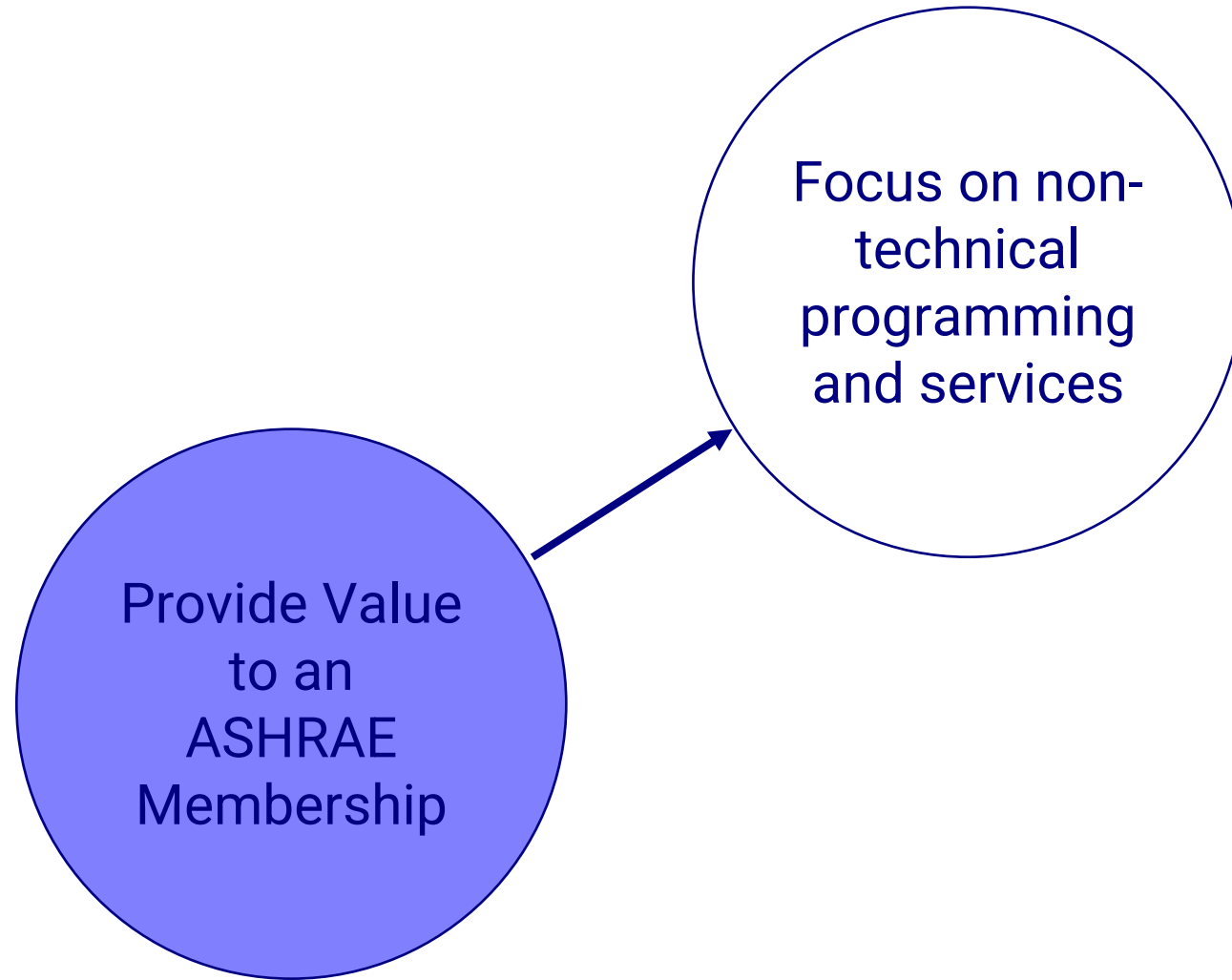
Innovation and Implementation Subcommittee Update

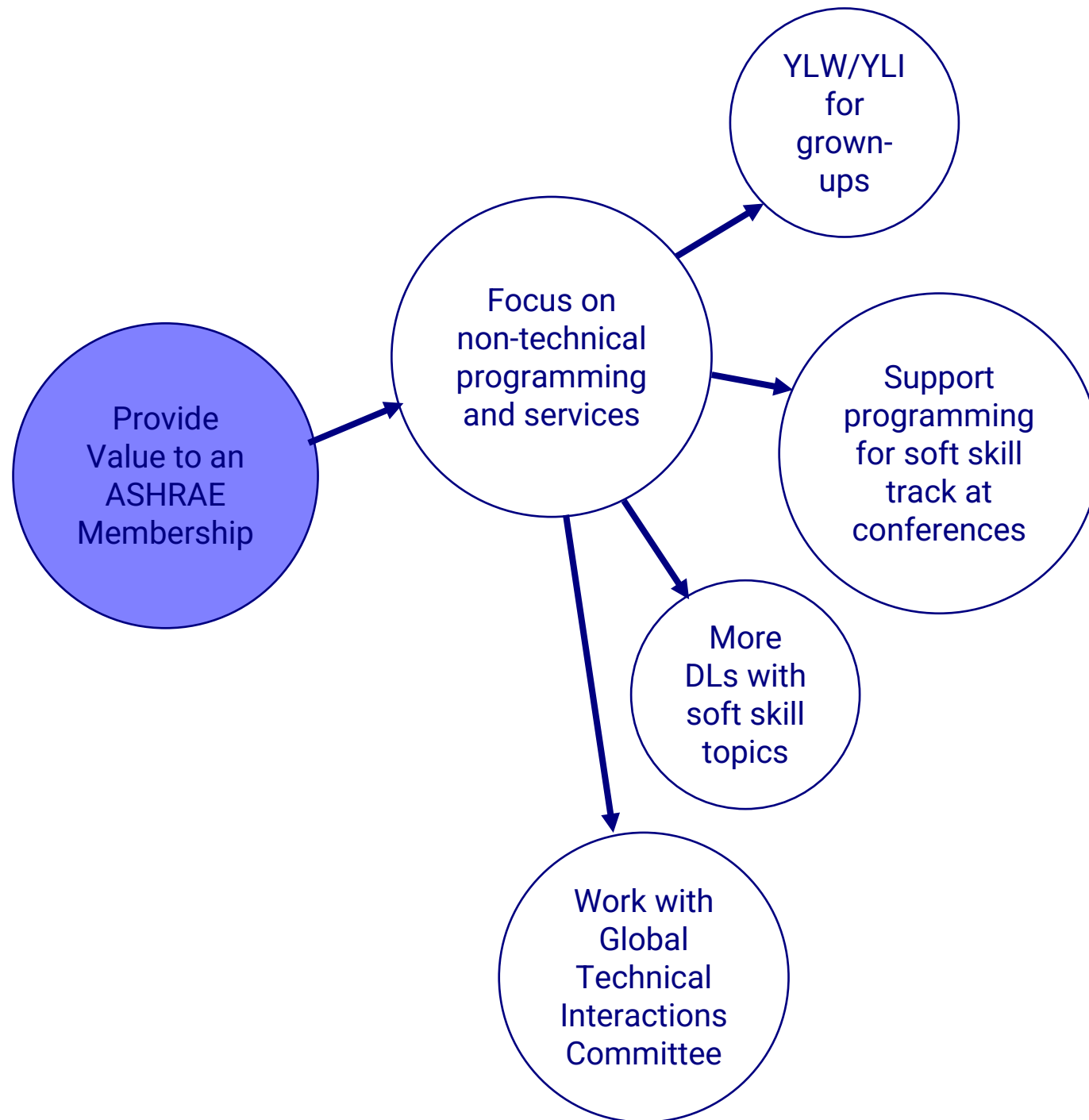
2024 Winter Conference

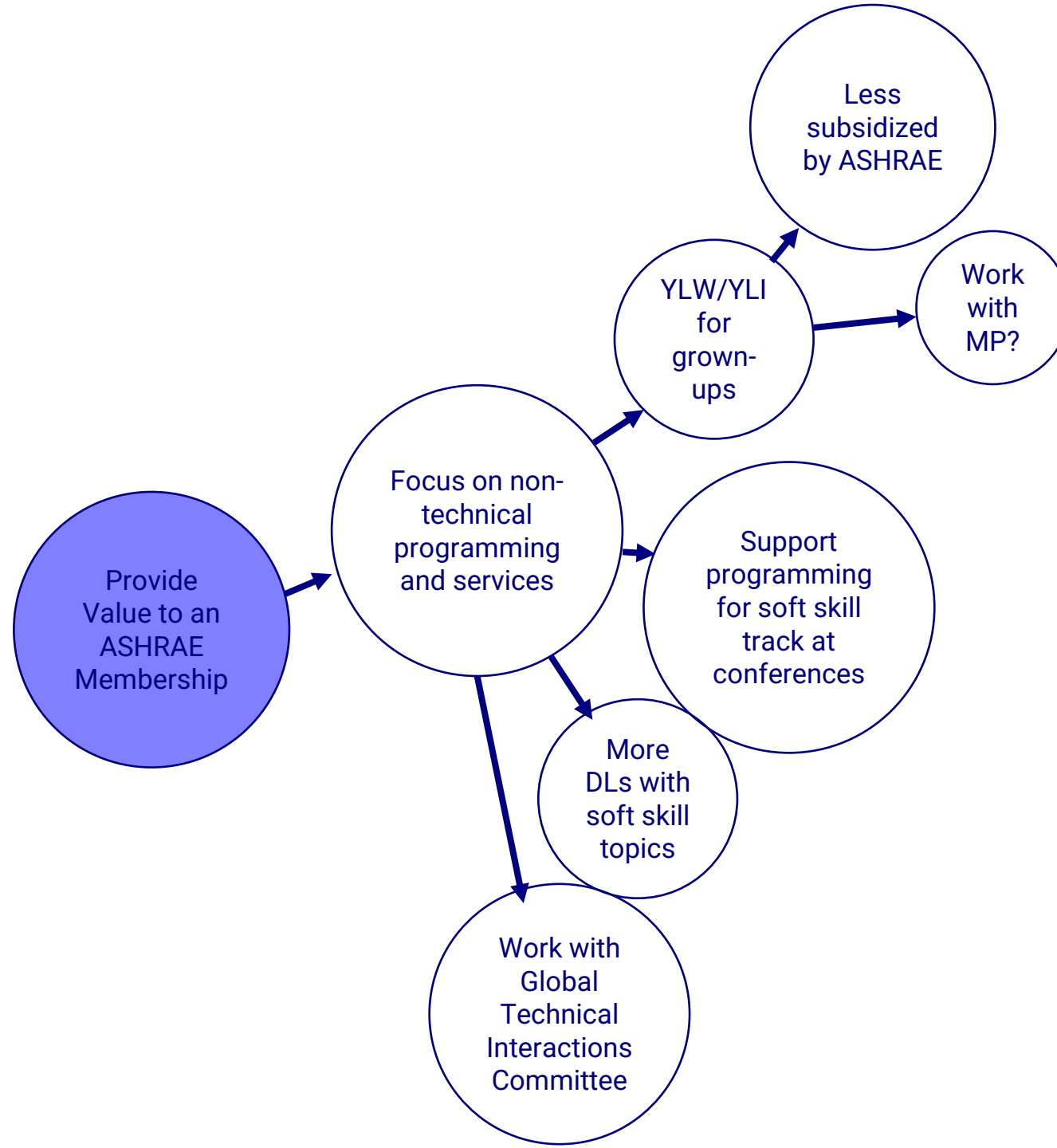
Chicago

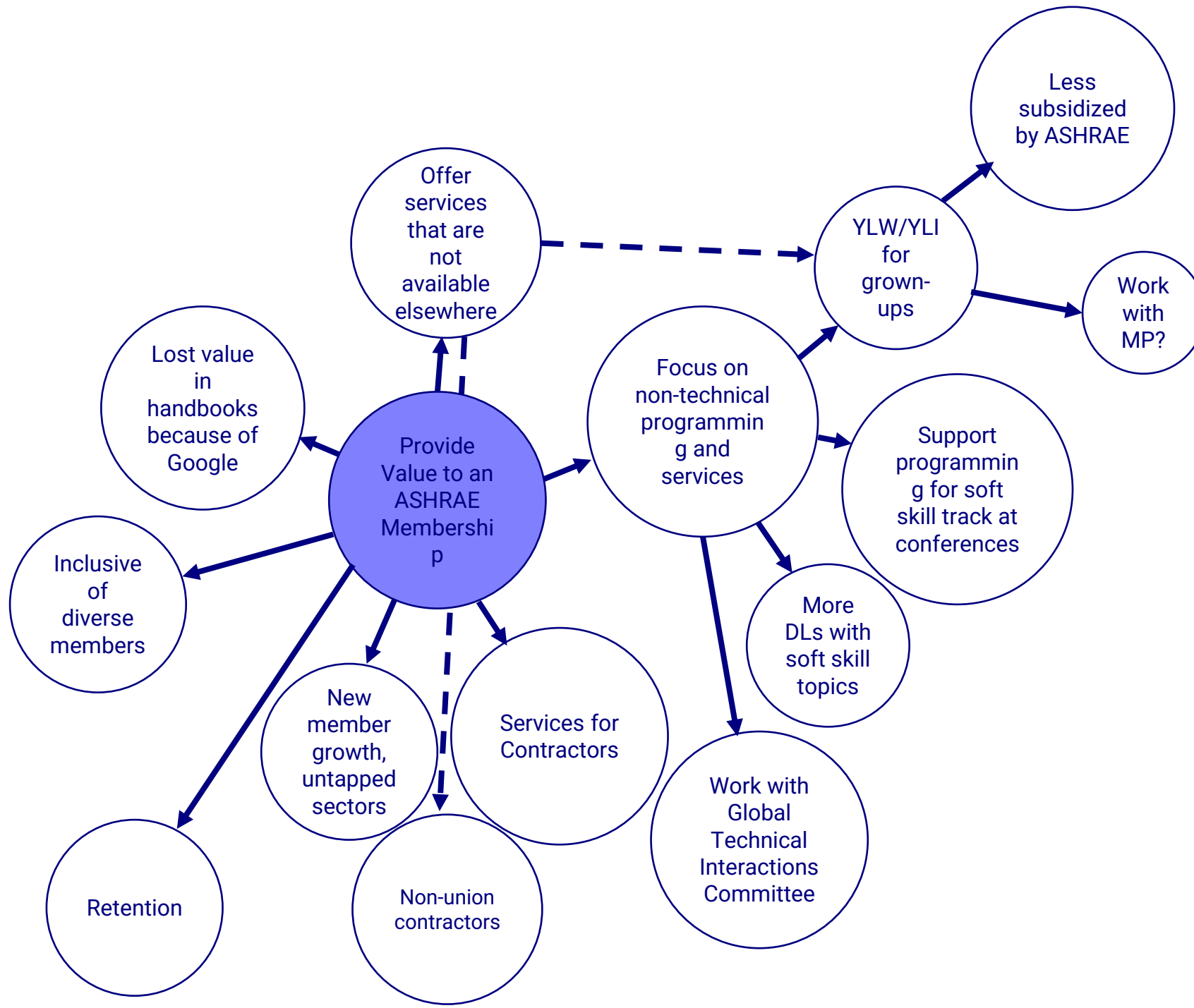


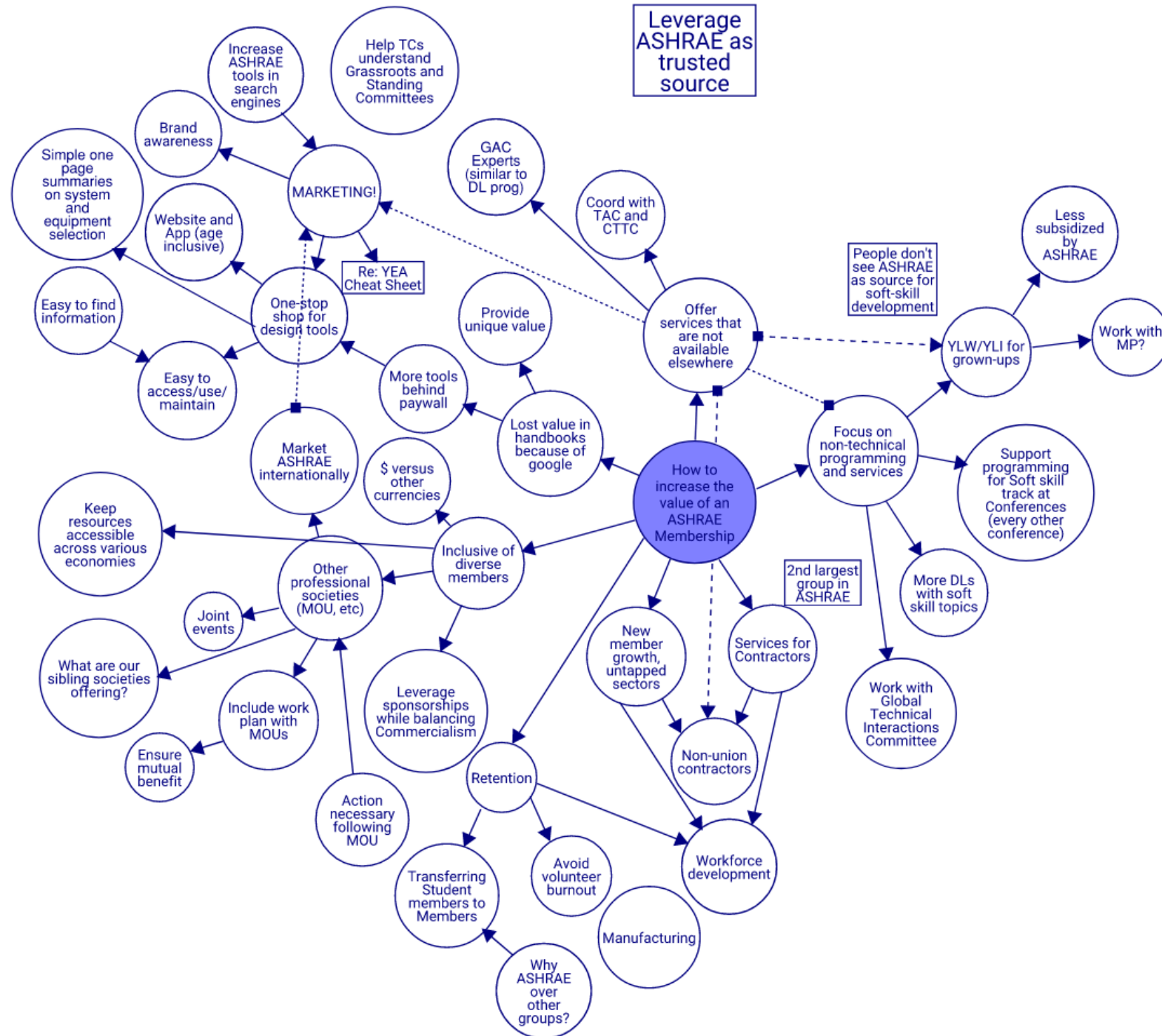
Provide Value to
an ASHRAE
Membership



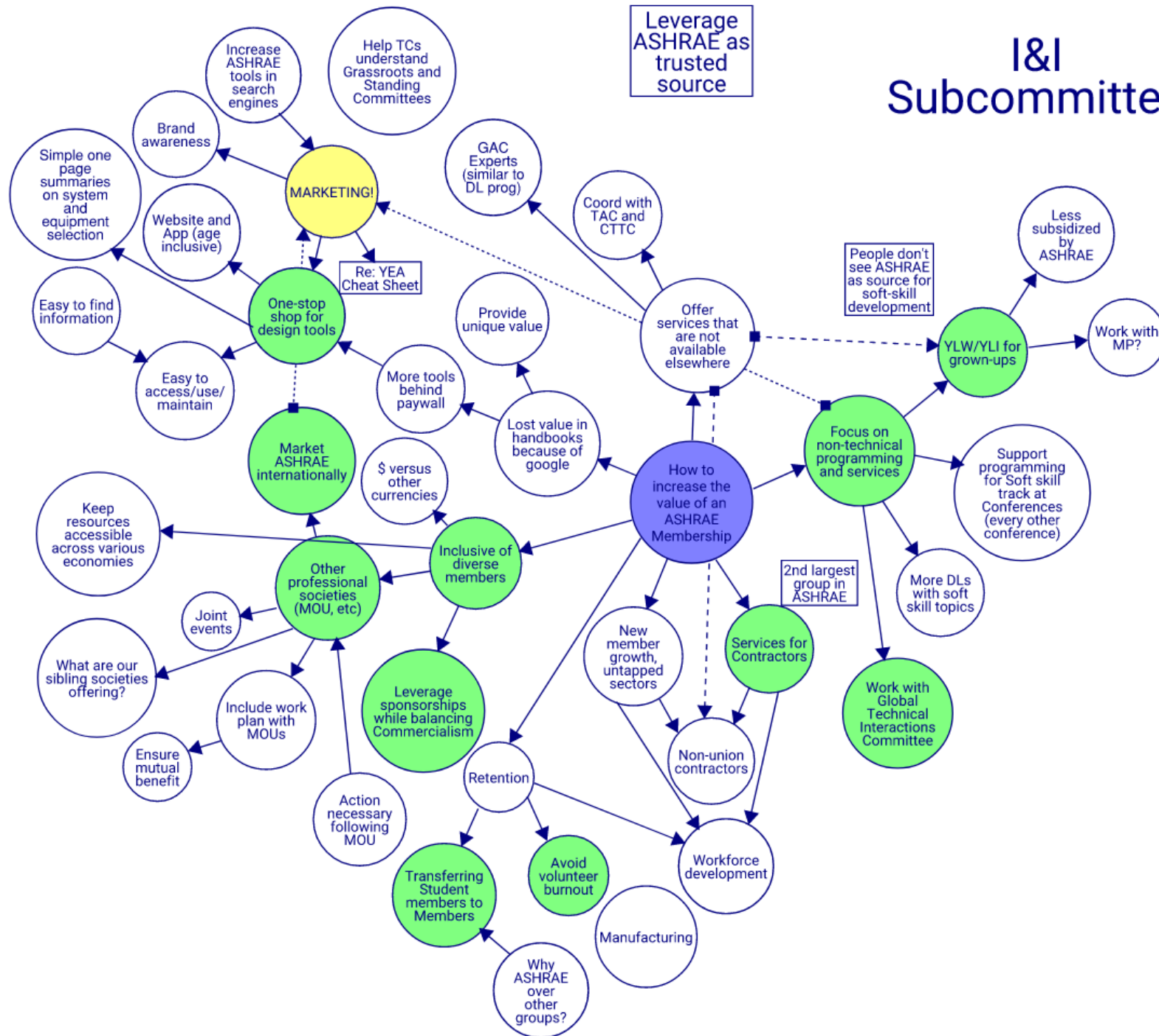




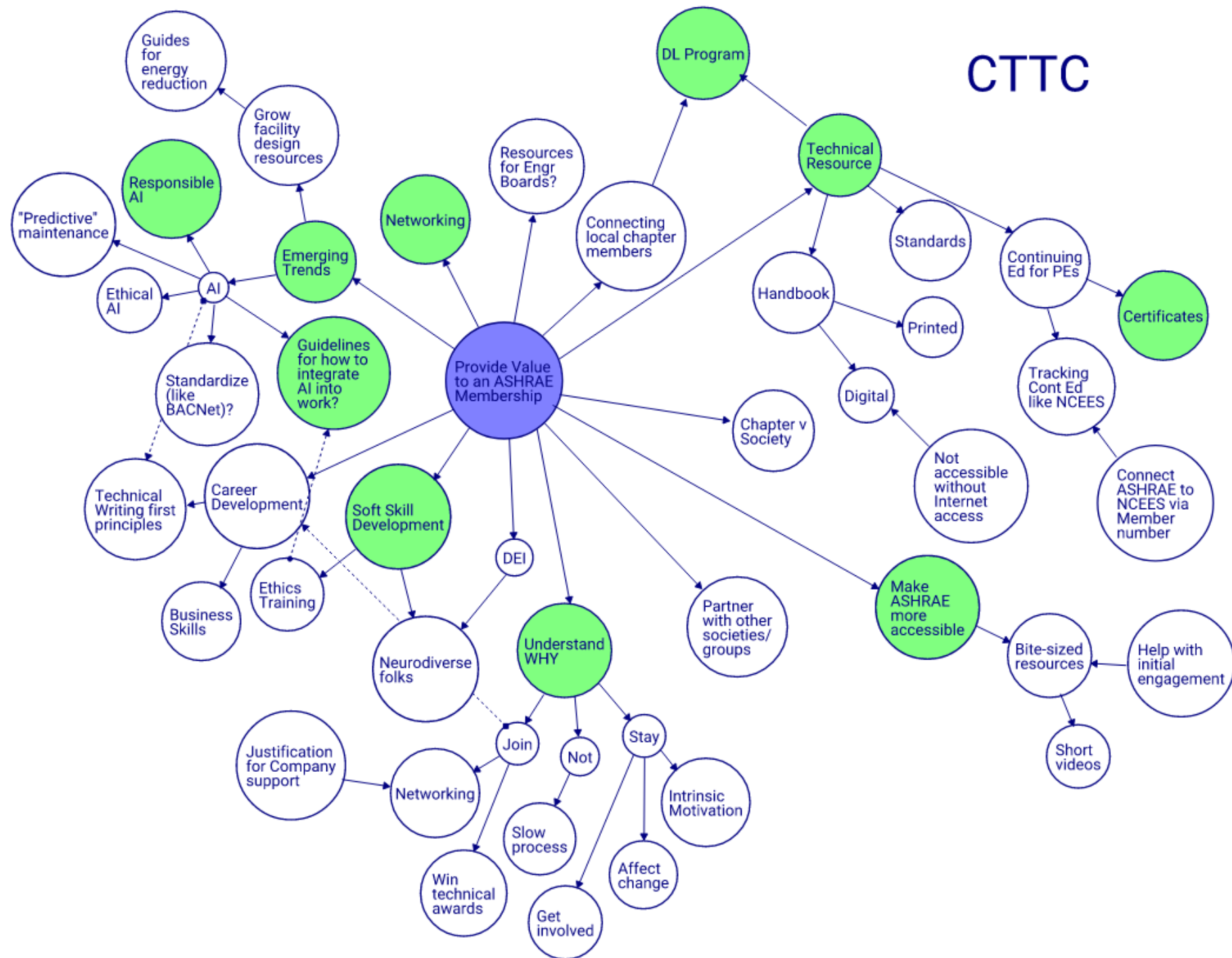




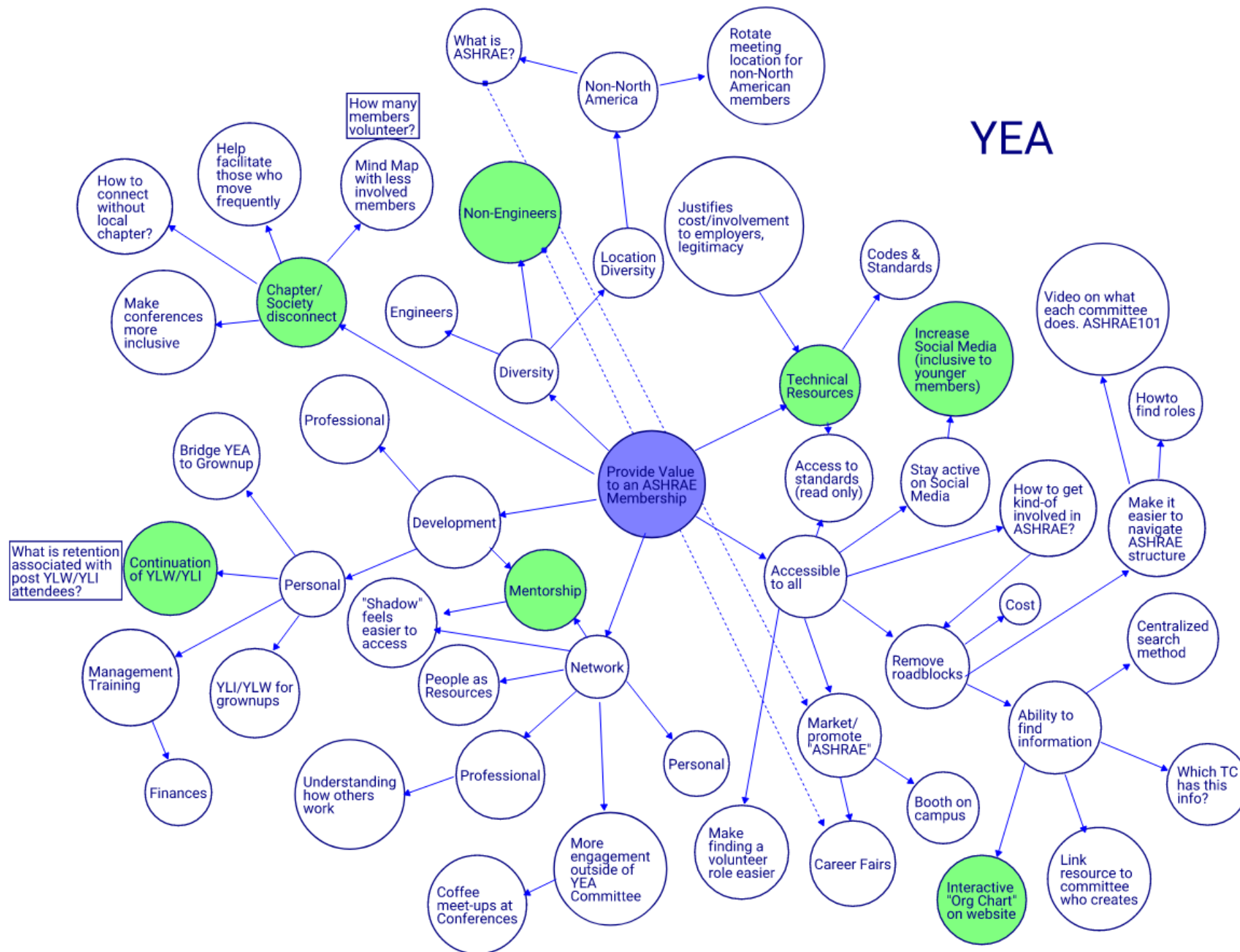
I&I Subcommittee

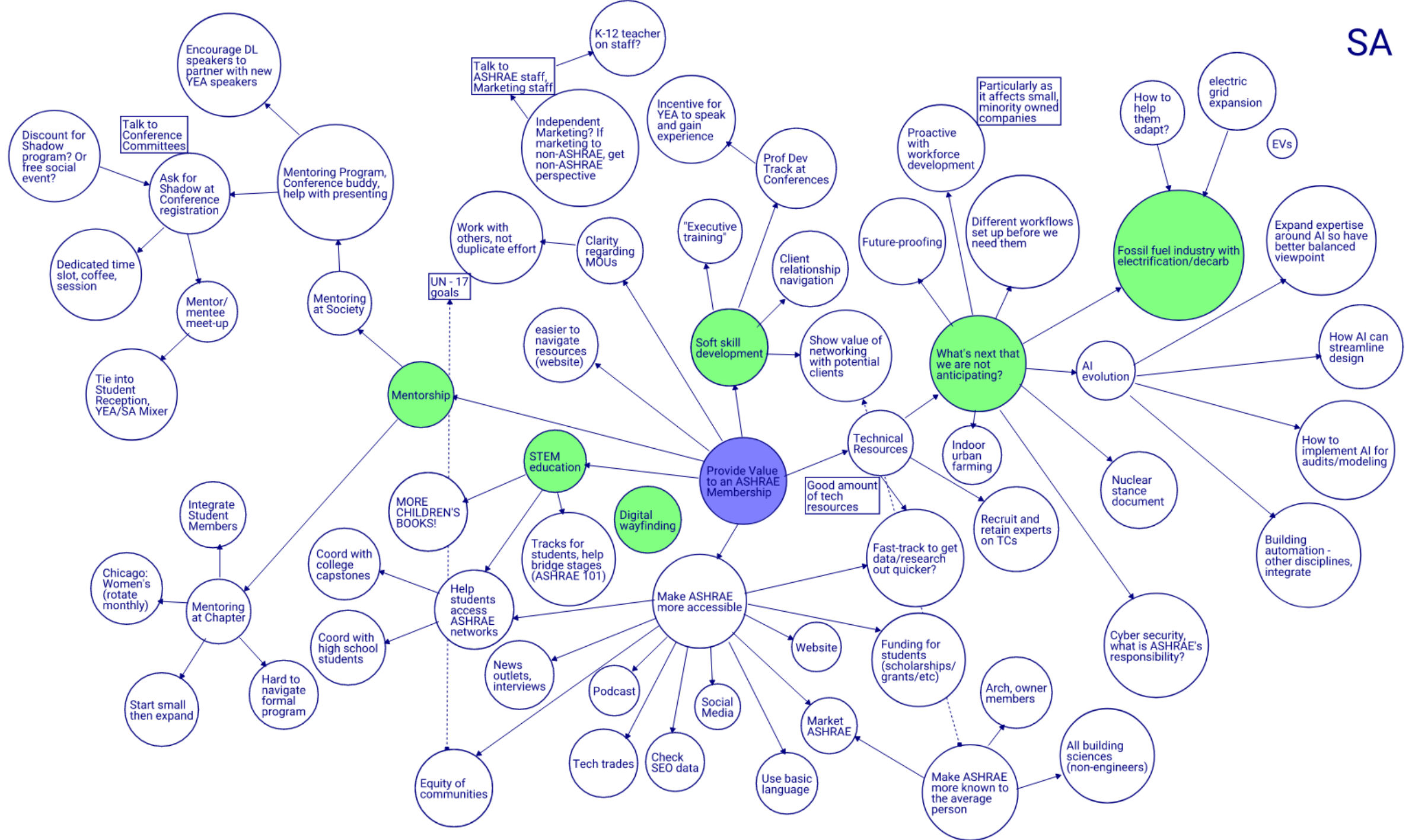


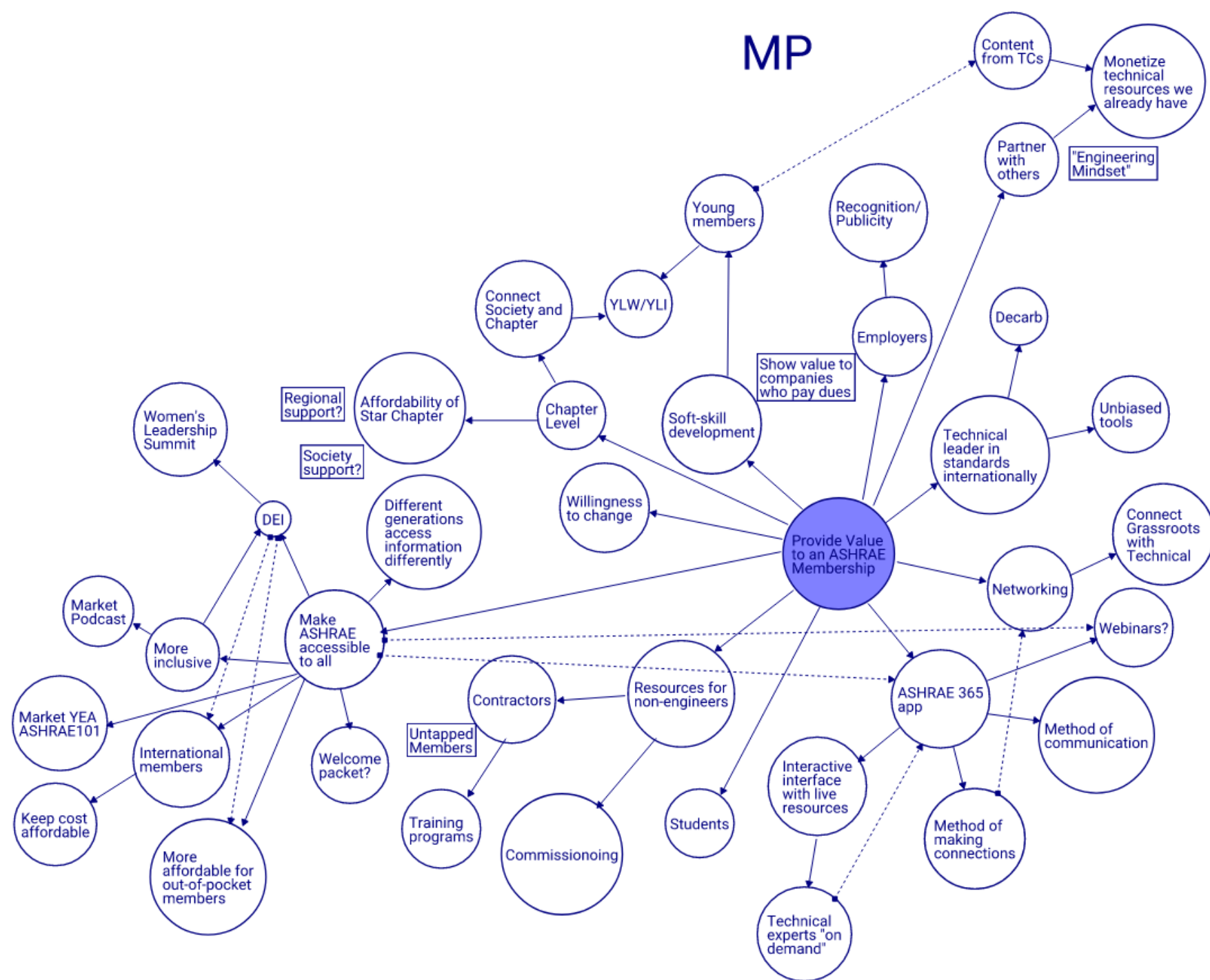
CTTC



YEA







International Perspective

Outcomes:

- 1. There should be an option of Electronic v/s print with respect to ASHRAE publications** – All ASHRAE members should have access to publications in its electronic form as a default option. A downloadable pdf version should be able to be requested that can be printed. Hardcopy prints from ASHRAE can be payable.
- 2. ASHRAE must become the go-to organization globally for its publications** – ASHRAE codes and standards must have global climate zones than have only North American climate zones. Region wise specifications/modifications can be mentioned in existing standards. Region specific codes & standards could be created that are more relevant to specific countries/global climate zones. Locally applicable codes can be developed by ASHRAE in collaboration with regions and chapters.
- 3. Financial Profit v/s Member Count** – Different global economies have different capacities to pay member dues. ASHRAE should look into having different grades of member dues to cater to the ever changing global economic scenarios. Creating a 3 tier membership criteria for member dues depending on under developed, developing and developed economies could increase memberships and bring more diversity to the membership.
- 4. Commercialism v/s Sponsorship** – Creating boundary conditions for allowing sponsorships without compromising commercialism concerns is key. Local chapters need sponsorships to make events happen. Allowing banners / flyers / promotional material / stalls outside the lecture hall could be allowed. Sponsorships could be for food / merchandise and not specifically for the presentation / lecture.
- 5. Local Society / Local Govt. Engagement** – ASHRAE BOD should engage more with local societies in different countries and local governments. Local societies have more impact in government organizations and having MOUs and interactions with local governments through local societies could help ASHRAE have an impact on shaping local by-laws.
- 6. Increasing global inclusivity** – ASHRAE codes and standards tend to be North America centric as committees tend to have majority North American members. Having diversity and mix of global members in committees can help ASHRAE codes and standards become more relevant globally.
- 7. Creating more global conferences** – Marketing ASHRAE as the global organization for building codes could be done more aggressively. Having more international conferences across the globe could be a start. Doing more collaborative conferences with local societies could increase ASHRAE's reach to a global audience. This could increase memberships.
- 8. 5 year / 10 year goals** – ASHRAE should position itself to become the go-to organization globally for codes / standards / publications / networking / influencing etc. It should look at becoming the authority for any local government regulation / policy making. This can be achieved by investing in membership, local societal connects, inclusivity and having a diverse mix of individuals catering to specific requirements of different regions in the globe.

Consistent Topics

- Anticipating and shaping industry trends
- Technical leader in the industry
- Connect ASHRAE PDH reporting to NCEES to automate tracking continuing education for PEs (like AIA)
- Soft skill development. YLW/YLW for non-YEA members, Management training, financial training, professional development.
- Networking and industry connections
- Address chapter/society disconnect
- Engage with additional sibling societies and government entities. Be the trusted resource for government regulators/policy makers.
- DEI, Equity of communities. Both communities that ASHRAE serves and communities within ASHRAE.
- Make ASHRAE more accessible. More easily accessible resources. Focus on articles written for SEO to increase traffic from web searches. Interactive “org chart” online with links to all committees/groups with information and contact information.

Consistent Topics

- Mentorship. At a chapter level, at society, at conferences. Shadow program at Conferences.
- STEM Education. K-12, Tech schools, and higher education. More interaction on campus with events/participation in career fairs.
- Enhance ASHRAE 365 app to be method of communication, networking, access to technical resources, interface with live resources, technical experts on demand
- Market ASHRAE to more people. Average people, internationally, everyone in building sciences like Architects and non-engineers
- Dual digital/printed option for all resources. Maintain accessibility to technical resources to people without power or internet access. Keep printed option for all resources.
- Include international climate zone information instead of exclusively North American data
- Keep cost accessible to all members. Explore increasing sponsorships while maintaining non-commercialism to help offset cost.

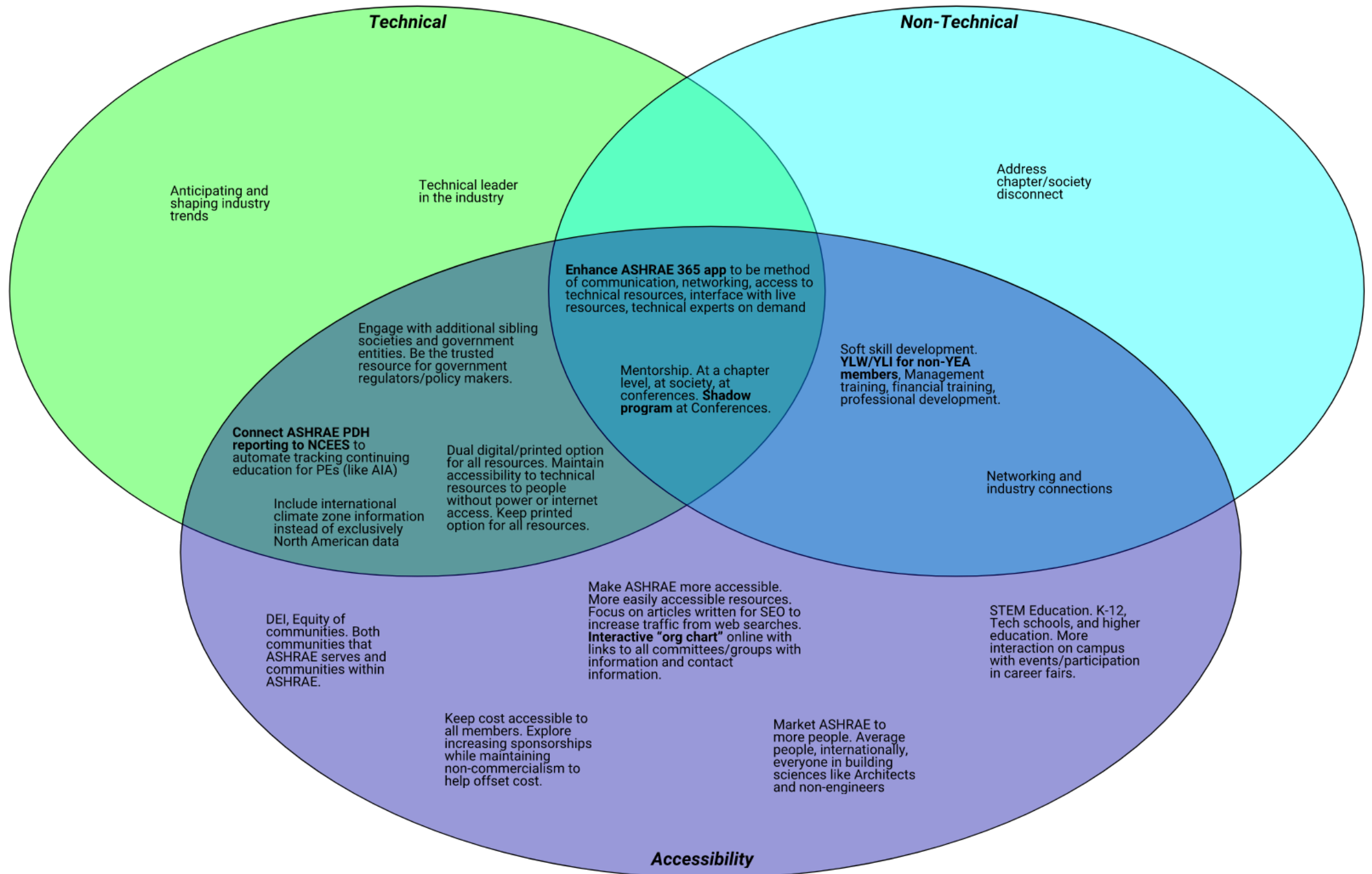
Consistent Themes



Technical

Non-
Technical

Accessibility



Next Steps

- What are we missing?
- Continue reaching out to all groups within ASHRAE.
- Make sure all ASHRAE members know about the SP effort and know how to have their voices heard!

ASHRAE at International Conferences Task Group

ICTG Members

Andres Sepulveda, Chair

Ron Gagnon, Member

Art Giesler, Member

Cheng Wee Leong, Member

Richie Mittal, Member

Raul Simonetti, CEC Chair

Farooq Mehboob, Consultant

Tony Giometti, Staff

Tasks:

- Evaluate if/when ASHRAE should have an international conference with BOD involvement/attendance and at what frequency this event(s) should occur.
- Show members and the world that ASHRAE is a global organization.

The 2024 Madrid ICBD live experience:

- 3rd ASHRAE Topical Conference on Building Decarbonization. Primary objective is to enrich the knowledge base while fostering global collaborations in decarbonization efforts, ultimately leading to a sustainable future for the planet.

The 2024 Madrid International Building Decarbonization Conference

Deliverables & Timelines:

- Provide a report at the 2024 Chicago WM
- Work completion: January 30th, 2024



Ongoing 2024 Madrid ICBT Live Experience



2024 International Conference on Building Decarbonization April 17-19, 2024 | Madrid, Spain

www.ashrae.org/2024BuildingDecarb



Ongoing 2024 Madrid ICBD Live Experience



Steering Committee

- Marianna Vallejo, Jacobs, Conference Chair
- Costas Balaras, National Observatory of Athens, Scientific Committee Chair
- Andres Sepulveda, Commtech Commissioning Services, Region XIV Liaison
- Tony Giometti, Group Manager - Conferences at ASHRAE
- Tom Lawrence, University of Georgia
- Alkis Triantafyllopoulos, Menerga
- Bing Liu, Pacific Northwest National Laboratory, ASHRAE TFBD ExCom member
- Ongun Berk Kazanci, Technical University of Denmark, ICIEE4
- Joseph Firrantello, McKinstry
- Ghina Annan, Stantec
- Eduardo Maldonado, Engenharia da Universidade do Porto. Region XIV RMCR
- **Ginger Scoggins**, Engineered Designs Inc, ASHRAE President
- Craig Bradshaw, Oklahoma State University, CEC Representative

Invited Speakers/DLs:

- Esteban Baccini
- Erich Binder
- Chandana Dalugoda
- **Dennis Knight**
- **Luke Leung**
- **Chandra Sekhar**
- Samir Traboulsi

Paper Topics:

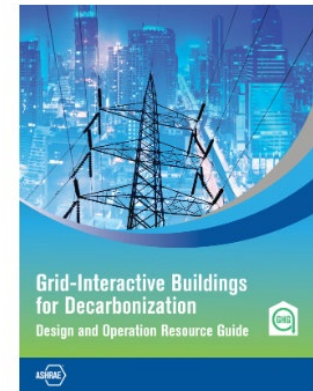
- Data Centers
- Design Case Studies
- Envelope Materials
- Healthcare
- Heat Pumps
- Multi-Family Buildings
- Refrigerants
- Retrofit
- Smart Systems/Integrated Grid
- Strategies and Policies
- Whole Life Cycle Carbon

Roundtables: Fit for 55, NZC DCs, Spanish R.E. Vision on BD

Special Sessions: Update on the TFBD Activities

ALI Course: Introduction to Building Decarbonization

Bookstore: TBD



Ongoing 2024 Madrid ICBD Live Experience



Diamond Sponsor



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Platinum Sponsors



Endorsers



Sustainability Sponsor



Silver Sponsor



Bronze Sponsor



Ongoing 2024 Madrid ICBD Live Experience



Conclusions

- We have an in-house capacity to organize and host International Conferences
- Conference Steering Committees can be easily set up with International perspective of their members
- We can count on ASHRAE BOD support and involvement
- It is possible to have full or 1/3 BOD participation, scheduling an International Roundtable
- ASHRAE has a global hook to attract bright speakers and participants as well as commercial sponsors and partnership organizations
- International Conferences can generate beneficial collaborations and opportunities with International Institutions
- International Conferences can raise the ASHRAE global profile and relevancy
- Lesson Learned exercise will be scheduled at the Madrid Conference completion



SO, THAT'S WHY ASHRAE SHOULD HOST INTERNATIONAL CONFERENCES OUTSIDE N.A.

ASHRAE at International Conferences Roadmap - Prioritized Options

- An ASHRAE International Conference should go far beyond traditional TOPICAL CONFERENCES
- International Conferences can fit in future ASHRAE RAL, Region VIII, XII, XIII, XIV Enhanced CRC programs
- Full or partial (1/3) BOD in-person attendance and a BOD meeting schedule need to be considered, addressing fiscal and staff impact
- Global Summits and HVAC&R International Roundtables outside N.A. can fill gaps between International Conferences
- Is there an opportunity to organize an ASHRAE Annual Conference outside N.A. in the near future?
- Based on the Madrid Conference experience, once the location is identified a minimum of 15-18 months is required for organizing an International Conference

5-Year Plan

- 2024: Madrid International BD Conference, April 17-19th: Region XIV
- 2025: HVAC&R International Roundtable, scheduled with a CRC and a full BOD meeting: Region XII or XIII
- 2026: Topical Conference with 1/3 of the BOD in-person attendance: RAL, Region VIII, XII, XIII
- 2027: ASHRAE mini-Annual Conference outside N.A.: RAL, Region XII, XIII
- 2028: International Conference, Enhanced CRC with a full BOD meeting: RAL, Region VIII, XII, XIII

**REPORT TO THE BOARD OF DIRECTORS
From the Presidential Ad Hoc on Collaboration
As of January 12, 2023**

Recommendations for Board Approval:

1. MOTION: We recommend that the ASHRAE MOU template be revised to align with the new AASA 'Collaboration Agreement and Membership Requirements' document, attached in Appendix E.

BACKGROUND: As the AASA's 'Collaboration Agreement and Membership Requirements' document is based upon ASHRAE's Code of Ethics and its core values, it stands to reason that ASHRAE's MOU template should align with those same organizational values.

FISCAL IMPACT: None

STAFF IMPACT: None

2. MOTION: We recommend that Rules of the Board (ROB) Section 3.300.006, 'Conflict of Interest' be amended as shown in Appendix F, attached.

BACKGROUND: ROB3.300.006 has been expended to include the electing and appointing members of the Board of Directors, including officers.

FISCAL IMPACT: None

STAFF IMPACT: None

3. MOTION: We recommend that the Board of Directors consider this report an official notice of a possible conflict of interest ongoing in the Region-At-Large. Accordingly, ROB 1.140.002 requires the Board to evaluate the situation to determine if a conflict of interest exists and, if so, what steps are necessary to resolve the situation.

BACKGROUND: The evaluation process for a conflict of interest is spelled out in ROB 1.140.002.

FISCAL IMPACT: We are assuming the evaluation team will be comprised primarily of volunteers, so there would be no fiscal impact.

STAFF IMPACT: A staff liaison may be required, depending on the wishes/needs of the volunteer chair.

4. MOTION: We recommend that Rules of the Board (ROB) Section 2.104.18 be amended, as shown in Appendix G, attached.

BACKGROUND: The committee believes that our chapters and regions are being unfairly restricted in their fundraising efforts with respect to product shows and equipment expositions. We recognize the importance of the AHRI show in the US and Mexico and its impact on ASHRAE's bottom line (Note: the AHRI shows are approximately 18-20% of ASHRAE's total revenue, which is a significant risk to ASHRAE, as demonstrated by the pandemic.). Our recommended revisions would allow more flexibility for chapters and regions to earn money on product shows and expositions without competing with our own AHRI shows. Further, a pathway was constructed to apply for a waiver to allow product shows and expositions outside the specified boundaries in special cases. If approved, these changes would need to be sent to Members Council so that they can revise the Manual of Chapter Operations (MCO) to align with these changes.

FISCAL IMPACT: Very positive for chapters and regions.

STAFF IMPACT: None

Information Items:

1. We have combined the three existing ASHRAE-AASA requirements and application forms be consolidated into a single 'Collaboration Agreement and Membership Requirements' document, as attached in Appendix C, Parts I and II. This document would simplify the process to join AASA, add clarity to the duties and responsibilities for both the AASA society and ASHRAE, and provide a foundation to form a mutually beneficial relationship. The duties and responsibilities are based upon ASHRAE's Code of Ethics and its core values.

We have requested AASA to review, make comments and suggest modifications as necessary to fit their plan for AASA going forward. They have done so, and their comments, input, and recommendations are found in tracking mode on our recommend 'Collaboration Agreement and Membership Requirements', found in Appendix D. Our ad hoc will be meeting with AASA at this winter meeting to continue the discussion to reach a consensus document that can be submitted to the Board.

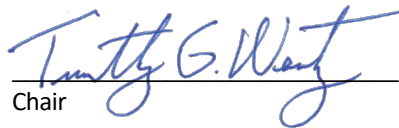
2. We have two recommendations to expand communication with AASA societies (potential Dennis Knight presidential initiative)
 - a. Create a meeting notification system and network that will allow any AASA member wishing to know about, access and participate in the discussions and work of any technical or standards committee meeting, society, council, or committee meeting through an online platform. This includes task groups, ad hoc and working groups. Chairs and staff could limit access for non-voting members and non-working group participants to listen only and possibly chat only access. [Potential Dennis Knight initiative]
 - b. Expand 2022-2023 President Farooq Mehboob's 'Securing Our Future' initiatives:
 - i. Provide AASA societies with advance notice of live-streamed BOD and Council meetings.
 - ii. Distribute to AASA societies BOD/ExCom/Committee agendas with links to open meetings.
 - iii. Distribute to AASA societies the BOD's quarterly newsletter.
3. We recommend the development of an equity-based dues structure with two separate initiatives (potential Dennis Knight presidential initiative)
 - a. Initiate and complete the first ASHRAE global HVAC&R salary survey of engineers, designers, contractors, operators, maintenance personnel, service technicians, building opera and facility

managers in SY 2023-2024.

- b. Develop a membership model and dues model that is fair, equitable and affordable to anyone, anywhere wanting to join ASHRAE. The model could be a basic membership that includes very little in the ways of services other than possibly access to the online journal and insights and some public facing website information. Consider a stepped membership subscription service layered on top of the basic membership that could provide access to handbooks, standards, guidelines, conference papers and presentations, online learning, access to a web-based AI driven CEN help desk and mentorship program. In addition, the models could support individuals, small employers (up to salaries 30-50 employees, mid-sized firms 50-100 employees, large firms over 100 employees. Basic membership could be the same so that the employer could afford to have more members engaged. Then subscriptions could be in individual, 5, 10, 20, 30 and enterprise priced, non-concurrent user access to the services subscribed to.
4. Special thanks go to the ad hoc committee who developed these recommendations:
- a. Apichit Lumbertpongpana
 - b. Ross Montgomery
 - c. Zeki Poyraz
 - d. Andres Sepulveda

Respectfully submitted on behalf of the ad hoc committee:

1/12/24
Date


Chair

Final Report

Presidential Ad Hoc on Collaboration Policies

Jan. 12, 2024

Charge

The Presidential Ad Hoc on Collaboration Policies was established by 2022-2023 President Farooq Mehboob in April of 2023 and was extended by 2023-2024 President Ginger Scoggins. The charge given to the ad hoc committee contained four goals:

1. Review and analyze ASHRAE's collaboration/competition with other international bodies and provide recommendations on approaches to formation of chapters in different parts of the world.
2. Provide recommendations to develop policies and rules for regions and chapters with interacting with other industry bodies.
3. Review the potential conflicts of interest arising from regional and chapter officers holding concurrent positions in other societies and make recommendations.
4. Review and develop policies governing MOUs with other bodies.

Preamble

ASHRAE's mission statement requires Society "To serve humanity...". At the same time, we recognize that ASHRAE, working alone, cannot make a difference in the 'Critical Issues of the Day'¹ that we face worldwide. As stated by ASHRAE President Mehboob (2022-2023) *"For us to move the needle, it will be necessary to work in concert with like-minded societies to make a material difference"*². This is the essence of **collabora' on** (the ability to work with others to achieve common goals) and is embedded into the "DNA" of ASHRAE philosophy.

ASHRAE also has a duty to serve its members, who pay dues and make achieving our mission possible in a volunteer-led Society. Creating a diverse, inclusive environment best serves our members by exposing them to the richness of different thoughts, perspectives, priorities, and processes. To provide the most diverse environment possible, ASHRAE needs to partner with outside organizations and stakeholders to create these diverse environments, while simultaneously serving humanity. This is the essence of **coopera' on** (the ability to work with others to achieve ASHRAE goals) and is also an integral part of the "DNA" of ASHRAE.

¹ ASHRAE Global HVAC&R Summit, Istanbul, Türkiye, 2022

² 2022-2023 ASHRAE President Farooq Mehboob, ASHRAE Global HVAC&R Summit, October 2022

The interface between collaboration and cooperation may give rise to the perception of **competition** (striving for common goals that cannot be shared). Some HVAC&R societies have historically looked at ASHRAE as a competitor when our mission clearly calls for competition to be avoided or minimized. Competition, either real or perceived, can create **conflict** (a lack of harmony) that should be avoided, where possible. Any competition that does arise should be conducted in alignment with ASHRAE's Core Values of "Excellence, commitment, integrity, collaboration, volunteerism, and diversity". While competition may sometimes manifest itself, its solution should include fairness and integrity, coupled with ethics; a goal to be shared by all parties involved in conflict.

Due to the importance of our mission to serve humanity, it is imperative that ASHRAE has clear policies to amplify our ability to collaborate and cooperate while minimizing any negative unintended consequences from competition and conflict. ASHRAE policies should support members' ability to make informed decisions on their path to success in their professional careers.

Background

The need for the ad hoc was precipitated by multiple, verified reports of other HVAC&R societies recruiting ASHRAE members at a substantially reduced membership rate from that levied by ASHRAE. It has been reported to the committee that some organizations are using ASHRAE resources to develop their own branded resources that are more or less the same as ASHRAE resources. Luring ASHRAE members to join another HVAC&R society using ASHRAE resources, at a substantially lower membership rate, was deemed to be not in accordance with the ASHRAE Code of Ethics by the ad hoc committee.

ASHRAE has diligently attempted to avoid competing with local HVAC&R societies, viewing them as partners in addressing the critical issues we all face. However, this is not how ASHRAE's actions are always perceived, due to the discrepancy in size, financial stability, and global reach. The primary goal of the ad hoc was to create a fair, equitable, and mutually beneficial foundation that would build a relationship that avoided unfair competition and accentuated cooperation and collaboration.

Analysis

To understand the scale and scope of the problems inherent in applying fair and equitable policies to govern collaboration, cooperation, and competition, the committee felt it would be best to first focus on the existing relationships between ASHRAE and the ASHRAE Associate Society Alliance (AASA) societies. ASHRAE has a long history with many of its AASA societies and issues involving collaboration, cooperation, and competition have manifested themselves many times over the years. Once policy recommendations were developed for AASA, the committee

would then move forward to address relationships with other, non-AASA societies in a consistent manner.

The ad hoc committee conducted a survey of AASA members to identify their membership numbers and their dues for membership. The results of this survey are found in Appendix A attached to this report.

Several observations can easily be made by studying the results found in Appendix A:

- The vast majority of AASA societies have a very small membership base compared with ASHRAE. It should then come as no surprise that many of our AASA societies have a very small staff, and in some cases, the staff is only part-time.
- The vast majority of AASA societies have a dues structure that is much smaller than ASHRAE's. Many have an annual dues of between \$10 and \$50 US.
- Many AASA societies include a corporate dues structure, which to an extent, obscures their actual membership size.

Looking at the survey responses it becomes apparent that most AASA societies have a much different business model than ASHRAE's. Most AASA societies rely upon sponsorships, corporate memberships, grants, or other forms of "soft" revenue. ASHRAE's business model relies, in large part, upon member dues as seen by the fact that member dues comprise 27% of its total revenue, the second largest revenue stream behind the expositions.³ This explains the disparity in dues between ASHRAE, at \$240/year US, and the dues for an AASA society, which is as low as \$9/year US. This disparity in business models can give rise to the perception of unfair competition.

Due to this structural difference between ASHRAE and its AASA societies, it is not hard to see why so many of our AASA societies view ASHRAE as a competitor. ASHRAE, due to its size and global outreach, could irreparably damage an AASA society's revenue stream inadvertently and without any malice or intent. The AASA society wouldn't care if the damage was done inadvertently or not, of course. The damage would be done and would be long-lasting, if not permanent. This explains why so many AASA societies are opposed to ASHRAE forming chapters or sections within their national boundaries. This resistance by national associations explains, in part, the low number of national associations that currently have an ASHRAE chapter, section, or student branch within their borders, as shown in Appendix B.

ASHRAE has a duty to its regions, chapters, and sections to work diligently to fulfill ASHRAE goals and objectives. To provide our members with a diverse environment that provides a wide spectrum of perspectives, solutions, and strategies it is imperative that we work effectively with local, regional, and national HVAC&R entities with like-minded goals and objectives. As stated previously, we need to work with our global partners. As a result, ASHRAE tends to view the relationship with its AASA societies as an opportunity instead of a threat. It can afford to do so,

³ ASHRAE Financial Dashboard, March 2023

as any threat to ASHRAE is bound to be minimal due to the difference in size and financial foundation. There is great merit in ASHRAE's focusing on the opportunities inherent in the relationship, as well. ASHRAE's many strengths (global outreach, extensive industry research, strong volunteer base, etc.) if properly aligned with an AASA society's local strengths, would amplify benefits to both organizations and its members.

As the structural element of our relationship with AASA societies is not likely to change, it becomes critical that our policies toward AASA societies should be based upon the following:

- Formation of a relationship based upon fairness, equity, respect, integrity, and our common mission to serve humanity.
- Commitment to enhance the growth and strength of both ASHRAE and the AASA society simultaneously
- Mutual agreement to avoid real or perceived unfair practices or conflicts of interest.
- Frequent and transparent communication to proactively identify situations that might cause harm to either party

It is the position of the ad hoc that implementing the structural elements listed above into a new AASA 'Collaboration Agreement and Membership Requirements' document would reduce the perception of competition and conflict revolving around the formation of chapters in different parts of the world, one of the charges given our committee.

Once a relationship foundation was built for AASA societies, the ad hoc embarked on a review of the existing ASHRAE Memorandum of Understanding (MOU) template, as required by the charge to the committee. The ad hoc thought it beneficial to ensure that the policies employed with AASA societies would be aligned with our policies to other entities outside of AASA and be used to as a foundation of equity and trust for regions and chapters to use in interacting with other industry entities. A foundation of equity and trust will also reduce competition and conflict with entities outside of AASA.

As directed by the charge to the committee, we are providing the following recommendations for consideration by the ASHRAE Board of Directors.

Recommendation #1 – New AASA Collaboration Agreement and Membership Requirements

Consistent with the approach outlined in the analysis phase our work, the committee decided to first address the relationship between ASHRAE and its AASA societies. Currently, that relationship is defined by three separate documents:

- ASHRAE Associates – Requirements and Application Procedure for Association with ASHRAE (BOD – 05-06-29)
- ASHRAE Associate Society Alliance Application Request Form – BOD

- ASHRAE Memorandum of Understanding (MOU) template

Predictably, using three different documents to define a relationship creates confusion, as well as inevitable redundancy. The ad hoc committee decided to consolidate all three documents into a single document entitled, 'AASA Collaboration Agreement and Membership Requirements'. Having the relationship defined by a single document will add clarity to the relationship, particularly with respect to expected conduct and outcomes. Additionally, it is our understanding that the BOD no longer wishes to enter into an MOU with AASA societies. Our recommendation to consolidate the three documents into a single collaboration agreement addresses that decision by the BOD.

By consolidating the three documents into a single agreement, we believe it will be far easier to define a fair, equitable, and respectful relationship between ASHRAE and its AASA societies. The proposed 'Collaboration Agreement and Membership Requirements' (Agreement) for association with ASHRAE defines the conduct and outcomes expected between ASHRAE and its AASA societies. The Agreement highlights the following:

- Recognizes the duty of both organizations to serve its members and to strengthen their society
- Identifies boundaries of acceptable conduct that avoids unfair competition or conflicts of interest
- Promotes strong communication between ASHRAE and the AASA society to prevent disputes and misunderstandings
- Written such that the duties, responsibilities and rights are mirrored between ASHRAE and its AASA society.

The proposed 'Collaboration Agreement and Membership Requirements' for AASA societies is found in Exhibit C (Parts I and II) attached to this report. Our ad hoc has transmitted the attached proposed 'Collaboration Agreement and Membership Requirements' to AASA for their review and input, which we have received. Exhibit D is a copy of our ad hoc's 'Collaboration Agreement and Membership Requirements with AASA's recommendations in tracking mode. Our ad hoc is planning on meeting with AASA at the 2024 Chicago meeting to resolve questions regarding AASA's proposed changes. Exhibit C and D are offered as informational items only until a consensus with AASA can be achieved.

Recommendation #2 – Expand Communication with AASA Societies

Developing strong communication policies will not only strengthen a relationship, but it will also mitigate misunderstandings and false perceptions. Strong communication between ASHRAE and AASA societies would further ASHRAE's ability to interact with AASA societies and reduce the resistance to chapter formation worldwide. The ad hoc therefore recommends consideration of the following specific actions relative to communication with AASA members:

1. Create a meeting notification system and network that will allow any AASA member wishing to know about, access and participate in the discussions and work of any technical or standards committee meeting, society, council, or committee meeting through an online platform. This includes task groups, ad hoc and working groups. Chairs and staff could limit access for non-voting members and non-working group participants to listen only and possibly chat only access. [Potential Dennis Knight initiative]
2. Expand 2022-2023 President Farooq Mehboob's 'Securing Our Future' initiatives:
 - A. Provide AASA societies with advance notice of live-streamed BOD and Council meetings.
 - B. Distribute to AASA societies BOD/ExCom/Committee agendas with links to open meetings.
 - C. Distribute to AASA societies the BOD's quarterly newsletter.

The first initiative is under review and development by President-Elect Knight's PEAC committee. The second initiative would be implemented by ASHRAE staff, with permission from the Board of Directors.

Recommendation #3 – Develop a New Equity-based Dues Structure

A significant part of the problems involving misunderstanding and false perceptions, which often gives rise to competition, is the inherent inequity found in ASHRAE's North American-centric dues structure. Developing an equity-based dues structure, particularly in developing economies, would enhance our interaction with outside organizations and remove some of the obstacles faced in forming new chapters worldwide.

Fortunately, President-elect Knight is considering two initiatives that would address the obstacle of ASHRAE's current dues structure. The ad hoc committee therefore is pleased to forward these two initiatives that are under consideration by Mr. Knight's PEAC committee:

1. Initiate and complete the first ASHRAE global HVAC&R salary survey of engineers, designers, contractors, operators, maintenance personnel, service technicians, building opera and facility managers in SY 2023-2024. Plans and discussions are already underway to make this happen. [Potential Dennis Knight initiative]
2. Develop a membership model and dues model that is fair, equitable and affordable to anyone, anywhere wanting to join ASHRAE. The model could be a basic membership that includes very little in the ways of services other than possibly access to the online journal and insights and some public facing website information. Consider a stepped membership subscription service layered on top of the basic membership that could provide access to handbooks, standards, guidelines, conference papers and presentations, online learning, access to a web-based AI driven CEN help desk and mentorship program. In addition, the models could support individuals, small employers

(up to salaries 30-50 employees, mid-sized firms 50-100 employees, large firms over 100 employees. Basic membership could be the same so that the employer could afford to have more members engaged. Then subscriptions could be in individual, 5, 10, 20, 30 and enterprise priced, non-concurrent user access to the services subscribed to.
[Potential Dennis Knight initiative]

In the event the two initiatives above are not incorporated into the Society's theme for 2024 – 2025, the ad hoc committee recommends that these two initiatives be studied and implemented by Members Council.

Recommendation #4 – Revise the Existing ASHRAE MOU Template

The major elements of the AASA 'Cooperation Agreement and Membership Requirements' provide a suitable basis for a new MOU template. The intent of the revised MOU template is to provide a structure to enable regions and chapters to successfully interact with entities outside of AASA. The structure is identical to that developed for AASA societies and is based upon the shared duty to serve its members, create boundaries of conduct to limit competition, provide strong communication and mutual benefits to both ASHRAE and the other organization.

The proposed new ASHRAE MOU retains the basic outline of the original ASHRAE MOU with the added duties, boundaries, and communication protocols contained within the proposed AASA 'Cooperation Agreement and Membership Requirements'. The proposed revised ASHRAE MOU template is found in [Appendix E](#). This recommendation falls under the purview of Members Council and would require the approval of the Board of Directors.

Recommendation #5 - Conflict of Interest Policies in the Rules of the Board (ROB)

Recommendation #1 through #4 are primarily aimed at enhancing the relationship between ASHRAE and other organizations, both inside and outside of AASA, while also preventing unfair competition and conflict. Recommendation #5 primarily deals with addressing conflicts of interest that already exist, are ongoing, or may manifest themselves in the future.

The ad hoc committee found that the Rules of the Board (ROB), in section 1.140.002, contains a very robust and comprehensive 'Conflict of Interest' policy. The existing 'Conflict of Interest' policy includes a duty in 1.140.002.3(A) that each "Covered Person" has to file a conflict of interest form each year for "actual, potential, or apparent" conflicts of interest. A "Covered Person" is defined as follows:

"A "Covered Person" includes each of ASHRAE's current and former (within the last five years) (i) directors, (ii) officers and (iii) employees, volunteers, independent contractors,

substantial contributors, and others who have the ability to exercise substantial influence over the affairs of ASHRAE.”

From this definition it is clear that virtually everyone in ASHRAE could be considered a “Covered Person”. It is also clear that directors and officers are specifically called out to provide notice of “actual, potential, or apparent” conflicts of interest. The issue to be addressed by the ad hoc committee included the issue of an officer of another HVAC&R society serving as an officer, director, or in another leadership position with ASHRAE. It is the position of the ad hoc committee that holding a leadership position in another HVAC&R society does not automatically produce an adverse conflict of interest. Holding leadership positions in ASHRAE and another HVAC&R society would still have to be reported as called out in ROB1.140.002, but it may not produce an adverse situation for ASHRAE. For example, it was noted that several of our South American chapters have an agreement with their national HVAC&R society such that a board member of the ASHRAE chapter automatically sits on the national HVAC&R society board and a board member of the national HVAC&R society automatically sits on the ASHRAE chapter board. This current policy is an operational issue that seems to work well at the chapter level and obviously greatly improves communication between the two entities.

Even more importantly, ROB 1.140.002 outlines the procedures for handling a conflict of interest. Again, the ad hoc committee felt that the ROB are sufficiently clear on how a conflict of interest is to be identified, handled, and resolved.

It is the position of the ad hoc committee that the existing ROB section on conflicts of interest is sufficiently clear and contains actionable strategies to address an adverse conflict of interest, as seems to be happening in the Region-at-Large. The issue here, in our opinion, is not the absence of appropriate policies. The issue is a lack of enforcement. As found in ROB 1.140.002 the responsibility for enforcement clearly rests with the Board of Directors. In order to address the situation currently ongoing in the Region-at-Large, the President (Chair of the Board) or the Audit Committee, must be formally notified of a potential conflict of interest. The Board or the committee will then conduct an evaluation as outlined in ROB 1.140.002.3(B).

If a conflict of interest is confirmed by the evaluation process the BOD has the authority in ROB 1.140.002.3(C) to address the conflict, as follows:

“the Board or committee determines that the member has in fact failed to disclose an actual or possible conflict of interest, it shall take appropriate disciplinary and corrective action, which may include removal from office or termination.”

In reviewing the ROB, the ad hoc committee discovered a second reference to conflicts of interest in ROB 3.300.006, ([Appendix F](#)) which requires the nominating committee to take every “reasonable effort” to avoid any situation that may precipitate a conflict of interest. Although the section currently only refers to standing committees and councils, the ad hoc committee believes that this section could be strengthened to be more inclusive by including the selection of the Board of Directors nominees, including officers, in the requirement to take every

reasonable effort to avoid a potential conflict of interest. Further, the ad hoc committee recommends that this section of the ROB refer back to ROB section 1.140.002 to add clarity to process of avoiding conflicts of interest. The recommended changes to the ROB are found in Appendix F (attached).

It is the position of the ad hoc committee that the BOD considers this report to be an official notification of a potential conflict of interest occurring in the Region-at-Large and that the Board take the steps called out in the ROB 1.140.002 to evaluate the situation, such that appropriate action can be taken, if needed.

Recommendation #6 - Chapter Product Shows and Expositions

The issue of unfair competition, or the restriction of fair competition, are related issues and are covered by ASHRAE's Code of Ethics, along with various laws and regulations, such as the Sherman Anti-trust Act in the United States. Accordingly, great care needs to be taken to ensure there is a fair and equitable right to pursue legal fundraising operations worldwide.

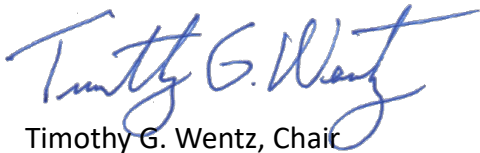
One obstacle to a fair and equitable right to pursue legal fundraising operations involves the arbitrary restrictions on product shows and expositions for regions and chapters outside of North America. The committee is well aware of the long, successful, and monetarily important relationship with AHRI. ASHRAE's operating budget would be far less without the revenue generated by the AHRI shows in the United States and Mexico.⁴ At the same time, it appears that AHRI has no current plans to offer or produce shows outside of North America, particularly in developing economies, where many ASHRAE chapters exist. ASHRAE chapters outside of North America, and in particular in developing economies, could raise a transformative amount of money for their chapter if they were not unduly restrained by restrictions found in ROB 2.104.18 that restricts product shows and expositions to a net display area of 10,000 square feet, with individual displays capped at 100 square feet. The ad hoc committee understands the need to restrict chapters in North America so as to not compete with AHRI and thus ourselves. However, this same logic evaporates when viewed in countries without any presence by AHRI.

This change in policy would empower our regions and chapters outside of North America by allowing greater interaction, along with enhanced fund-raising, with other industry bodies. We are also recommending that no product show or exposition be allowed to conflict with the AHRI shows in the United States and Mexico without permission from IEC.

⁴ It is worth noting that ASHRAE's dependence on the revenue from the AHRI shows constitutes an extreme risk to our Society. ASHRAE's revenue from the AHRI shows is approximately 18% of total revenues. Having that many "eggs in one basket" exposes to ASHRAE to an enormous risk, as evidenced by the pandemic cancelled AHRI shows. ASHRAE was able to survive that sudden revenue shortfall through government stimulus funds.

The ad hoc committee has communicated with Members Council and have received their feedback on our recommended changes, which we have addressed in making our recommendations. Accordingly, we are recommending that ROB 2.104.18 be changed as found in Appendix G. These changes will be submitted to The Board of Directors for their consideration and action. These changes must also be sent to SRC for their review and recommendations. Finally, any changes made must be sent to Members Council so that they may align the Manual of Chapter Operations with any changes made.

Respectfully submitted,



Timothy G. Wentz, Chair
Apichit Lumlertpongpana
Ross Montgomery
Salih Zeki Poyraz
Andres Sepulveda

Appendix A - AASA Member Size and Dues

Society	# of Members (includes students, excludes delinquents)	Full Member Dues in US\$	Notes
ASHRAE	47,631	240	
CIBSE ¹	20,000	364	
ISHRAE	28,780	36	
AAF (Argentina)	200	55	
AIRAH (Australia)	4,200		Affiliate = \$390 AUD
ABRAFAC (Brazil)		120	\$962 per company
ABRAVA (Brazil)	380	40 to 808	Depends on company revenues
ASBRAV (Brazil)		125	
ACAIRE (Columbia)	250	300	Company annual dues = \$1,500 US
FINVAC (Finland)	5,500		
AICVF (France)	2,000	188	+100 corporate members
TEE (Greece)		54	
HKIE (Hong Kong)	5,000	270	
ETE (Hungary)	650	21.5	HVAC specialist = 30, +13 corporate members
AiCARR (Italy)	2,065	150	+ 187 corporate members
JSRAE (Japan)	6,000	69	+ 460 corporate members
SHASE (Japan)	15,000	82	
AHGWTCL (Latvia)	342		
LITES (Lithuania)	24		+13 corporate members
MACRA -Malaysian Air- Conditioning & Refrigeration Association	387	34.88	
IEM -The Institution of Engineers (Malaysia)	45,000	36.05	
MAESCO - Malaysia Association of Energy Service Companies	62	46.50	
Malaysian Fire Protection Association	235	93.0 (Corporate) 35.0 (Individual)	
PHVACR (Pakistan)	3,000		
APVARC (Peru)	In hibernation		
PGBI (Philippine Green Building Initiative)	600	18	
PSME (Philippine Society of Mechanical Enginners)	1,000	18	
PSVARE(Philippine Society of Air Conditioning and Refrigeration Engineers)	100	91	
AFCR (Romania)	50	11	
AIIR (Romania)	1,167	30	+72 corporate members
AGFR (Romania)		15	
KGH (Serbia)	850	15	+126 corporate members
SAIRAC (South Africa)	1,200	37.54	
KIAEBS (South Korea)	8,700	37.54	
ATECYR (Spain)	1,500	150	An additional 100 companies
SWKI (Switzerland)	1,410	15	
TTMD (Turkiye)	1,400	15	
HVAC&R PE (Taiwan)	200	162	
TARPEA (Taiwan)	245	33	
TSHRAE (Taiwan)	8,000	9	
ACAT, FTI, TRA, TATA, MECT, TEMCA (Thailand)	100	9	

¹CIBSE is not an AASA member but was included in the survey for comparison purposes

Appendix B - AASA Members with Local ASHRAE Chapters

Number	Country	Acronym	Local ASHRAE Chapter	MOU in Place (Yes/No)
1	Argentina	AAF	Argentina Chapter (178)	
2	Australia	AIRAH		Yes
3	Austria	OEKKV		
4	Bahrain	BSE	Bahrain Chapter (181)	
5	Belgium	ATIC		
6	Brazil	ABRAFAC	Brazil Chapter (172) South Brazil (213)	
7	Brazil	ABRAVA	Brazil Chapter (172) South Brazil (213)	
8	Brazil	ASBRAV	Brazil Chapter (172) South Brazil (213)	
9	Brazil	SBCC	Brazil Chapter (172) South Brazil Chapter (213)	
10	Chile	CCHRYC	Chile Chapter (196)	
11	Chile	DITAR	Chile Chapter (196)	
12	China	CAR	Hong Kong Chapter (143) Macao Chapter (198)	Yes
13	China	CCHVAC	Hong Kong Chapter (143) Macao Chapter (198)	
14	Colombia	ACAIRE	Columbia Chapter (190)	
15	Czech Republic	STP		
16	Denmark	DANVAK		
17	Denmark	DRA		
18	Ecuador	ATEAAR	Ecuador Chapter (199)	
19	Egypt	ESME	Cairo Chapter (161) Pyramids Chapter (211) Alexandria Chapter (222)	
20	Finland	FINVAC		
21	Finland	LIVI		
22	France	AICVF		
23	France	IIF IIR		Yes
24	Georgia	GARCAE		
25	Germany	DKV		Yes
26	Greece	TEE	Hellenic Chapter (168)	
27	Hungary	ETE		
28	Iceland	ICEVAC		
29	India	ISHRAE	India Chapter (158) Western India Chapter (163) Bangalore Chapter (169) Chennai Chapter (185) Pune Chapter (186) Mumbai Chapter (188) Deccan Chapter (191) East India (215) Rajasthan (216) Chandigarh (217)	Yes

30	Iran	IRSHRAE		
31	Italy	AiCARR		
32	Japan	JSRAE	Japan Chapter (194)	Yes
33	Japan	SHASE	Japan Chapter (194)	Yes
34	Latvia	AHGWTEL		
35	Lebanon	OEAB	Lebanese Chapter (162)	
36	Lebanon	OEAT	Lebanese Chapter (162)	
37	Lithuania	LITES		
38	Mexico	AMERIC	Mexico City (165) Monterrey (166) Guadalajara (173)	
39	Netherlands	KNVVK		
40	Netherlands	TVVL		
41	New Zealand	IRHACE		
42	Norway	NORVAC		
43	Pakistan	PHVACR	Pakistan Chapter (174) Central Pakistan (189) Faisalabad (210) Northern Pakistan (179)	Yes
44	Peru	APVARC	Peru Chapter (220)	
45	Philippines	PGBI	Pilippines Chapter (167)	
46	Philippines	PSME	Pilippines Chapter (167)	
47	Philippines	PSVARE	Pilippines Chapter (167)	
48	Poland	PZITS		
49	Portugal	EFRIARC	Portugal Chapter (177)	
50	Romania	AFCR	Danube Chapter (176)	
51	Romania	AGFR	Danube Chapter (176)	
52	Romania	AIIR	Danube Chapter (176)	
53	Russia	ABOK		
54	Serbia	KGH		Yes
55	Slovakia	SSTP		
56	Slovenia	SITHOK		
57	South Africa	SAIRAC	South Africa Chapter (207)	
58	South Korea	KIAEBS	South Korea Chapter (195)	
59	South Korea	SAREK	South Korea Chapter (195)	Yes
60	Spain	ACTECIR	Spanish Chapter (182)	
61	Spain	ATECYR	Spanish Chapter (182)	Yes
62	Sweden	SWEDVAC		
63	Switzerland	SWKI		
64	Turkey	TTMD	Turkish Chapter (193)	
65	United Kingdom	IOR	ASHRAE UK (223)	Yes
66	Vietnam	VISRAE		Yes

ASHRAE Associate Society Alliance

Collaboration Agreement and Membership Requirements

ASHRAE's mission statement requires Society "To serve humanity...". At the same time, we recognize that ASHRAE, working alone, cannot make a difference in the 'critical issues' that we all face worldwide. Accordingly, ASHRAE, in its desire to best serve humanity by creating a more sustainable, resilient world for all, endeavors to produce a more effective and fruitful exchange of technical information, knowledge and ideas among engineers engaged in the arts and sciences of heating, ventilation, air-conditioning and refrigeration by making it possible for any qualifying society, engaged in the similar fields of technical activity, to become an Associate Society of ASHRAE.

Due to the importance of our mission, it is imperative that ASHRAE has clear policies to amplify our ability to collaborate and cooperate with like-minded HVAC&R societies while minimizing any negative, unintended consequences from competition and conflict. This collaboration agreement between ASHRAE and an Associate Society is intended to identify the rights, responsibilities and requirements that are attributable to both ASHRAE and its Associate Societies.

I. BASIC REQUIREMENTS

The basic requirements for an organization within the built environment to become an ASHRAE Associate are as follows:

- A. Application will be limited to organizations located outside of the United States and Canada whose purpose is to advance the arts and sciences of heating, refrigerating, air-conditioning or ventilation.
- B. Organizations applying for association must have been in existence a minimum of five consecutive years and have no less than 50 members in good standing at the signing of agreement
- C. The membership requirements of organizations applying for association must be open to all individuals who meet the minimum requirements for ASHRAE membership. (Please reference ASHRAE's website at <https://www.ashrae.org/membership/join> for qualifications of ASHRAE membership.)
- D. All organizations seeking membership in AASA shall adhere to ASHRAE's Code of Ethics (<https://www.ashrae.org/about/governance/code-of-ethics>)

II. RIGHTS, RESPONSIBILITIES AND PRIVILEGES ATTRIBUTABLE TO ASHRAE

ASHRAE acknowledges the following:

- A. ASHRAE will strive to collaborate and cooperate with the Associate Society to advance the arts and sciences of the HVAC&R industry to serve humanity.
- B. ASHRAE will act with honesty, fairness, courtesy, competence, inclusiveness, and respect for others, which exemplify our core values of excellence, commitment, integrity, collaboration, volunteerism, and diversity.
- C. ASHRAE will avoid any real or perceived conflict of interest in its dealings with the Associate Society.

- D. ASHRAE will endeavor to avoid unfair competition¹ with the Associate Society with respect to membership recruitment or revenue streams
- E. ASHRAE will continue to grow its membership and serve its members² in keeping with its mission.
- i. The formation of chapters, sections, and student branches is a decision to be made by local ASHRAE members and is therefore not controlled by ASHRAE. The rules and regulations regarding the formation of chapters, sections, and student branches is contained within the Manual of Chapter Operations (MCO) (<https://www.ashrae.org/communities/chapters/ashrae-chapters/manual-for-chapter-operations>).
 - ii. If local ASHRAE members choose to form a chapter, section, or student branch, the local AASA society should be informed of the intent and the process to be followed to form a chapter, section, or student branch.
 - iii. If an ASHRAE chapter, section, or student branch is already existing in that country, the proposed new ASHRAE chapter, section, or student branch shall be comprised of new ASHRAE members and shall not compete with the existing ASHRAE chapter, section, or student branch.
 - iv. The proposed ASHRAE chapter, section, or student branch will endeavor to work in harmony with the local AASA societies to ensure that both the local ASHRAE chapter, section, or student branch and the local AASA organization benefit humanity.
- F. ASHRAE may promote, endorse, sponsor and/or collaborate on joint conferences, seminars, forums, and other technical events with an AASA organization if it is mutually determined that the collaboration benefits both organizations and the community as a whole.
- i. If it is mutually determined that ASHRAE should be involved in a joint endeavor, a business case on any particular collaboration project shall be agreed upon and balanced benefits measured. A clear statement of benefits to each organization shall be developed.
 - ii. If a local ASHRAE chapter or group is available, and so inclined, it shall similarly be involved in the joint endeavor and will be held to the same rights, responsibilities, and privileges as ASHRAE Society.
 - iii. If it is mutually determined that ASHRAE and/or a local ASHRAE chapter or group shall be involved in a joint endeavor, a detailed budget must be prepared showing all expected expenses and revenues for the endeavor. A detailed explanation of how the expenses, revenues and excess are to be divided between ASHRAE, its local chapter or group and the AASA organization shall be produced.
 - iv. If the joint activity is dependent on ASHRAE funding, the funding request shall be submitted to ASHRAE prior to the end of the preceding Society year, so that it may be included in the current year's budget.
 - v. ASHRAE and its chapters and groups shall comply with the requirements for product shows and equipment expositions, as outlined in the Manual of Chapter Operations (MCO)

¹ ASHRAE will avoid recruiting an Associate Society's members, sponsors, or supporters by using unfair or unethical methods.

² Serving members includes, but is not limited to, holding seminars, DL lectures and other similar activities

<https://www.ashrae.org/communities/chapters/ashrae-chapters/manual-for-chapter-operations>).

- G. Members of ASHRAE in good standing are entitled to register for meetings and conferences conducted by AASA organizations at AASA member registration rates. Each Society agrees to provide the other with one complimentary VIP registration to the primary annual meeting of the other organization.
- H. Members of ASHRAE in good standing are entitled to purchase publications of AASA organizations at AASA member prices.
- I. ASHRAE will provide each AASA organization with any regular monthly publication produced by ASHRAE.
- J. In an attempt to facilitate communication and collaboration, ASHRAE will survey their members in the country of the AASA organization and request their permission to share their name and contact information with the AASA organization. To reciprocate, the AASA organization will survey its members to identify ASHRAE members and request their permission to share their name and contact information with ASHRAE. It is hoped that this common pool of ASHRAE volunteers will serve as the foundation for future collaboration and communication.

III. RIGHTS, RESPONSIBILITIES AND PRIVILEGES ATTRIBUTABLE TO THE ASSOCIATE SOCIETY

Each ASHRAE Associate Society Alliance (AASA) organization acknowledges the following:

- A. The AASA organization will strive to collaborate and cooperate with ASHRAE and its local chapters to advance the arts and sciences of the HVAC&R industry to serve humanity.
- B. The AASA organization will act with honesty, fairness, courtesy, competence, inclusiveness, and respect for others, which exemplify ASHRAE's core values of excellence, commitment, integrity, collaboration, volunteerism, and diversity.
- C. The AASA organization will avoid any real or perceived conflict of interest in its dealings with the ASHRAE and its local chapters.
- D. The AASA organization will endeavor to avoid unfair competition³ with ASHRAE and its local chapters with respect to membership recruitment or revenue streams.
 - i. The AASA organization will not distribute ASHRAE standards, DL presentations, Handbooks or other ASHRAE member benefits for free or at a reduced rate without the written permission of ASHRAE.
- E. The AASA organization will continue to grow its membership and serve its members in keeping with its mission⁴.
 - i. The formation of chapters, sections, groups, and student branches is a decision to be made by the AASA organization.
 - ii. If an AASA organization chooses to form a chapter, section, group, or student

³ The Associate Society will avoid recruiting ASHRAE members, sponsors, or supporters by using unfair or unethical methods.

⁴ Serving members includes, but is not limited to, holding seminars, DL lectures and other similar activities

branch, ASHRAE Society and the local ASHRAE entity should be informed of the intent and the process to form a chapter, section, or student branch.

- iii. The proposed AASA chapter, section, group, or student branch will endeavor to work in harmony with ASHRAE Society and the local ASHRAE entities to ensure that both the local AASA chapter, section, or student branch and ASHRAE, and the local ASHRAE entities, benefit humanity.
- F. An AASA organization may promote, endorse, sponsor and/or collaborate on joint conferences, seminars, forums, and other technical events with ASHRAE if it is mutually determined that the collaboration benefits both organizations and the community as a whole.
- i. If it is mutually determined that ASHRAE should be involved in a joint endeavor, a business case on any particular collaboration project shall be agreed upon and balanced benefits need to be measured. A clear statement of benefits to each organization shall be developed.
 - ii. If an AASA chapter and/or a local ASHRAE chapter or group is available, and so inclined, it shall similarly be involved in the joint endeavor and will be held to the same rights, responsibilities, and privileges.
 - iii. If it is mutually determined that ASHRAE should be involved in a joint endeavor, a detailed budget shall be prepared showing all expected expenses and revenues for the endeavor. A detailed explanation of how the expenses, revenues and excess are to be divided between ASHRAE, and the AASA shall be produced.
- G. Members in good standing of AASA organizations are entitled to register for Society meetings and conferences of ASHRAE at ASHRAE member registration rates. Each Society agrees to provide the other with one complimentary VIP registration to the primary annual meeting of the other organization.
- H. Members in good standing of AASA organizations are entitled to purchase ASHRAE Society publications at ASHRAE member prices.
- K. AASA organizations will provide ASHRAE with any regular monthly publication produced by the AASA organization.
- I. AASA organizations will endeavor to attend an ASHRAE winter or annual meeting once a year.
- J. A virtual ASHRAE Library, consisting of monthly ASHRAE Journals, annual volumes of the Handbook series, Meeting Transactions will be provided to each AASA member in good standing. Digital copies of ASHRAE Standards will be made available to an AASA member in good standing upon written request.
- i. AASA members may translate and reprint ASHRAE meeting and Journal papers following formal written permission to do so.

IV. IDENTIFICATION OF ASSOCIATION

Associates may print on their letterhead: Associate of ASHRAE

V. DISASSOCIATION

ASHRAE reserves the right to disassociate with any AASA organization by withdrawing their 'in-

good-standing' status, due to a failure to meet these AASA membership requirements, ASHRAE's Code of Ethics, or precipitating a conflict of interest.

VI. APPLICATION PROCEDURE

If the applicant meets the basic requirements for association as outlined herein and desires to apply for association with ASHRAE as an AASA member, a 'Collaboration Agreement and Membership Requirements' form, signed by an authorized officer of the organization, shall be transmitted to ASHRAE as outlined herein. Further, a formal letter/request signed by an authorized officer of the applicant organization shall be directed to the AASA chairman, and the Manager of Region Services of ASHRAE, stating that the national Society, by approval of its Governing Board, has voted to apply for status as an ASHRAE Associate Society. This letter must state that the national society is fully aware of the basic requirements, rights, responsibilities, and privileges for association with ASHRAE and that it agrees to this 'Collaboration Agreement and Membership Requirements'.

When completed, mail this agreement, the above referenced letter, and the attached AASA Application Request Form to:

Manager – Region Services
C/o ASHRAE
180 Technology Parkway
Peachtree Corners, GA 30092

Email: AASA@ashrae.org

Upon receipt of this request for association, it will be reviewed by the Executive Committee for compliance with requirements and submitted to the ASHRAE Board of Directors for approval. The organization applying for association will then be officially notified of the action taken by the Board of Directors of ASHRAE. Should the number of Associate Societies in any country increase, ASHRAE reserves the right to review its relations with the Associate Society in that country to ensure maximum cooperation and to avoid duplication of effort.

Agreed and accepted:

For the organization

For ASHRAE

Signature:

Name:

Title:

Date:

Signature:

Name:

Title: ASHRAE President

Date:

AASA Application Request Form – Inserted Here



ASHRAE ASSOCIATE SOCIETY ALLIANCE APPLICATION REQUEST FORM

GENERAL INFORMATION

Society Name: _____
Address Line 1: _____
Address Line 2: _____
Address Line 3: _____
Country: _____
Telephone: _____
Facsimile: _____
Email: _____
Web Address: _____

AASA OFFICIALS (Please list elected officials on a separate page)

CHIEF STAFF OFFICER (Please list person responsible for correspondence with ASHRAE – include formal title)

Name: _____ Title: _____
Email: _____
ASHRAE Member? Yes ☐ Membership Number: _____
No ☐

AASA PRESIDENT

Name: _____
Email: _____
Term of Office: From: _____ To: _____
ASHRAE Member? Yes ☐ Membership Number: _____
No ☐

AASA REPRESENTATIVE

Name: _____
Address Line 1: _____
Address Line 2: _____
Address Line 3: _____
Country: _____
Telephone: _____
Facsimile: _____
Email: _____
ASHRAE Member? Yes ☐ Membership Number: _____
No ☐

PUBLICATIONS

Publication Name

Publication Frequency

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

MEMBERSHIP

Total Membership: _____

Membership Grades

Approximate Number of Members

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

SOCIETY MEETINGS (include 5 year listing)

Dates

Location

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

OTHER SOCIETY INFORMATION

Native Language: _____

Brief description of the nature of your national association, its aims and scope of activity, the date of formation, and include a copy of the certificate of national registration.

Submitted by:

Name: _____

Title: _____

Email: _____

Date: _____

Return Completed Application form and a copy of your Society Bylaws to:

Tammy Catchings

ASHRAE

180 Technology Parkway • Peachtree Corners, GA 30092

Email: AASA@ashrae.org

ASHRAE Associate Society Alliance

Collaboration Agreement and Membership Requirements

Comments and suggestions by AASA leadership council. Will be discussed by AASA in Chicago. (Comments from AASA in red text)

ASHRAE's mission statement requires Society "To serve humanity...". At the same time, we recognize that ASHRAE, working alone, cannot make a difference in the 'critical issues' that we all face worldwide. Accordingly, ASHRAE, in its desire to best serve humanity by creating a more sustainable, resilient world for all, endeavors to produce a more effective and fruitful exchange of technical information, knowledge and ideas among engineers engaged in the arts and sciences of heating, ventilation, air-conditioning and refrigeration by making it possible for any qualifying society, engaged in the similar fields of technical activity, to become an Associate Society of ASHRAE.

Due to the importance of our mission, it is imperative that ASHRAE has clear policies to amplify our ability to collaborate and cooperate with like-minded HVAC&R societies while minimizing any negative, unintended consequences from competition and conflict. This collaboration agreement between ASHRAE and an Associate Society is intended to identify the rights, responsibilities and requirements that are attributable to both ASHRAE and its Associate Societies.

I. BASIC REQUIREMENTS

The basic requirements for an organization within the built environment to become an ASHRAE Associate are as follows:

- A. Application for HVAC&R societies will be limited to organizations located outside of the United States and Canada whose purpose is to advance the arts and sciences of heating, refrigerating, air-conditioning or ventilation. Applications for affiliate membership from industrial/manufacturer associations (like AIHR, AMCA, EUROVENT, etc.), as well as federations of HVAC&R societies (like FAIAR, REHVA, etc.) will be accepted as non-voting, affiliate members. Affiliate membership application may be from any continent.
- B. ~~Organizations-HVAC&R societies~~ applying for association must have been in existence a minimum of five consecutive years and have no less than 50 members in good standing at the signing of agreement. Affiliate, non-voting members are not required to meet these membership requirements.
- C. The membership requirements ~~of-for HVAC&R societies organizations~~ applying for association must be open to all individuals who meet the minimum requirements for ASHRAE membership. (Please reference ASHRAE's website at <https://www.ashrae.org/membership/join> for qualifications of ASHRAE membership.) Affiliate, non-voting members are not required to meet these membership requirements.
- D. All organizations seeking membership in AASA, either full members or affiliate members, shall adhere to ASHRAE's Code of Ethics (<https://www.ashrae.org/about/governance/code-of-ethics>)

II. RIGHTS, RESPONSIBILITIES AND PRIVILEGES ATTRIBUTABLE TO ASHRAE

ASHRAE acknowledges the following:

- A. ASHRAE will strive to collaborate and cooperate with the Associate Society to advance the arts and sciences of the HVAC&R industry to serve humanity.

- B. ASHRAE will act with honesty, fairness, courtesy, competence, inclusiveness, and respect for others, which exemplify our core values of excellence, commitment, integrity, collaboration, volunteerism, and diversity.
- C. ASHRAE will avoid any real or perceived conflict of interest in its dealings with the Associate Society.
- D. ASHRAE will endeavor to avoid unfair competition¹ with the Associate Society with respect to membership recruitment or revenue streams.
- E. ASHRAE will continue to grow its membership and serve its members² in keeping with its mission.
 - i. The formation of chapters, sections, and student branches is a decision to be made by local ASHRAE members and is therefore not controlled by ASHRAE. The rules and regulations regarding the formation of chapters, sections, and student branches is contained within the Manual of Chapter Operations (MCO) (<https://www.ashrae.org/communities/chapters/ashrae-chapters/manual-for-chapter-operations>).
 - ii. If local ASHRAE members choose to form a chapter, section, or student branch, the local AASA society should be informed of the intent and the process to be followed to form a chapter, section, or student branch.
 - iii. If an ASHRAE chapter, section, or student branch is already existing in that country, the proposed new ASHRAE chapter, section, or student branch shall be comprised of new ASHRAE members and shall not compete with the existing ASHRAE chapter, section, or student branch.
 - iv. The proposed ASHRAE chapter, section, or student branch will endeavor to work in harmony with the local AASA societies to ensure that both the local ASHRAE chapter, section, or student branch and the local AASA organization benefit humanity.
- F. ASHRAE may promote, endorse, sponsor and/or collaborate on joint conferences, seminars, forums, and other technical events with an AASA organization if it is mutually determined that the collaboration benefits both organizations and the community as a whole.
 - i. If it is mutually determined that ASHRAE should be involved in a joint endeavor, a business case on any particular collaboration project shall be agreed upon and balanced benefits measured. A clear statement of benefits to each organization shall be developed.
 - ii. If a local ASHRAE chapter is available, and so inclined, it shall similarly be involved in the joint endeavor and will be held to the same rights, responsibilities, and privileges as ASHRAE Society.
 - iii. If it is mutually determined that ASHRAE and/or a local ASHRAE chapter shall be involved in a joint endeavor, a detailed budget must be prepared showing all expected expenses and revenues for the endeavor. A detailed explanation of how the expenses, revenues and excess are to be divided between ASHRAE, its local chapter and the AASA organization shall be produced.

¹ ASHRAE will avoid recruiting an Associate Society's members, sponsors, or supporters by using unfair or unethical methods.

² Serving members includes, but is not limited to, holding seminars, DL lectures and other similar activities

- iv. If the joint activity is dependent on ASHRAE funding, the funding request shall be submitted to ASHRAE prior to the end of the preceding Society year, so that it may be included in the current year's budget.
- iv.v. ASHRAE must inform the AASA member and AASA affiliate member if an ASHRAE topical conference is organized in the country of the AASA member or AASA affiliate member.
- v.vi. ASHRAE and its chapters shall comply with the requirements for product shows and equipment expositions, as outlined in the Manual of Chapter Operations (MCO) (<https://www.ashrae.org/communities/chapters/ashrae-chapters/manual-for-chapter-operations>).

- G. Members of ASHRAE in good standing are entitled to register for meetings and conferences conducted by AASA organizations at AASA member registration rates. Each Society agrees to provide the other with one complimentary VIP registration to the primary annual meeting of the other organization.
- H. Members of ASHRAE in good standing are entitled to purchase publications of AASA organizations at AASA member prices.
- I. ASHRAE will provide each AASA organization with any regular monthly publication produced by ASHRAE.
- J. In an attempt to facilitate communication and collaboration, ASHRAE will survey their members in the country of the AASA organization and request their permission to share their name and contact information with the AASA organization. To reciprocate, the AASA organization will survey its members to identify ASHRAE members and request their permission to share their name and contact information with ASHRAE. It is hoped that this common pool of ASHRAE volunteers will serve as the foundation for future collaboration and communication.

III. RIGHTS, RESPONSIBILITIES AND PRIVILEGES ATTRIBUTABLE TO THE ASSOCIATE SOCIETY

Each ASHRAE Associate Society Alliance (AASA) organization acknowledges the following:

- A. The AASA organization will strive to collaborate and cooperate with ASHRAE and its local chapters to advance the arts and sciences of the HVAC&R industry to serve humanity.
- B. The AASA organization will act with honesty, fairness, courtesy, competence, inclusiveness, and respect for others, which exemplify ASHRAE's core values of excellence, commitment, integrity, collaboration, volunteerism, and diversity.
- C. The AASA organization will avoid any real or perceived conflict of interest in its dealings with the ASHRAE and its local chapters.
- D. The AASA organization will endeavor to avoid unfair competition³ with ASHRAE and its local chapters with respect to membership recruitment or revenue streams.
 - i. The AASA organization will not distribute ASHRAE standards, DL presentations, Handbooks or other ASHRAE member benefits for free or at a reduced rate without

³ The Associate Society will avoid recruiting ASHRAE members, sponsors, or supporters by using unfair or unethical methods.

the written permission of ASHRAE.

- E. The AASA organization will continue to grow its membership and serve its members in keeping with its mission⁴.
- i. The formation of sub-entities of an AASA organization to serve its members (for example, by location, discipline, or students) is a decision to be made by the AASA organization.
 - ii. If an AASA organization chooses to form a sub-entity as described above, ASHRAE Society and the local ASHRAE chapter or section, if any, should be informed of the intent and the process to form a sub-entity.
 - iii. The proposed AASA sub-entity will endeavor to work in harmony with ASHRAE Society and the local ASHRAE chapters or sections to ensure that both the local AASA sub-entities and ASHRAE, and the local ASHRAE chapter or section-, if any, benefit humanity.
 - iii.iv. An AASA organization can organize an ASHRAE chapter, section, or student branch, administered by the AASA organization. The policies and processes found in the 'Model Plan to Establish Chapters with National Associations' (attached) should be followed.
- F. An AASA organization may promote, endorse, sponsor and/or collaborate on joint conferences, seminars, forums, and other technical events with ASHRAE if it is mutually determined that the collaboration benefits both organizations and the community as a whole.
- i. If it is mutually determined that ASHRAE should be involved in a joint endeavor, a business case on any particular collaboration project shall be agreed upon and balanced benefits need to be measured. A clear statement of benefits to each organization shall be developed.
 - ii. If an AASA chapter and/or a local ASHRAE chapter is available, and so inclined, it shall similarly be involved in the joint endeavor and will be held to the same rights, responsibilities, and privileges.
 - iii. If it is mutually determined that ASHRAE should be involved in a joint endeavor, a detailed budget shall be prepared showing all expected expenses and revenues for the endeavor. A detailed explanation of how the expenses, revenues and excess are to be divided between ASHRAE, and the AASA shall be produced.
- G. Members in good standing of AASA organizations are entitled to register for Society meetings and conferences of ASHRAE at ASHRAE member registration rates. Each Society agrees to provide the other with one complimentary VIP registration to the primary annual meeting of the other organization.
- H. Members in good standing of AASA organizations are entitled to purchase ASHRAE Society publications at ASHRAE member prices.
- ~~K. AASA organizations will provide ASHRAE with any regular monthly publication produced by the AASA organization.~~

⁴ Serving members includes, but is not limited to, holding seminars, DL lectures and other similar activities

- I. AASA organizations will endeavor to attend an AASA meeting twice a year. ASHRAE will organize an AASA meeting at each winter meeting. The second meeting could be at the ASHRAE annual meeting or at another location to be decided by AASA.
- J. A virtual ASHRAE Library, consisting of monthly ASHRAE Journals, annual volumes of the Handbook series, Meeting Transactions will be provided to each AASA member in good standing. ~~Digital copies of ASHRAE Standards will be made available to an AASA member in good standing upon written request.~~
 - i. AASA members may translate and reprint ASHRAE meeting and Journal papers following formal written permission to do so.

IV. IDENTIFICATION OF ASSOCIATION

Associates may print on their letterhead: Associate of ASHRAE

V. DISASSOCIATION

ASHRAE reserves the right to disassociate with any AASA organization by withdrawing their 'in-good-standing' status, due to a failure to meet these AASA membership requirements, ASHRAE's Code of Ethics, or precipitating a conflict of interest.

VI. APPLICATION PROCEDURE

If the applicant meets the basic requirements for association as outlined herein and desires to apply for association with ASHRAE as an AASA member, a 'Collaboration Agreement and Membership Requirements' form, signed by an authorized officer of the organization, shall be transmitted to ASHRAE as outlined herein. Further, a formal letter/request signed by an authorized officer of the applicant organization shall be directed to the AASA chairman, and the Manager of Region Services of ASHRAE, stating that the national Society, by approval of its Governing Board, has voted to apply for status as an ASHRAE Associate Society. This letter must state that the national society is fully aware of the basic requirements, rights, responsibilities, and privileges for association with ASHRAE and that it agrees to this 'Collaboration Agreement and Membership Requirements'.

When completed, mail this agreement, the above referenced letter, and the attached AASA Application Request Form to:

Manager – Region Services
C/o ASHRAE
180 Technology Parkway
Peachtree Corners, GA 30092

Email: AASA@ashrae.org

Upon receipt of this request for association, it will be reviewed by the Executive Committee for compliance with requirements and submitted to the ASHRAE Board of Directors for approval. The organization applying for association will then be officially notified of the action taken by the Board of Directors of ASHRAE. Should the number of Associate Societies in any country increase, ASHRAE reserves the right to review its relations with the Associate Society in that country to ensure maximum cooperation and to avoid duplication of effort.

Once an organization has been approved by the Board of Directors as an AASA member, a certificate of membership will be issued to the organization.

Agreed and accepted:

For the organization

For ASHRAE

Signature:

Name:

Title:

Date:

Signature:

Name:

Title: ASHRAE President

Date:

AASA Application Request Form – Inserted Here



Memorandum of Understanding

ASHRAE
and the

[Name of other organization goes here]

Founded in 1894, ASHRAE's mission statement calls for the advancement of, ~~Atlanta, Georgia~~ advances the arts and sciences of heating ventilating, ~~air-conditioning~~air-conditioning, and refrigeration to serve humanity and promote a sustainable world. ASHRAE, in its desire to best serve humanity by creating a more sustainable, resilient world for all, endeavors to produce a more effective and fruitful exchange of technical information, knowledge and ideas among engineers engaged in the arts and sciences of heating, ventilation, air-conditioning and refrigeration.

[Mission statement of other organization goes here] ~~Founded in~~

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

RIGHTS AND RESPONSIBILITIES OF EACH PARTY

ASHRAE and [name of other organization goes here] acknowledge the following:

- ASHRAE and [] will strive to collaborate and cooperate to advance the arts and sciences of the HVAC&R industry to serve humanity.
- ASHRAE and [] will act with honesty, fairness, courtesy, competence, inclusiveness, and respect for others, which exemplify our core values of excellence, commitment, integrity, collaboration, volunteerism, and diversity.
- ASHRAE and [] will avoid any real or perceived conflict of interest in its dealings with the Associate Society.
- ASHRAE and [] will endeavor to avoid unfair competition with respect to membership recruitment or revenue streams

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/[]- senior representatives to:

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

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:

For _____:

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 _____ 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.

ASHRAE may promote, endorse, sponsor and/or collaborate on joint conferences, seminars, forums, and other technical events if it is mutually determined that the collaboration benefits both organizations and the community as a whole.

- If it is mutually determined that ASHRAE should be involved in a joint endeavor, a business case on any particular collaboration project shall be agreed upon and balanced benefits measured. A clear statement of benefits to each organization shall be developed.
- If a local ASHRAE chapter is available, and so inclined, it shall similarly be involved in the joint endeavor and will be held to the same rights, responsibilities, and privileges as ASHRAE Society.
- If it is mutually determined that ASHRAE and/or a local ASHRAE chapter shall be involved in a joint endeavor, a detailed budget must be prepared showing all expected expenses and revenues for the endeavor. A detailed explanation of how the expenses, revenues and

excess are to be divided between ASHRAE, its local chapter and the AASA organization shall be produced.

- If the joint activity is dependent on ASHRAE funding, the funding request shall be submitted to ASHRAE prior to the end of the preceding Society year, so that it may be included in the current year's budget.
- ASHRAE and its chapters shall comply with the requirements for product shows and equipment expositions, as outlined in the Manual of Chapter Operations (MCO) (<https://www.ashrae.org/communities/chapters/ashrae-chapters/manual-for-chapter-operations>).
- _____

CHAPTER COLLABORATION

ASHRAE and _____ agree to coordinate collaborative opportunities with ASHRAE's global network of 181 Chapters.

ADVOCACY

Where mutually beneficial and to the extent allowed by laws and corporate policies, ASHRAE and _____ 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.
- Promoting mutually beneficial positions during the development and passage of government policy and legislation.
- Education of lawmakers 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 _____ 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 other languages.

EDUCATION

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

- Cross-market educational offerings and 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 _____.
- Discuss ways that certifications programs can be jointly develop or administered.

TECHNICAL ACTIVITIES COORDINATION

ASHRAE and _____ 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 initiatives where mutually beneficial to do so.

RESEARCH

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

- Promote research in areas where research results will add to the built environment body of knowledge;
- 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
180 Technology Parkway
Peachtree Corners, GA 30092
Tel: 404-636-8400
Email: jlittleton@ashrae.org

For _____:

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)~~two (2) years unless extended at that time by written agreement.

LEGAL STANDING

This MOU reflects a commitment by ASHRAE and _____ 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 _____. 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

Printed Name/Title

Signature

Date

FOR _____

Printed Name/Title

Signature

Date

Printed Name/Title

Signature

Date

This is the 'Conflict of Interest Policy' regarding nominations and is found in Volume 3 of the Rules of the Board, 2023 edition, page 26. It applies to appointing and electing members to committees and councils.

3.300.006 CONFLICT OF INTEREST (94-01-26-28/01-01-31-32A/09-06-24-16)

In appointing and electing members to the Board of Directors, standing committees and councils of the Society, the nominating committee, the President, the Board of ~~Directors~~Directors, and ~~the Board~~ any subcommittees ~~for nominating that nominate for Society positions~~ shall make every reasonable effort to avoid any and all situations in which there could exist a conflict of interest, including the gain of proprietary advantage, or the appearance or implication thereof. Slates of nominees should strive for a balance of all interests (such as employer, ASHRAE region, industry, and technology). -ROB 1.140.002, ASHRAE's Conflict of Interest Policy, applies to all such nominations and appointments.

This material on Regional and Chapter Expositions is found in Volume 2 of the Rules of the Board

2.104.18 Regional and Chapter Expositions

(87-07-02-43/88-06-

29-06) Chapters shall be allowed to sponsor expositions of products, equipment, and systems, subject to the following restrictions:

2.104.021.1

The net display area shall not exceed 10,000 square feet [929 square meters] or 100 exhibitors, whichever is less, feet;

~~2.104.021.2~~

~~Individual display areas shall not exceed 100 square feet;~~

~~2.104.021.3~~

~~No organization shall have more than two (2) display areas;~~

2.104.021.4

One (1) display area shall be dedicated to promoting Society publications and membership;

2.104.021.5

A technical seminar of at least three (3) hours' length shall be held in conjunction with this event.

2.104.021.6

A disclaimer which shall be furnished by Society headquarters shall be posted adjacent to the display area and listed in the published material. A signed copy of this disclaimer shall be sent to the Director of Member Services at ASHRAE headquarters.

2.104.021.7

A notice of intent to hold an exposition must be sent through the Regional Chair to the Director of Member Services prior to the exposition.

~~2.104.021.8~~

~~Chapters may not sponsor, co-sponsor, conduct, manage or operate exhibits or expositions during any meeting sponsored by Society or during any AHR show in the United States or Mexico.~~

~~2.104021.9~~

~~ASHRAE Chapters cannot sponsor or endorse per IEC agreement an exposition run by another organization without the written permission from ASHRAE's partners with the AHR Expo~~

~~2.104.021.10~~

~~Requests of exceptions to these restrictions to conduct, manage, operate, sponsor, and/or endorse an exposition may be sent, in writing, to the Director of Member Services for approval by ASHRAE's partners with the AHR Expo.~~

ASHRAE's Carbon Footprint:
Measurement and Recommendations for Reduction
Implementation of Presidential Goals for SY23-24
Report to the ASHRAE Board of Directors
Winter Meeting (January 2024) – Chicago

Bill McQuade (Chair), Don Brandt, Luke Leung, Wade Conlan

INTRODUCTION

President Ginger Scoggins assigned this team the following Presidential Goal:

- **Objective:** Complete the review of ASHRAE's organizational carbon footprint and provide concrete recommendations on how we can reduce our footprint by 20% as a minimum.
- **Measurement Device:** Carbon reduction measures should be accomplished first, with carbon offsets used as a final resort if needed.
- **Due Date:** January 2024 – Winter Meeting.

This report presents the group's assessment, recognizing that decarbonization is a journey. As ASHRAE works to decarbonize its own operations, it is important to keep in mind that ASHRAE's operations themselves result in important decarbonization of the built environment on a global basis. As such, limiting the ASHRAE organization's emissions at the expense of our broader mission is not desirable. With this in mind, ASHRAE will persistently work to reduce our own emissions over time, while continuing to boldly pursue its global mission with a focus on decarbonization of the built environment.

Background

In the dynamic landscape of environmental sustainability, the classification of greenhouse gas emissions into three distinct scopes serves as a pivotal framework for businesses, governments, and organizations worldwide. Scope 1, Scope 2, and Scope 3 emissions represent a comprehensive approach to understanding and managing the environmental impact of human activities.

Scope 1 emissions encompass direct greenhouse gas emissions that result from sources directly controlled or owned by an entity, such as on-site combustion of fossil fuels, industrial processes, fugitive refrigerant, and transportation fleets. These emissions are within the immediate operational control of an organization, providing a clear starting point for companies to identify and mitigate their primary sources of carbon footprint while maintaining excellent indoor environmental quality.

Moving beyond the organizational boundaries, Scope 2 emissions encapsulate indirect emissions originating from the generation of purchased electricity, heat, or steam consumed by the entity. This category acknowledges that entities often rely on external sources for energy, and by including Scope 2 emissions in the assessment, organizations gain insight into the environmental impact of their energy

consumption. Consequently, this scope not only encourages the adoption of cleaner energy sources but also fosters collaboration with energy providers to transition towards a low-carbon economy.

Scope 3 emissions, arguably the most intricate and expansive of the three, extends the assessment to include indirect emissions from the entire value chain of an organization. This includes activities such as business travel, employee commuting, upstream and downstream supply chain processes, and product lifecycle emissions. By encompassing the entire spectrum of a company's activities, Scope 3 provides a holistic view of the environmental impact, enabling organizations to identify opportunities for improvement across their entire value chain. Tackling Scope 3 emissions often requires collaborative efforts and innovative solutions, as they are influenced by factors beyond an organization's direct control.

For ASHRAE, the categorization of emissions into these three scopes offers a nuanced and comprehensive framework for assessing and addressing the environmental impact of its activities. Embracing this classification not only facilitates targeted emissions reduction strategies but also aligns with the global imperative to transition towards a more sustainable and environmentally conscious future. The purpose of this document is to summarize the current state of emissions in all three scope categories and provide recommendations for future actions that will drive further reductions in the future.

Walking the Talk:

ASHRAE's Position Document on Building Decarbonization, released in 2022 suggested that by 2030, the global built environment must halve its 2015 GHG emissions, whereby:

- all new buildings must be net zero GHG emissions in operation,
- widespread energy-efficiency retrofits of existing assets must be well underway, and
- embodied carbon of new construction must be reduced by at least 40%.

In addition, ASHRAE stated in that same document a number of Society positions related to responsible building decarbonization that are applicable to the Society's own operations:

- By 2050, at the latest, all new and existing owned assets must have net zero GHG emissions across the whole life cycle.
- Building decarbonization provides benefits beyond reducing GHGs, including reduced indoor and outdoor air pollution, energy savings, improved community health and wellbeing, enhanced social responsibility, and increased property valuation. Therefore, any efforts within the Society's operations must consider the implications across all those areas.
- Reducing operational energy-related GHG emissions by implementing efficiency measures and building electrification where possible; improving operation and maintenance discipline; using low-GWP refrigerants and proper refrigerant management; and increasing use of renewable energy sources both on site and off site.
- Building design and operations should be able to respond to real-time carbon signals from the power grid to reduce GHG emissions.

The first step in ASHRAE's own decarbonization journey was the completion of the ASHRAE global Headquarters in Peachtree Corners, Georgia. First occupied in the fall of 2020, the new, renovated facility is a showcase for the latest HVAC&R equipment and technology and provides a destination venue for industry visitors to experience state-of-the-art technology installed and "in action" in a built environment. The renovated facility incorporates high-quality, energy efficient and environmentally sustainable HVAC&R equipment which reflects an understanding of the high-performance building movement, and which achieves a superior efficiency while providing a healthy and comfortable environment. The new headquarters building embodies the sustainability values which ASHRAE has long held and has a net-zero energy footprint and excellent indoor environmental quality.

Having decarbonized our owned building assets, our next step in the decarbonization journey has been to assess the carbon emissions of ASHRAE's operations in terms of the Scope 1, 2, and 3 emissions described previously. Then to look for ways to reduce those over time. This report provides a summary of our emissions based upon a study done by SCS Global Consulting in the 2021-2022 Society year. The same calculation methods are used to quantify emissions in 2022-2023 Society year. This information is then used to quantify baseline emissions and provided areas of focus for reducing/offsetting our emissions in the short and long term.

SUMMARY OF EMISSIONS RESULTS

Before presenting the results, it is important to note that ASHRAE is one of the few organizations that is even analyzing Scope 3 emissions, and this analysis should be refined and conducted on a regular basis to identify opportunities for improvement. Per the UN Global Compact, out of Bloomberg's 15,000 profiled companies, only 20% reported ESG data that includes Scope 3 emissions.¹ An October 2021 survey² of humanitarian aid organizations found that, "more than half of the groups surveyed do not count their total emissions." As ASHRAE works to decarbonize the built environment, it is establishing itself as a leader in assessing its own carbon footprint.

ASHRAE hired a consulting firm (SCS Global Services) to analyze its organizational greenhouse gas emissions for SY21-22. The results from that analysis were presented to the Board and are also summarized in the table and figure below. It is important to note that the Covid-19 pandemic was still a factor in ASHRAE's operations, especially related to travel, and thus this initial year of assessing carbon emissions should not be considered as a baseline for ASHRAE.

¹ O'Dwyer, C., Martin E., Ward C., *Closing the Scope 3 GHG Emissions Data Gap*, Bloomberg Terminal, April 2023 <https://www.bloomberg.com/professional/blog/closing-the-scope-3-ghg-emissions-data-gap-2/#:~:text=According%20to%20the%20UN%20Global,for%20the%202020%20fiscal%20year>

² Salzenstein, L., & Pedersen, K. (2021, October 27). *What's the aid sector's carbon footprint?* The New Humanitarian. Downloaded 04 January 2024 from: <https://www.thenewhumanitarian.org/investigations/2021/10/27/aid-sector-carbon-footprint-environmental-impact>

The emissions analysis for SY22-23 was conducted in-house using a spreadsheet tool developed by SCS Global Services. Those results are also provided in the table and figure below, along with these highlights:

- ASHRAE’s Scope 1 and 2 emissions declined markedly (by 33% and 73% respectively), while Scope 3 emissions significantly increased.
- The marked reduction of Scope 2 emissions reflects a full year of PV operation.
- The significant increase in Scope 3 emissions was a result of an increase in travel as Covid-19 restrictions and congregating were lifted. Significantly reducing those emissions may have a much larger negative impact on ASHRAE’s ability to execute its mission or promote its contributions to the built environment globally.

Table 1. ASHRAE’s Operations Emissions

	Metric Tons (CO ₂ -eq)		Comparison	
	SY21-22	SY22-23	Absolute	Percentage
Scope1	284	189	-95	-33%
Scope2	121	33	-88	-73%
Scope3	2,751	3,852	1,101	40%
Total	3,156	4,074	918	29%

Fig. 1: ASHRAE's GHG Emissions for SY21-22
(MT CO₂ equivalent)

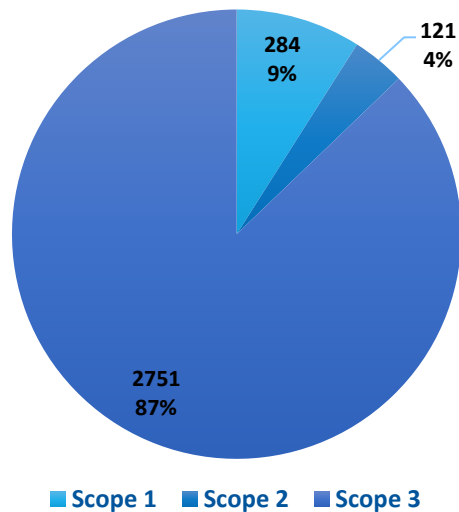
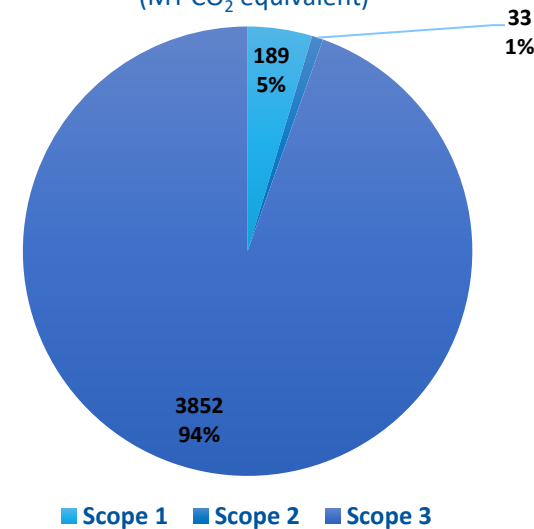


Fig. 2: ASHRAE's GHG Emissions for SY22-23
(MT CO₂ equivalent)



Recommendations: Metrics and Reduction Options

In the review of our results, SCS Global was asked how ASHRAE's operations compared to other similar organizations. As mentioned earlier, ASHRAE is one of the few entities, in general, that has attempted to quantify Scope 3 emissions in a comprehensive manner. And within our sector, non-profit publishing companies, our overall emissions are exceptionally low.

As we look to continuously decrease our emissions over time, the committee discussed the establishment of a benchmark for future comparison and what metrics should be used to identify progress.

Benchmarking:

Although the SCS Global evaluation was in SY21-22, the team feels that this evaluation was not representative of a "normal" year of operation due to a partial year of photovoltaic energy generation at the headquarters and reduced travel emissions due to pandemic restrictions. Instead, this team recommends that the emissions calculated using the SCS Global methods for the SY 22-23, which are larger and more representative of normal operating conditions, should be established as the baseline to measure future reductions.

Per Capita Emissions:

It is common for companies to report emissions on a per-employee basis. However, ASHRAE accomplishes its mission with a significant amount of volunteer labor and dividing total emissions by direct ASHRAE employees artificially inflates per capita values.

One of the limits of our initial analysis was the ability to accurately quantify all travel related to the Society activities. ASHRAE is currently only able to quantify the travel emissions in which it directly reimburses employees, officers and members that participate in society events, Board Meetings, committees, councils, and ad-hocs. These are the basis for the travel values in our analysis. The recommendation of this team is to base the denominator of our per-capita emissions on employees plus the number of individual members reimbursed for Society travel:

$$\text{Total Annual Emissions (Scope 1 + Scope 2 + Scope 3)} / (\text{Direct Employees} + \text{Reimbursed Members})$$

The team recognizes, however, that there are other regional and chapter activities that require member travel that are not reimbursable by the Society and are currently impossible to track. In addition, those travel emissions may be claimed by other entities as part of their own accounting and risk double counting. A Presidential ad hoc³ has been created to look at methods for quantifying and offsetting emissions related to regional and chapter activities. It is expected to present its recommendations in the format of an **ASHRAE Chapter and Region Carbon Guide** at the 2024 Annual meeting. At that time, the per-capita emission metrics should be revisited and adjusted accordingly.

³ The Presidential Goal Team's Objective, led by Blake Ellis with team members John Constantinide, Buzz Wright, Jonathan Smith, and staff liaison Lizzy Seymour, is to "Provide guidance to Chapters and Regions on how they can work to reduce their carbon footprint."

Opportunities for Scope 1 and Scope 2 Emissions Reductions:

The ASHRAE headquarters, in Peachtree Corners, Georgia, is its only directly owned facility. It does lease space in buildings in Washington, DC and in Dubai, UAE where it has government affairs and training activities, respectively.

As mentioned previously, the ASHRAE headquarters building is designed to be a net-zero energy facility. To achieve this result and maintain it going forward, requires continuous monitoring, periodic adjustments to building control strategies based on season and building use, and diligent adherence to operation and maintenance best practices. The team recommends that:

- ASHRAE should create an Energy Management Program (EMP) for the headquarters building. This program would initially use an ASHRAE Standard 211 Level 2 Commercial Building Energy audit in addition to recommissioning the MEP Systems to develop a program. The EMP shall be a “living document” that is updated annually using energy audits and recommissioning of the facility at prescribed intervals.
- All refrigerant containing equipment be leak checked on a semiannual basis and any found leaks corrected immediately. Leaks should be documented, and quantities of refrigerant used logged for tracking purposes.
- When equipment is replaced, preference should be given to equipment that uses the lowest GWP refrigerant possible while maintaining energy efficiency requirements.
- Considerations will also be given regarding use of different documents from TFBD, including “Understanding Grid-Interactive Buildings for Decarbonization” and “Building Performance Standards: A Technical Resource Guide” that are already available.

For our leased facilities, the team recommends that our energy use within the leased spaces be sub-metered and that discussions be initiated with property managers to encourage the following:

- Renewable Energy Credits be purchased to offset emissions from those facilities.
- In addition, ASHRAE should encourage our leased facility owners to:
 - Perform periodic commercial building energy audits per ASHRAE Standard 211.
 - Purchase electricity from renewable energy source providers
 - Install on-site renewable energy systems when and where possible.
 - Perform semi-annual refrigerant leak checks on building equipment and correct them immediately.

Opportunities for Scope 3 Reductions

The SY22-23 analysis of GHG emissions from ASHRAE operations showed that 93% of our total Scope 3 Emissions fall into three categories: Business Travel, Purchased Goods and Services (related to operations and publishing), and upstream Transportation and Distribution (T&D) emissions. (See Table 2.) With such a high impact, these areas should be the focus of our short-term efforts.

Table 2: Scope 3 Emissions from ASHRAE Operations (SY22-23)

Category	GHG Emissions (Metric Tons CO ₂ -eq.)	Percentage of Scope 3 Emissions
Purchased Goods & Services	1,300	33.7%
Fuel & Energy Related Activities	9	0.2%
Upstream T&D	398	10.3%
Waste Generated in Operations	12	0.3%
Business Travel	1,880	48.8%
Employee Commuting	254	6.6%
Scope 3 Total	3,852	100%

There are many approaches to estimating Scope 3 emissions, some are more accurate and tedious than others, but all depend on the data available. In ASHRAE's case, detailed information exists on business travel but the consultants had to make estimates of emissions on purchased goods and services and T&D emissions, based on supply chain spend. Business travel specifically will be discussed later in this document. For the latter two, the first step in reducing emissions will be to better quantify the activity in those areas. For instance, measuring the quantity of paper purchased for publishing activities in pounds and requesting the carbon intensity per pound of paper information from our suppliers. Once this is done, the next step would be to evaluate if lower carbon intense options are available as direct substitutes, or if a policy or process change would result in the elimination of the activity all together. Using this methodology, the team recommends the following:

Transition to Digital Documents and Paperless Meetings wherever possible:

- Implement a Longer-term strategy of transition of all publications (books, standards, guidelines, etc.) to a digital format. Direct the Publications Committee to investigate on-demand printing services for customers willing to pay for a paper version. In the short term and through the transition process and inventory draw down, immediately change to low-carbon providers of paper and binding materials. This will also reduce transportation and distribution emissions.
- Eliminate the use of printed business cards for Society officers and staff. Instead, purchase a reusable card with a QR code that can be scanned, and a contact saved in a mobile phone.
- Investigate methods to further reduce the use of paper at meetings and conferences. Have CEC investigate best practices for paperless conferences and make recommendations to the Board of Directors.
- Implement a paperless meeting policy at ASHRAE headquarters and remote facilities for staff activities and training courses/programs.

Recommendations for Travel Emission Reductions:

- Have the Conferences and Exposition Committee (CEC) evaluate the impact of shifting the annual Meeting to be a virtual conference. Experience during the pandemic showed that virtual meetings and technical sessions could be effectively completed.
- Task ExCom to reevaluate the current travel reimbursement policy for volunteer positions in ASHRAE and make recommendations on ways to lower travel costs by reducing or eliminating reimbursement for positions that do not need to meet in person at the annual or winter meeting or, for members who do not hold more than one volunteer position on a standing committee or council at a time.
- Task the Councils to evaluate the number of standing committees and subcommittees that meet in person during the annual meeting and provide recommendations for ones that could meet virtually.

The Use of Carbon Offsets:

ASHRAE is an international engineering society with chapters in over 130 countries in the world. It is neither possible nor practical to eliminate all Scope 3 emissions and continue to effectively execute our mission and vision. In fact, a convincing argument could be made that the net reduction in global building emissions that result from the research, standards, guidelines, education, and other publications developed by ASHRAE in a given year far outweighs its total carbon emissions required to create those products and services in that year. Unfortunately, this impact is very difficult to measure.

For that reason, it will be necessary, at least in the short-term, for ASHRAE to purchase carbon offsets to achieve a net-zero carbon outcome. This practice is already in place to offset the travel emissions for all senior officers as part of President Scoggins' decarbonization initiatives in the 2023-2024 Society year. It is the recommendation of this committee that:

- Staff be assigned the task of identifying carbon off-set providers that have been validated and verified through an independent third party. These carbon offsets should be purchased throughout the year to offset net positive emissions.
- The Carbon offset providers used must be able to aggregate purchases across the enterprise (Society, Region, and Chapter level) to provide a comprehensive accounting of all offsets purchased.
- Staff develop a method for members to voluntarily purchase credits as part of their registration for the Annual, Winter, and Chapter Regional Conferences that would offset their travel emissions to and from the meetings.
- ExCom to evaluate the ability to quantify the reduction of global emissions due to the ASHRAE research, guidelines, standards, and other documents versus the quantity of ASHRAE Scope 3 emissions associated with creating those materials.

CONCLUSION

In conclusion, this report provides a comprehensive overview of ASHRAE's carbon footprint, encompassing an in-depth analysis of Scope 1, 2, and 3 emissions. President Ginger Scoggins' directive to reduce ASHRAE's carbon footprint by a minimum of 20% has prompted a thorough evaluation of the Society's environmental impact and a commitment to align its operations with global sustainability goals. ASHRAE, as a leader in the HVAC&R industry, recognizes its dual responsibility to both reduce its own emissions and contribute significantly to the global mission of decarbonizing the built environment.

The three scopes framework has served as a valuable tool for evaluating ASHRAE's emissions, enabling the identification of areas for improvement across organizational boundaries. While Scope 1 and 2 emissions have experienced notable reductions, the increase in Scope 3 emissions, notably from business travel, purchased goods and services, and transportation and distribution, presents a complex challenge. Nonetheless, the structured analysis presented here equips ASHRAE with the insights needed to formulate effective strategies for emissions reduction.

ASHRAE's commitment to decarbonization is not just a theoretical pursuit but is manifested in tangible achievements, exemplified by the construction of the net-zero energy global headquarters in Peachtree Corners, Georgia. The report highlights the importance of continuous monitoring and periodic assessments, exemplified by recommendations for regular energy audits and recommissioning of the headquarters building.

Furthermore, the report outlines clear recommendations for future actions, emphasizing the need for a benchmark using the more representative emissions data from SY22-23 and the adoption of per capita emissions metrics that consider both direct employees and reimbursed members. This nuanced approach acknowledges the unique nature of ASHRAE's volunteer-driven mission.

The report also underscores the significance of ASHRAE's pioneering efforts in quantifying Scope 3 emissions, positioning the organization as a leader in environmental stewardship within its sector. The team's commitment to transparency and accountability is evident in the detailed analysis and recommendations, setting a precedent for responsible emission reporting.

Looking forward, the focus on Scope 3 emissions reduction is paramount, with specific recommendations addressing the high-impact areas of business travel, purchased goods and services, and transportation and distribution. The proposed shift towards digital documents, paperless meetings, and a reassessment of travel policies reflect ASHRAE's dedication to embracing innovative solutions.

In recognition of the practical challenges in achieving complete Scope 3 emissions elimination, the report wisely recommends the judicious use of carbon offsets in the short term. This pragmatic approach ensures that ASHRAE can balance its commitment to reducing emissions with the practicalities of executing its global mission effectively.

In summary, this report not only fulfills the presidential directive but also serves as a testament to ASHRAE's commitment to environmental stewardship and responsible corporate citizenship. By adopting the recommendations presented herein, ASHRAE has the opportunity to not only meet but exceed its carbon reduction goals, reinforcing its position as a leader in sustainable practices within the HVAC&R industry. As ASHRAE navigates its ongoing decarbonization journey, this report provides a robust foundation for informed decision-making and continuous improvement in the pursuit of a greener, more sustainable future.

REPORT TO THE BOARD OF DIRECTORS
From the Efficient and Healthy Schools Program Partnership with DOE
January 8, 2024

Members

John Constantinide – Chair
Sonya Pouncy
Raj Setty
Bruce Lindsay
Chris Ruch
Jonathan Smith

Background

The committee began work on November 1, 2022 when then-President Farooq Mehboob appointed John Constantinide to serve as Chair. The committee was formed, in part, to expand existing ASHRAE support of the U.S. Department of Energy (DOE) Efficient and Healthy Schools Initiative by engaging ASHRAE Chapters with schools and school districts to share information about federal funding and other resources to help implement school facility improvements. This includes a multi-pronged effort in which ASHRAE, through 15 Pilot Chapters and a Leadership Team, reaches out to schools, especially those in disadvantaged or rural communities or otherwise underserved, to share technical information on improving the energy and Indoor Air Quality (IAQ) performance of school facilities as well as federal assistance available (as provided by DOE).

Recommendations for Board Approval:

The Leadership Team of the Efficient and Healthy Schools Program Partnership with DOE (the “ASHRAE DOE Schools Leadership Team”) has no motions to come before the Board.

Information Items:

1. Over the past six months, the ASHRAE Schools Partnership Pilot Program Team has:
 - a. Created resource materials for the Pilot Chapters that can be shared with Local Education Agencies (LEAs) that explain the application process for the DOE Renew America's Schools Program and how ASHRAE chapters can assist.
 - b. Met one-on-one with several of the pilot program chapters and discussed strategies tailored to their specific chapter to help increase engagement within their chapter, and strategies on how to engage with LEAs.
 - c. Hosted five webinar events that have been well attended (19+ ASHRAE member attendees per webinar); attendees are engaged and asked questions.
 - d. Participated on a panel discussion at an IAQ in schools summit hosted by USGBC in Washington, DC.
 - e. Partnered with the ASHRAE Memphis Chapter, who successfully received round one funding, in outreach events with Pilot Chapters to share their success.

2. The leadership team of the Efficient and Healthy Schools Program organized a panel discussion event on January 24 at the 2024 ASHRAE Winter Conference, including participants from LBNL. The panel session was submitted and accepted to provide insights on federal funding for LEAs, strategies for Chapters and ASHRAE Members, and success stories and lessons learned with past work.
3. A copy of the 6-month progress report submitted to LBNL is attached.
4. As this program is a pilot, over the Spring, the Schools Leadership Team will assess its merit and make a recommendation for its future.



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December 15, 2023

Ms. Cindy Regnier
Technical Representative
Lawrence Berkeley National Laboratory
One Cyclotron Rd.
Mail Stop 90R2000
Berkeley, CA 94720

RE: ASHRAE 6-Month Report: Support Services for Schools Partnership Pilot Program

Dear Ms. Regnier:

We are pleased to provide ASHRAE's 6-month report on our Support Services for the Schools Partnership Pilot Program. As stipulated in Subcontract No. 7706536, Activity 4, Task 4.2: the Subcontractor (ASHRAE) is to prepare a mid-project status report ("6-month report"), addressing data points identified in the deliverables table.

ASHRAE is committed to our partnership with LBNL, and we look forward to continuing working with our chapter members to reach out to schools, especially those in disadvantaged or rural communities or otherwise underserved, to share technical information on improving energy and IAQ performance of school facilities as well as federal assistance available. Please do not hesitate to contact me if you have any questions about this report.

Sincerely,

Jeff H. Littleton
Executive Vice President

[Revision: January 8, 2024]

The 6-month report was revised to include Brevard Public School District as a participant in the pilot program. The changes made throughout the report were mostly minor edits to data points.



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Executive Summary

The Department of Energy (DOE) Lawrence Berkeley National Laboratory (LBNL) American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) Schools Partnership Pilot Program entered into an Agreement on January 26, 2023, and entails a multi-pronged effort in which ASHRAE, through 15 Pilot Chapters and a Leadership Team, reaches out to schools, especially those in disadvantaged or rural communities or otherwise underserved, to share technical information on improving the energy and Indoor Air Quality (IAQ) performance of school facilities as well as federal assistance available (as provided by DOE).

Over the past six months, the ASHRAE Schools Partnership Pilot Program Team has:

- Created resource materials for the Pilot Chapters that can be shared with LEAs that explain the application process and how ASHRAE chapters can assist.
- Met one-on-one with several of the pilot program chapters and discussed strategies tailored to their specific chapter to help increase engagement within their chapter, and strategies on how to engage with LEAs.
- Hosted five webinar events that have been well attended (19+ ASHRAE member attendees per webinar); attendees are engaged and asked questions.
- Participated on a panel discussion at an IAQ in schools summit hosted by USGBC in Washington, DC.
- Partnered with the ASHRAE Memphis Chapter, who successfully received round one funding, in outreach events with Pilot Chapters to share their success.

Several challenges have arisen with implementing the pilot program:

- There has been a struggle to have specific school districts engage in application preparation or indicate interest due to their lack of resources to fund the prerequisites, lack of staff to manage the project, and lack of information for what is required in their proposal.
- Schools are hesitant to spend money on a needs assessment without knowing they'll have the funds to address the needs.
- A lack of sufficient information about the 2024 application, including details and deadlines, poses a challenge for LEAs from taking the initial step and getting involved.
- One district could not target a single school as parents at other schools would question the equity implications.



Detail on Project Activities

ASHRAE has met one-on-one with several of the pilot program chapters. ASHRAE discussed strategies tailored to their specific chapter to help increase engagement within their chapter, and strategies on how to engage with LEAs. From these meetings, ASHRAE has been able to get a better understanding of the lessons learned and struggles of the ASHRAE members with their outreach and engagement efforts.

ASHRAE conducted five webinars to boost and inform chapters about outreach/engagement with LEAs, and to provide technical assistance training:

Webinars Held		
Date	Title	Attendees
May 30, 2023	<i>Open Forum Question and Answer Session</i>	29
July 13, 2023	<i>Communicating and Managing a Relationship with LEAs</i>	20
July 28, 2023	<i>How to use ASHRAE's Design Guidance for Education Facilities: Prioritization for Advanced Indoor Air Quality</i>	19
August 23, 2023	<i>LBNL's Presentation on the Efficient and Healthy Schools Campaign</i>	27
November 7, 2023	<i>Panel Discussion with ASHRAE Memphis Chapter and Memphis</i>	20

ASHRAE participated in an IAQ in schools summit hosted by USGBC in Washinton, DC. ASHRAE School's Program Leadership team member Raj Setty served as a panelist on a session entitled, *Facilitated panel discussion Experts from research and the field react to attendees' perceptions and prioritize results*. ASHRAE Treasurer Bill McQuade attended, along with ASHRAE Office Operations Manager Andrew Barberi. The U.S. Green Building Council's Center for Green Schools held an IAQ summit in Washington D.C. on Friday October 20th, 2023. This summit brought together industry practitioners, school district staff and leaders, as well as IAQ researchers from around the United States. This summit facilitated a discussion across these groups through multiple panel and small group discussions focusing on ways to help bring these groups together to improve IAQ in schools. Among the panelists was ASHRAE member Raj Setty. Also, among the attendees was ASHRAE Treasurer, Bill McQuade, adding a vital technical perspective to these discussions.

ASHRAE engaged with the ASHRAE Memphis Chapter on creating a webinar/panel discussion based around their experiences applying for a grant under the Renew America's School Program. This panel will bring together Memphis-Shelby County School District's Grant Manager Blake Burr, Director of Major Construction Charles (Chuck) Freeman Jr, and ASHRAE Memphis past president Lionel Davis II. This webinar



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took place on November 7, 2023. More about the success of the ASHRAE Memphis Chapter can be found in Appendix C.

ASHRAE has identified 15 ASHRAE chapters to participate in this pilot program. ASHRAE has equipped these chapters with knowledge and resources to engage with their LEAs. These resources include PowerPoint presentation templates, documentation on additional fundings available for LEAs, and conference and large meeting information flyers. ASHRAE Pilot Chapters have engaged with 18 school districts, including 6 schools in rural areas and 21 schools in underserved communities. The specific districts that ASHRAE has reached out to are listed below and more information about specific locations, age-range, and other accompanying metrics can be found in Appendix A.

1. Aberdeen School District
2. Cambridge School District
3. Homedale Joint School District
4. Twin Falls School District
5. Vallivue School District
6. West Ada School District
7. Rochester City School District
8. Miami-Dade Public Schools Districts 1-9
9. Broward County Public Schools
10. Geary Public Schools
11. Brevard Public School District

ASHRAE has worked with its members to develop some technical assistance to help support the members' outreach and engagement efforts. ASHRAE TC 9.7 Design Guidance for Education Facilities was given to all the program members, and a webinar was created with several of the authors of this document to discuss its use and effectiveness.

ASHRAE has been working with participating chapter members to engage with their local LEAs and for them to report their outreach data back to us. ASHRAE has been collecting this data through an online web form. A full list of the data points ASHRAE has been collecting is attached in Appendix A. The technical data ASHRAE has collected to date has been limited because most LEAs ASHRAE members have engaged with have been apprehensive with beginning the process and the technical work needed for the Renew America's Schools Grant without details of the FOA being released. In lieu of this technical data ASHRAE has focused on collecting the insights our chapter members can provide through lessons learned on outreach, the struggles, and reasons for apprehensiveness of LEAs to begin the process. This information is provided in Appendix B.



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Work planned for the remainder of the project

Engage the ASHRAE Government Affairs Committee: ASHRAE is continuing to work with chapter members to increase engagement across the pilot program chapters. ASHRAE will enhance these efforts by discussing the project with ASHRAE Government Affairs Committee at the ASHRAE Winter Conference, in an effort to develop more engagement. This engagement will bring more awareness to the regional and chapter level leadership to continue to develop local member engagement.

Host a panel and leverage the ASHRAE Winter Conference: The ASHRAE leadership team successfully submitted a proposal to have a forum on the pilot program at the ASHRAE Winter Conference, possibly sponsored TC 9.7 and/or GAC. Panelists will offer knowledge and insights on planning for these improvements with LEAs, guidance on seeking out and applying for available funding, perspectives from DOE, LBNL, and participating Chapters on successes and lessons learned, and future funding opportunities for LEAs. The ASHRAE leadership team will also provide a presentation on the project's progress to the Board of Directors.

Continue the development of informational resources (e.g. webinars): ASHRAE is also planning to create a webinar based around the process of completing the application documents, tentatively scheduled for February 2024. This will help to increase awareness and confidence in the ASHRAE members working with LEAs without the knowledge of these processes. ASHRAE will also hold another Question-and-Answer Session with our members to increase engagement. These have been tentatively scheduled for early 2024.



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Updates on Deliverables

Task	Deliverable	Due Date	Date of Completion
1.3	Deliver Outreach Webinar	Summer 2023	7/13/2023
	<i>Deliver Webinar to Chapters; this will involve outreach to Chapters through announcements and other tailored communications (1 Webinar)</i>		
3.4	Deliver Technical Support Webinar	Fall 2023	7/28/2023
	<i>Deliver Webinar to pilot Chapters (1 Webinar)</i>		
4.1	Monthly Progress Reports	Monthly	8/30/2023 10/6/2023 11/7/2023 12/7/2023
	<i>Prepare monthly project status memos</i>		
4.2	Mid-Project Report	12/15/2023	
	<i>Prepare mid-project status report ("6-month report), addressing data points identified in the deliverables table</i>		
4.3	Final Report		
	Draft Report Final Report	2/29/2024 3/31/2024	
	<i>Prepare final report, addressing data points identified in the Deliverables Table</i>		



Appendix A: Data

- a. Number of LEA (schools) at each grade level. (Identified schools)
 - i. K-12: 0
 - ii. K-6: 10
 - iii. Middle Schools: 6
 - iv. High Schools: 9
- b. Location: State and County.
 - i. Idaho, Bingham
 - ii. Idaho, Washington
 - iii. Idaho, Owyhee
 - iv. Idaho, Twin Falls
 - v. Idaho, Canyon
 - vi. Idaho, Ada
 - vii. New York, Monroe
 - viii. Florida, Miami-Dade
 - ix. Florida, Broward
 - x. Florida, Brevard County
 - xi. Oklahoma, Blaine County
- c. LEA name: School/School District.
 - i. Aberdeen School District
 - ii. Cambridge School District
 - iii. Homedale Joint School District
 - iv. Twin Falls School District
 - v. Vallivue School District
 - vi. West Ada School District
 - vii. Rochester City School District
 - viii. Miami-Dade Public Schools District 1-9
 - ix. Broward County Public Schools
 - x. Geary Public Schools
 - xi. Brevard Public School District
- d. Number of LEAs (schools) in rural communities.
 - i. 7 School Districts
- e. Number of LEAs (schools) in underserved communities.
 - i. 22
- f. Total number of LEAs in program/have been reached out to
 - i. 18 School Districts (25 schools identified)
- g. How many needs assessments were completed.
 - i. No data collected.
- h. Scope of the needs assessments.
 - i. No data collected.
- i. Total energy improvements identified (BTUs and \$ saved)
 - i. No data collected.
- j. Number (or ratio) of needs assessments converted to projects implemented.
 - i. No data collected.
- k. Anticipated energy savings per LEA (school)/total for pilot program.
 - i. No data collected.
- l. Anticipated cost savings per LEA (school)/total for pilot program.
 - i. No data collected.



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m. Data on the outreach efforts.

i. What outreach efforts have been used:

1. ASHRAE members emailed school district contacts to set up meetings where FOA info was provided along with general ASHRAE info, copies of Lucy's Engineering Adventure, and info on utility and Idaho Office of Energy & Mineral Resources energy efficiency incentives/resources was provided. Visits were targeted for engineering week and support was offered for future DOE funding announcements and other resources provided.
2. Materials were put together that outlines the various ways for the LEA to move forward with studies and how to get funding for them, including the DOE/Federal funding and state funding (NYSERDA, utilities, etc).
3. Tapping into professional networks, reaching out to individuals that members have collaborated with before.

ii. What efforts have not worked:

1. High pressure sales. The districts we met with were unaware of this funding and not prepared to put together applications within the amount of time provided.
2. Anything that sounded like additional, or an unknown amount of work was not attractive with current labor and other operational challenges.
3. Some techniques that were not successful included reaching out to schools individually without a network or a proper introduction. Without an established connection or introductory context, these efforts did not yield the desired results, if any.



Appendix B: Direct Feedback from Participants

Idaho

No feedback received

Baltimore

No feedback received

Central New York

No feedback received

Southern California

“We have had a bit of a tough time getting schools to agree and sign up for the process even though there are schools in our area that would fall under this category. The closest nomination that we had found for a school to apply for the program came in the way of connections through a General Contractor that had been working with the schools in the area directly. As they had the greatest amount of connections with the school leadership, it was easiest to find connections and eligible schools utilizing the connections made from the boots on the ground. We will continue canvassing our area through connections of General contractors and Design Firms to find more schools eligible for the opportunity.”

Detroit

“without a directive or a pre-existing relationship, approaching schools, even with an opportunity to grant them money such as this, is a sales job and it requires that one move through phases of the sales cycle, which takes TIME, especially the early phases of building rapport and bonding. All these must happen before one can begin to identify pain points and get down to the business of grant writing and information gathering.”

“with competing opportunities, (a) schools can become overwhelmed and, like deer in headlights, just freeze and do nothing; or (b) schools try to maximize the offerings of multiple programs, which cause delayed responses. In addition to the DOE program, we have two (2) state-level programs right now in MI. One is a state-sponsored audit of EVERY K-12 school in the state. The other is a voluntary follow-up to state-sponsored school audits performed under COVID. In a very real way, these programs compete with the DOE grant. Some schools will try to get the FREE audits provided by state-sponsored programs (which--ambitiously, speaking--may not be completed till next year, more likely later than than) and use that info to meet the DOE grant requirements, which means they won't be ready to submit a DOE application till next year or later. In the meantime, they're waiting to see what additional funding may come from the state, because they feel the odds of winning a national DOE grant are relatively slim.”

Miami

Positive:

- Building trust is crucial, especially through introductions via networks with established contracts in the district.



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- Early communications should focus on providing the most relevant and essential information, ensuring that all services are presented as voluntary.
- Collaboration with engineering firms willing to offer pro bono energy auditing services to LEAs is beneficial.
- Memphis Chapter Panel Discussion was very helpful.
- Persistence and a positive approach are key factors in successful engagement.

Negative:

- LEAs tend to be slow in taking necessary actions.
- A lack of sufficient information about the 2024 application, including details and deadlines, poses a challenge for LEAs from taking the initial step and getting involved.

Florida Gold Coast

“I had a short discussion with Brevard County Public Schools. They recently completed a 6-year, \$200M facility upgrade of HVAC and controls, and passed a similar referendum for roofs, playgrounds, and athletic fields. They felt the \$500M DOE funding was totally inadequate. Further, they could not target a single school as parents at other schools would question the equity implications.”

Alaska

“The Principals were really busy but they didn't really want to pursue at least in the schools close to me. Probably just see if the money is there for Alaska first and then talk to them. Most of the money goes to the lower 48 first.”

Minnesota

“I believe that the information I've gained on the program from the video meetings that you've orchestrated have been useful and would be best directed to a commissioning or consulting engineering firm that can do the bench mark testing of a building in its current state and offer the plan for items to add. I pass information on-to them as it arises from our meetings and the program's emails.”

Houston

No feedback received

Utah

“We've had mixed results with the program. A couple of districts have been really enthused to get phone calls and support, and to get some guidance in how to get projects rolling. But there have been a few districts that either haven't responded to outreach or saw involvement in the program too much of a time commitment. You know how sometimes it's harder to give away something for free than sell something for cheap?”

I think we've found the most success in rural districts that don't get much attention, that really need the help. As it stands, I'm not sure that they will be pursuing grant applications this year, but now that they are aware they are looking at grants in the next two to three years, while pursuing smaller RCx projects now. So I do think it has been a success!”



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Central Oklahoma

“I have three school districts that are Title 1 and have more than 70% paid lunches that are interested in being a part of the Pilot Program. They were selected not only because they meet 2 of the 3 prerequisites, but they also have very old HVAC systems, no IAQ, and lighting needs updated. I have brought in a solar / lighting consultant to be a part of the team when we go speak with these school districts.”

“We mentioned that this grant was set aside for Underserved School Districts and they were very receptive to be a part of the program. We explained that we were with the local ASHRAE Chapter and how ASHRAE is involved in this program and they relaxed a little after we explained why where in their office.”

South Texas

No feedback received

Rochester

No feedback received

Memphis

An initial challenge was a lot of the language of the Rebuild America's schools touched a lot of different departments within the district community safety workforce, and there was a lack of a consensus understanding of what the RFP was about., was chiefly about and to bring the right key folks to the table.

Another challenge was the schools district was in the process of onboarding some new key staff for their facilities. The applicants found it helpful to have an engineering firm manage the energy audit and keep them on pace, in addition to having the support of the ASHRAE Memphis Chapter.



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Appendix C: Memphis Success Formula

The Memphis working group first heard about this opportunity in July of 2022, when vendors started contacting various district departments and those departments would forward emails to a member of the working group who started tracking the activity around late November at the behest of the superintendent. In early December 2022, the facilities department was contacted by a local state university that has an engineering department at University of Memphis, and they were interested in partnering, but the working group members wanted to first see the webinar in December and January. The Chamber of Commerce then contacted the superintendent, really emphasizing the workforce development components of the project, and the superintendent reiterated that she wanted to explore this and pursue it. And around that time, ASHRAE came into the picture.

With knowledge on some of the efforts that the University of Memphis was making in an attempt to partner with the district on the school's project, the ASHRAE Memphis Chapter leaned on their really robust student chapter at the University of Memphis. The relationship also includes a student faculty advisor, Dr. Marchetta, who teaches HVAC courses. Dr. Marchetta from the University of Memphis reached out to inquire if the working group had heard about this grant, and if there was a relationship with the Memphis, Shelby County schools. The school system was already ahead of that, as they had already engaged a local engineering firm to help with some of the technical aspects. The local engineering firm had a previous relationship with the Memphis Shelby County schools and conducted their work *pro bono*. Many of the firm's employees are also long-time members and past presidents of the ASHRAE Memphis Chapter. "So it all just kind of came full circle that our team was just an organic kind...it just fit in pretty organically".

Through the leadership of ASHRAE and the engineering firm, weekly check-in meetings were set up to answer questions such as: How do we apply? Who should help us do this? What are the requirements? Can we assign some of these specific technical items to ASHRAE members? How can we get support from the ASHRAE Memphis Chapter, the engineering firm, and then from the district. The working group was ultimately a diverse group with a lot of representatives from industry and a diverse ASHRAE chapter with a mix of engineers, customers, industry people, engineering salespeople and manufacturer representatives. The similarities interests for parties in the working group meant that they received the same newsletters and other emails. The ASHRAE Memphis Chapter also made an announcement at their chapter meeting and put all of their minutes on their web page. These factors all meant that the word got out relatively quickly.

An initial challenge was a lot of the language of the Rebuild America's schools touched a lot of different departments within the district community safety workforce, and there was a lack of a consensus understanding of what the RFP was about., was chiefly about and to bring the right key folks to the table.

Another challenge was the schools district was in the process of onboarding some new key staff for their facilities. The applicants found it helpful to have an engineering firm manage the energy audit and keep them on pace, in addition to having the support of the ASHRAE Memphis Chapter.

REPORT TO THE BOARD OF DIRECTORS
From the ASHRAE Headquarters Committee
As of January 08, 2024

Recommendations for Board Approval:

1. MOTION: None

BACKGROUND:

FISCAL IMPACT

Information Items:

The Committee was 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 enhance the effective operation of the facility. So far this year we have worked on the following initiatives:

1. Net-Zero Operations:

The amount of solar power installed at the Headquarters was limited to 250 kW AC due to net metering regulations from Georgia Power. Performance is close to Net-Zero, but the larger DOAS units than what is in the model are a factor. As we continue to learn more about the operation of the building, we will 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. If the photovoltaic generation and the building energy use continue to perform similar to the last 12 months, we expect to be operating at net-zero energy by June 2024

2. The Carrier Abound IAQ monitoring system has been installed and the measurements are being displayed on the building performance dashboard. The system was donated by Carrier.

3. Ceiling Fans have been installed in Director offices and that has improved comfort. The ceiling fans were donated by Big Ass Fans.

4. A new proposal from Copper Tree, LBNL, and DOE was received to demonstrate Automated System Optimization. We are working with Automated Logic to get this set up.

5. Building operation evaluations:

a. **Cisco Intelligent Building Initiative:** We are currently evaluating the Building Intelligence using the Building Intelligence Quotient (BiQ). This is on hold until we get the lighting control 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 2024. The current Building EQ score is -3, and we anticipate the score to be 0 by March 2024. This is in comparison to the last Building EQ rating from March 2022 of 3.

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-EBOM:** We have approached the LEED organization for free access to their system but have not received approval yet.
- 6. A DC Microgrid System, using window mounted photovoltaic panels was donated by CISCO and it is feeding the lighting system in several of the small training rooms. We are retroactively getting the system permitted.

Scheduled and impromptu tours continue after the sold-out tours from the Atlanta Conference. On average there are one to two scheduled technical tours per month. The feedback from the tours have been highly positive. ASHRAE continues to receive requests from outside organizations to use the meeting facilities. Examples include Price Industries, Glance Gwinnett, Uponor and the American Chemistry Council.

To enhance the use of the Headquarters Building as a living lab, we plan to provide general access to the Building Performance Dashboard this spring.

January 8, 2024
Date

[Signature]
Chair



2024 ASHRAE
WINTER CONFERENCE
CHICAGO, JAN 20-24 | AHR EXPO, JAN 22-24

ASHRAE Marketing Update

Winter 2024

Vanita Gupta
Director of Marketing

Centralized Marketing

Centralized Marketing
supports
ASHRAE
Committees/Councils via
Staff Liaisons



Membership Marketing



2024 ASHRAE
WINTER CONFERENCE
CHICAGO, JAN 20-24 | AHR EXPO, JAN 22-24

Promoting Membership - Recruiting New Members



Member Referral Recruitment Campaign

Oct – Nov 2023

116 new members

\$30,160 in first year dues revenue



Targeted Ads to Non-Members

Twice annually | 4-6 weeks

100,000+ Impressions | 1,000+ Clicks

80 new members (average per ad)

Promoting Membership - Volunteer Resources

Flyers | Social Media Templates
Videos | Toolkits





New, full dues paying Full Members and Associates receive

\$2,094 in free ASHRAE products and \$100s more in discounts.

join.ashrae.org

Value of ASHRAE Membership

Members select one of four as an annual benefit:

 One ASHRAE Standard (PDF) up to \$200 value	 Upcoming Handbook (PDF) \$260 value
 One Certification Study Guide \$74 value	 One eLearning Course up to \$60 value

Members also get:

 ASHRAE Journal Subscription \$90 value	 Science and Technology for the Built Environment \$390 value
 One Year of ASHRAE Handbook Online \$315 value	 One Free Society Conference \$750 avg. value
 Technology Portal Member Access \$289 value	 ASHRAE Bookstore 25% Off
 ASHRAE Professional Development avg \$200 savings	 ASHRAE Certification \$200 savings

 **Membership Promotion Resources >**

Do you have pre-written emails to invite colleagues to join?

Do companies get discounts when enough new members join?

Do you have a flyer I can bring to a meeting with a local business?

Is there a quick video about benefits I can share?

Yes.

Cool.

Promoting the ASHRAE Community



5 post series with highest engagement across ASHRAE socials:

- 2,758 Reactions
- 537 Comments



ASHRAE added 3 new photos.
Jan 4

ASHRAE Family Tree: The Primeau Family 🌳

Élizabeth Primeau et son père Joël sont tous les deux très impliqués avec ASHRAE. Ils sont membres du chapitre d'Ottawa en Ontario, Canada. Joël a plus de 35 ans d'expérience en tant que gestionnaire de bâtiments, consultant et représentant; il est membre d'ASHRAE depuis 1993. Joël a déjà été président de son chapitre, responsable des affaires étudiantes à son chapitre, à sa région et à la société. De plus, il a été un adjoint au directeur régional de la région II. Il est maintenant un formateur pour ASHRAE. Élizabeth est représentante de vente d'équipement et une membre hors-pair de son chapitre; très active avec les affaires étudiantes, le membership et le programme, elle est maintenant RVC Student Activities pour sa région. Élizabeth fraie son propre chemin à l'ASHRAE, elle était une étudiante-membre très active; elle est vraiment une jeune leader à suivre. Après plusieurs rencontres à l'ASHRAE où on lui demandait si elle était la fille de Joël, c'est maintenant Joël qui se fait demander s'il est le père d'Élizabeth!

Joël et Élizabeth partagent plusieurs intérêts et font toutes sortes d'activités ensemble: le camping, le golf, les jeux de société, la musique (ils jouent de la guitare et du piano, et vont à des concerts).

#MyASHRAE

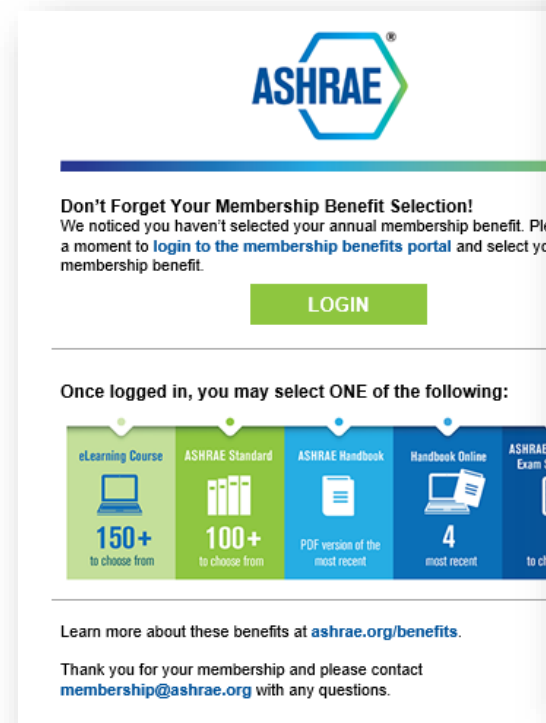
Show Less



Membership Communications

Membership lifecycle communications encourage engagement and awareness of programs and services, with over 60 components including:

- Transactional Messages
- Presentations
- Videos
- Landing Pages
- Postcards



ASHRAE

Don't Forget Your Membership Benefit Selection!
We noticed you haven't selected your annual membership benefit. Please take a moment to [login to the membership benefits portal](#) and select your membership benefit.

LOGIN

Once logged in, you may select ONE of the following:

- eLearning Course: 150+ to choose from
- ASHRAE Standard: 100+ to choose from
- ASHRAE Handbook: PDF version of the most recent
- Handbook Online: 4 most recent
- ASHRAE Certification Exam Study Guide: 3 to choose from

Learn more about these benefits at [ashrae.org/benefits](#).

Thank you for your membership and please contact membership@ashrae.org with any questions.



ASHRAE **ASHRAE Membership**
[ashrae.org/benefits](#)

NEW! Five Benefit Options Available.

Full Members and Associates can now select **1** of the following options:

- eLearning Course: 150+ to choose from
- ASHRAE Standard: 100+ to choose from
- ASHRAE Handbook: PDF version of the most recent
- Handbook Online: 4 most recent
- ASHRAE Certification Exam Study Guide: 3 to choose from

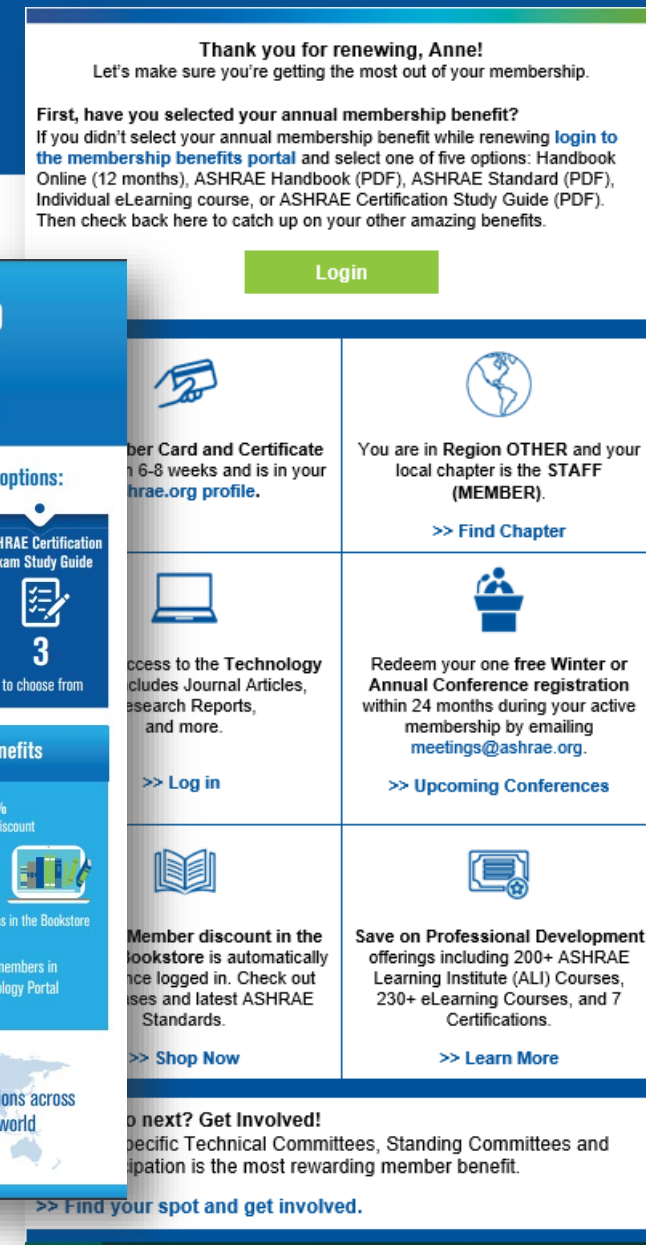
First Year New Members automatically get:

- 1 Free Registration to Winter or Annual Conference
- 12 Months FREE Handbook Online

Additional Member Benefits

- 12 month subscription to ASHRAE Journal
- 25% discount On 400 publications in the Bookstore
- 2000+ free resources for members in the ASHRAE Technology Portal

50,000+ Members **190+ Chapters** **15 Regions across the world**



Thank you for renewing, Anne!
Let's make sure you're getting the most out of your membership.

First, have you selected your annual membership benefit?
If you didn't select your annual membership benefit while renewing [login to the membership benefits portal](#) and select one of five options: Handbook Online (12 months), ASHRAE Handbook (PDF), ASHRAE Standard (PDF), Individual eLearning course, or ASHRAE Certification Study Guide (PDF). Then check back here to catch up on your other amazing benefits.

Login

 Member Card and Certificate Valid for 6-8 weeks and is in your ashrae.org profile.	 You are in Region OTHER and your local chapter is the STAFF (MEMBER) . >> Find Chapter
 Access to the Technology Portal includes Journal Articles, Research Reports, and more. >> Log in	 Redeem your one free Winter or Annual Conference registration within 24 months during your active membership by emailing meetings@ashrae.org . >> Upcoming Conferences
 Member discount in the Bookstore is automatically applied once logged in. Check out new titles and latest ASHRAE Standards. >> Shop Now	 Save on Professional Development offerings including 200+ ASHRAE Learning Institute (ALI) Courses, 230+ eLearning Courses, and 7 Certifications. >> Learn More

What's next? Get Involved!
Join specific Technical Committees, Standing Committees and more. Participation is the most rewarding member benefit.
>> Find your spot and get involved.

Newsletters

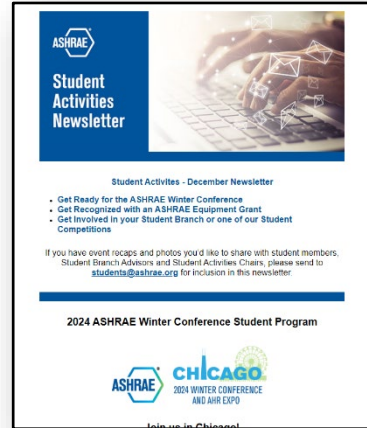
Produced in partnership with corresponding departments

ASHRAE Digital Journal



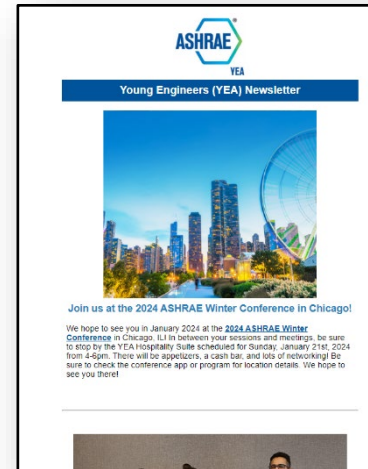
- 12 newsletters published in 2023
- Average of 37,500 subscribers each month
- Distributed to *ASHRAE Digital Journal Subscribers*

Student Newsletter



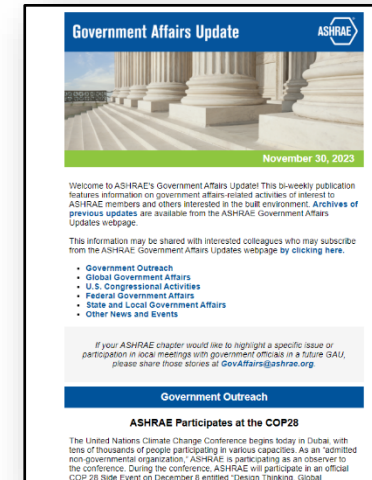
- 5 newsletters sent published in 2023
- Approximately 6,500 subscribers reached
- Distributed to *Student Activities Chapter Chairs and Co-Chairs, Student Branch Advisors and Student Members*

YEA Newsletter



- 4 newsletters published since in 2023
- Approximately 9,400 subscribers reached
- Distributed to *YEA Members (under age 35)*

Government Affairs



- 22 newsletters published in 2023
- Approximately 2,400 subscribers reached
- Distributed to *Government Affairs Update subscribers*

Newsletters and Dashboards

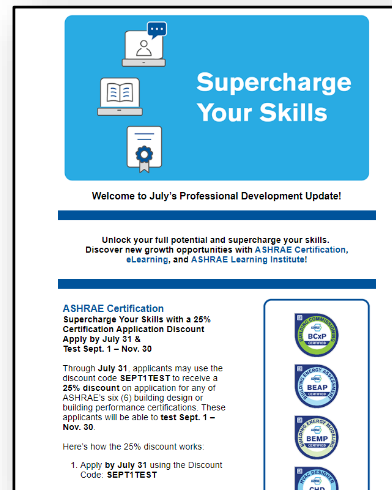
Produced in partnership with corresponding departments

European Policy Update



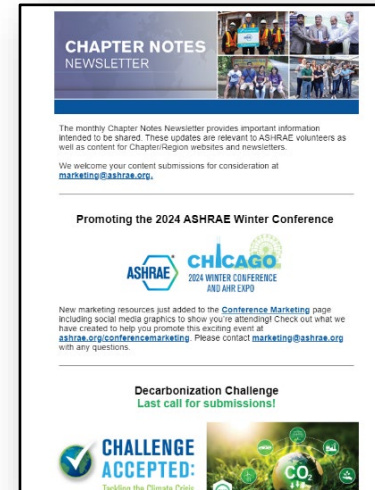
- 12 newsletters published in 2023
- Average of 1600 subscribers each month
- Distributed to *European Members*

Professional Development



- 9 newsletters published in 2023
- Average of 58,000 subscribers each month
- Distributed to *Current Members, Professional Development Update Subscribers*

Chapter Notes



- 12 newsletters published in 2023
- Average of 1,800 subscribers each month
- Distributed to *Chapter Leadership*

Dashboards



- Dashboards created monthly
- Contains monthly metrics for 5 key areas
- Distributed to *BOD and Presidential Members*

Conference & Topical Conference Marketing Support

Winter & Annual Conference Marketing



Marketing efforts are coordinated with

- Speakers
- Attendees
- Volunteers
- Partnering Organizations
- Media

20 Social Media Posts | **18** Targeted Emails | **14** Attendee Emails

LinkedIn Ads | App Notifications | Press Releases

ASHRAE Journal Ads | Videos | Landing pages | Justification Toolkit

Onsite Branding | **Onsite Press Event** with Media & ASHRAE President

+ Carefully curated media list



Conference Branding



Conference Photography

2023 Annual Conference

33 Events Captured | **3,200** Photos Taken

- ✓ Incoming Board of Directors Headshots
- ✓ Board Group Photo

2023 Winter Conference & AHR Expo

50 Events Captured | **2,300** Photos Taken

- ✓ Photos for *AHR Today* Show Daily
- ✓ Presidential Photo Shoot at ASHRAE HQ



Promoting Topical Conferences



ASHRAE and SCANVAC
HVAC Cold Climate Conference 2023

March 9-10, 2023
Fairbanks, Alaska

ASHRAE.ORG/2023HVACCLIMATE

196 Attendees



2023 Building Performance
Analysis Conference

September 11-13, 2023 | Austin, Texas

2023 ASHRAE Building Performance
Analysis Conference

September 11-13, 2023
Austin, Texas

ASHRAE.ORG/2023BPAC

230 Attendees

2023 Decarbonization Conference for the
Built Environment

October 25-27, 2023
Renaissance Arlington Capital View
Washington D.C. Metro Area

ASHRAE.ORG/2023BUILTENVIRONMENT

430 Attendees

SOLD OUT



Eighth International Conference on Energy
Research and Development

November 28-30, 2023

Kuwait University City, Kuwait
Co-organized by ASHRAE, Kuwait University,
Kuwait Foundation for the Advancement of
Sciences (KFAS) and
Kuwait Institute for Scientific Research (KISR)

ASHRAE.ORG/ICERD8

200 Attendees

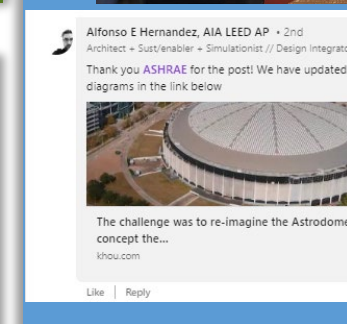


Developing Economies Conference 2023

May 11-12, 2023 | Mumbai, India

ASHRAE.ORG/DEVELOPINGCON2023

200 Attendees



ASHRAE Developing Economies
Conference Targets Healthcare,
Residential, District Energy

DIVE BRIEF

Accurate benchmarking data is
critical to building performance
standards: ASHRAE panel

Energy audits are important to ensuring buildings comply with standards, speakers
said at ASHRAE's Decarbonization Conference for the Built Environment.

Published Nov. 10, 2023

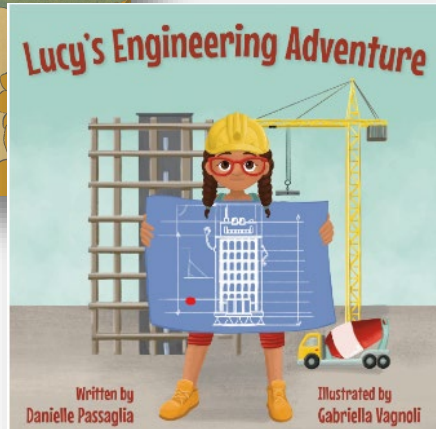
Joe Burns
Reporter

in f t e



Publication & Education Marketing Support

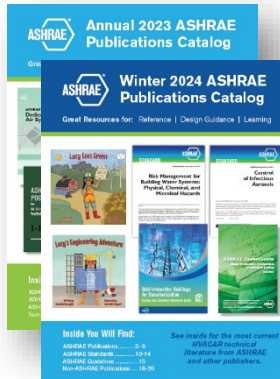
Bookstore Promotions



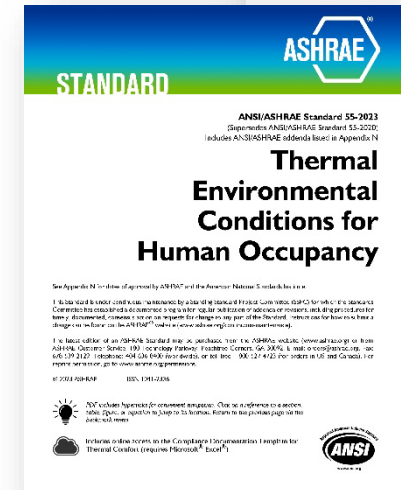
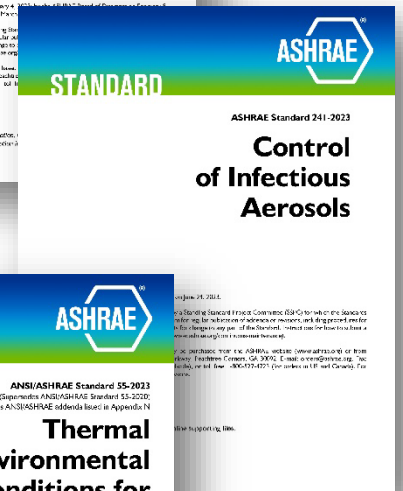
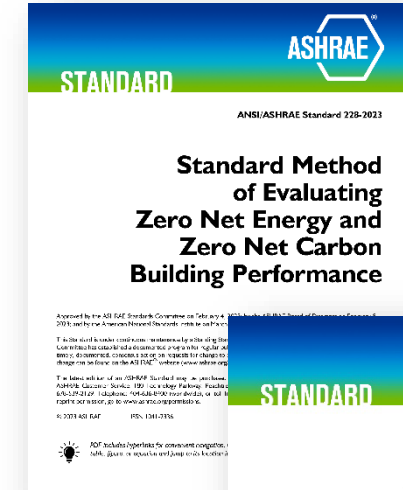
Pageview Highlights
Lucy's Engineering Adventures- 668
Standard 241- 16,503
Standard 228- 19,693
Standard 55- 48,023

20 Promotional emails
30 Social posts

Lucy's Engineering Adventure
Available in 8 languages!
Spanish, Portuguese, Serbian, Croatian, Arabic,
Greek, French, and Chinese.



Design Winter and
Annual Publications
catalog, in both print and
digital formats.



ASHRAE Education and Certification

eLearning



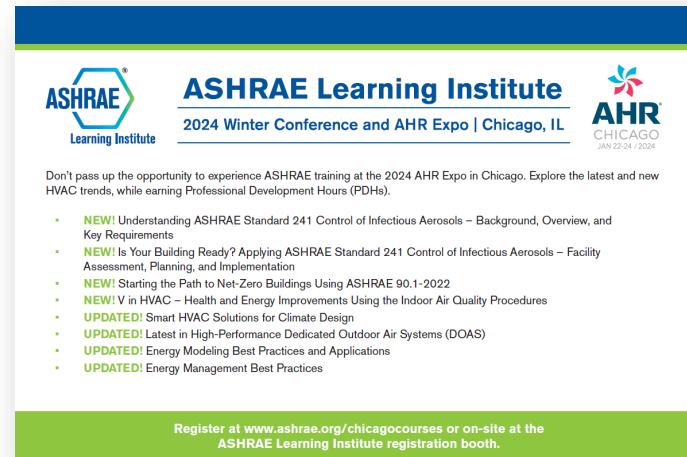
14 Promotional emails

11 Print Items

3 Social Posts

ashrae.org/eLearning
20,884 Site Visits

ALI



17 Promotional emails

5 Print Items

26 Social Posts

ashrae.org/ALI
10,032 Site Visits

Certification



37 Promotional emails

1 Social Post

ashrae.org/certification
40,446 Site Visits

GTC



15 Promotional emails

10 Print Items

20 Social Posts

ashrae.org/GTC
7,221 Site Visits

Marketing Technology

ashrae.org | Marketing Emails | Social Media

ashrae.org

2,900 - page updates

135 new pages created | **3,100** live pages

950 files (Excel, PPT, PDF, Word) uploaded or modified

80 vanity URLs created | **2,352** vanity URLs total

Marketing Email Communications

476 total emails sent to targeted audiences, members and subscribers.

Social Media

961 total posts

292 Facebook posts | **275** LinkedIn posts | **210** Tweets

88 Instagram posts | **44** Presidential Facebook posts

31 YEA Facebook posts | **21** Student Activities Facebook posts



SOCIAL MEDIA FOLLOWERS



72k



23k



7.5k



148k



3.8k

ASHRAE Website + Surveys

ashrae.org

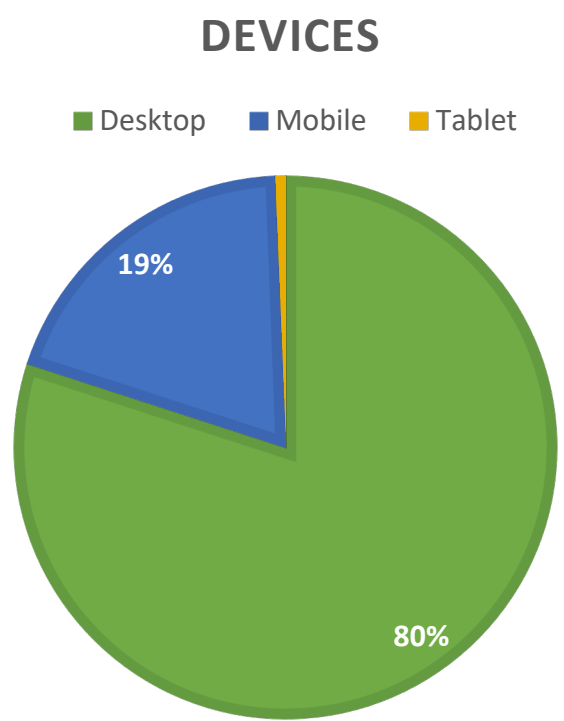
Sessions: 2.7M

Top Countries:



Top Searches: 90.1, 62.2, data center, handbook

Sessions by Device Type



Surveys

18 surveys sent

- targeted groups

Distribution Groups

- 2 ALI
- 1 All-Members
- 7 Certification
- 1 Conference
- 1 DEI
- 3 eLearning
- 1 GTC
- 1 Journal/PubEd
- 1 TFBD

ASHRAE 365 App

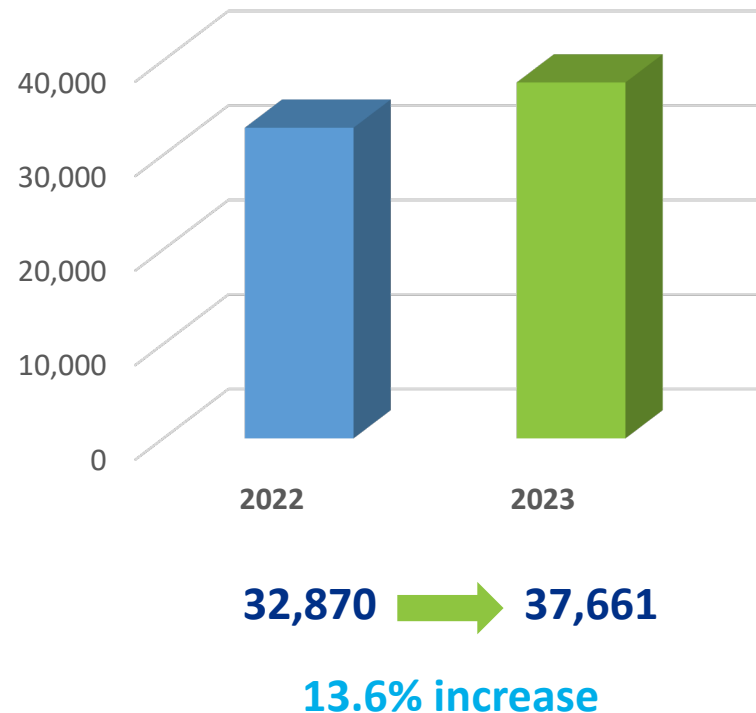
37,000+ downloads of the ASHRAE 365 app since launching in May 2018

50% are members / 50% non-members



Download at ashrae.org/365
or search for ASHRAE 365 on
the **App Store** or **Google Play**

TOTAL ANNUAL DOWNLOADS



TOP GEOGRAPHICAL DOWNLOAD REGIONS

1. US & Canada
2. Asia
3. Middle East



PUSH NOTIFICATIONS

- 10 sent (all users)
- 84 sent (conference specific)

Created for YOU - The Busy Volunteer

Central Location for:

- Acronym Guide
- Power Point Presentations
- ASHRAE Branding Guide
- Press Releases
- ASHRAE Newsletters
- Promotional Materials
- Chapter Supplies
- Logo Store

Resources To Use | *categorized by type*

Logos Forms PDFs Presentations Templates & Graphics Toolkits Tradeshow Videos Virtual Backgrounds

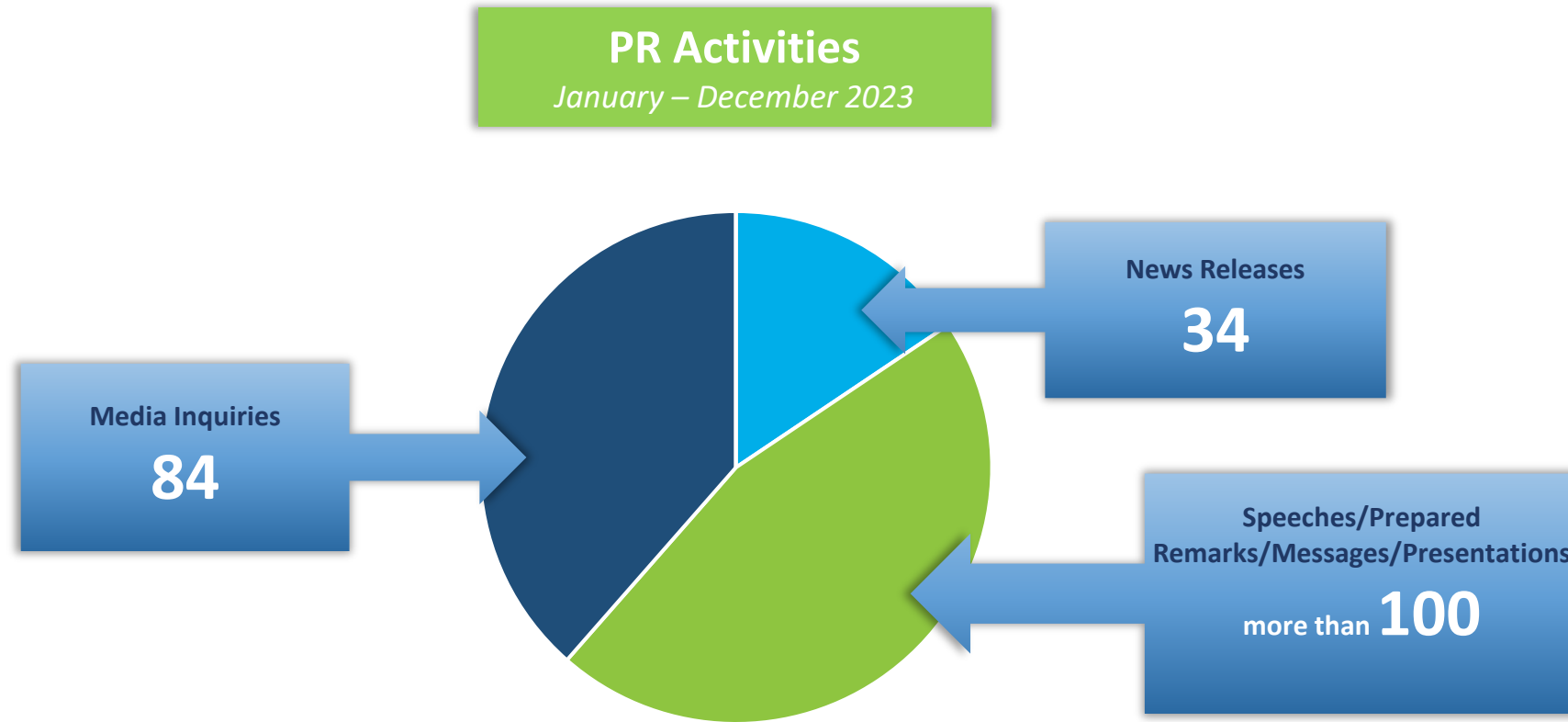
Resources organized by file type:

- Logos
- Forms
- PDFs
- Presentations
- Templates & Graphics
- Toolkits
- Tradeshow
- Videos
- Virtual Backgrounds



Public Relations

Public Relations



55,900

Media Mentions

Media Mentions refer to the number of times ASHRAE is mentioned in magazines and newspapers (both print and electronic).

resulting in

38.3 Billion

Media Impressions

Media Impressions are the number of potential viewers who have been exposed to ASHRAE media content.

Source: Meltwater

January – December 2023

Presidential and ExCom PR Support

ASHRAE 2023-2024 Board of Directors



EVENTS WHERE ASHRAE PR STAFF SUPPORT WAS PROVIDED

- ASHRAE Annual & Winter Conferences
 - NCEES – POLC Annual Meeting
 - Galway Energy Summit
 - AABC Annual Conference
 - Greenbuild
 - SHASE Annual Meeting
 - Philippines Chapter Gala
 - AHR Mexico Show Guide & Opening Remarks
 - Hong Kong Chapter Anniversary Dinner
 - Hawaii Chapter Meeting Opening Remarks
 - APPA Decarb Conference Summary
 - International Conference on Energy Research and Design
 - Northeastern Oklahoma Chapter Anniversary
 - AHR Expo Industry Trends Report
 - Green Breakthroughs Grand Event
 - Malaysia Chapter Annual Dinner
- CRC Leadership Presentation
 - Conference Leadership Presentation

51+ Speeches Drafted or Edited
40+ Prepared Talking Points Produced
12 Presidential Greetings Videos
6 Presentation Produced
4 Reports Produced
4 Conference Scripts Written
1 Presidential Citation Prepared
3 Presidential Messages of Support
2 Feature Articles Written

Standard 241: *Control of Infectious Aerosols*

Media Exposure



3:27 PM · Jun 26, 2023 · 166.1K Views



Visits to
ashrae.org/241
17,442

4 Press Releases
58+ Published Articles
613 News Outlets
201,000,000+ Impressions
534,000+ Social Engagements

WSJ

retrofit

The Washington Post

CANADIAN CONSULTING
Engineer

HEALTH FACILITIES
MANAGEMENT

The New York Times

Air Conditioning | Heating | Refrigeration
the NEWS

COLD
INCORPORATING COLD CHAIN

LINK
AFRICA

MIDDLE EAST
climate control
KEY PERSPECTIVES ON THE REGION'S HVACR INDUSTRY

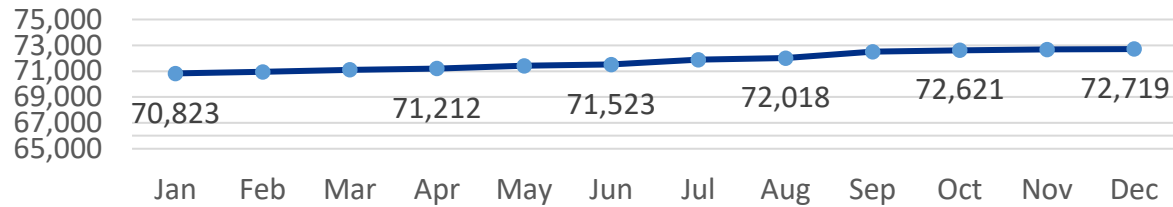
PHCP PROS
YOUR PROFESSIONAL PLUMBING, HEATING, COOLING & PIPING COMMUNITY

Social Media / Video

Social Media

Facebook, X (Twitter), LinkedIn, Instagram

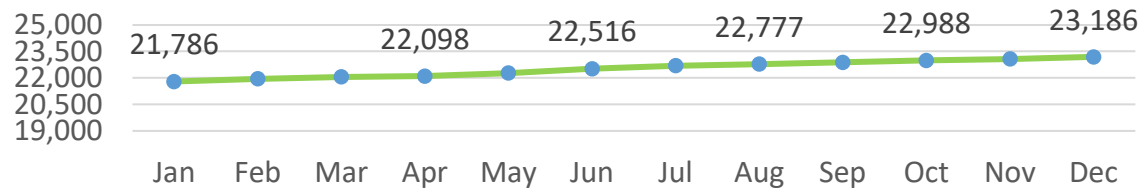
Facebook Followers 2023



72,719 total followers 4% ↑

- Monthly Reactions: **589**
- Monthly Post Clicks: **1,006**
- Monthly Impressions: **49,929**

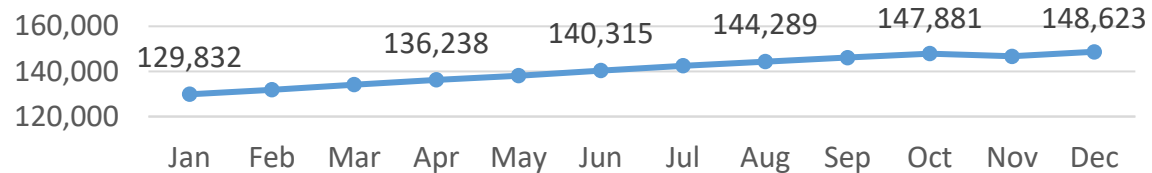
X (Twitter) Followers 2023



23,186 total followers 7% ↑

- Monthly Reactions: **235**
- Monthly Post Clicks: **627**
- Monthly Impressions: **40,406**

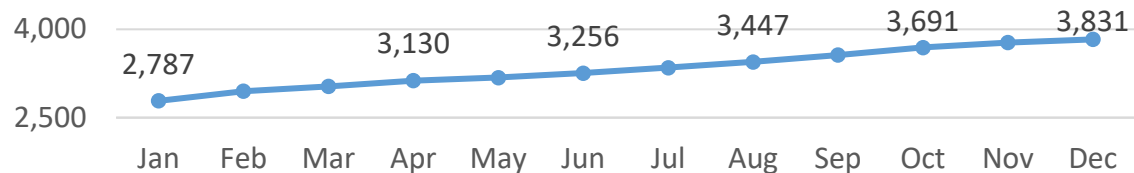
LinkedIn Followers 2023



78,191 total followers 16% ↑

- Monthly Reactions: **2,995**
- Monthly Post Clicks: **6,109**
- Monthly Impressions: **191,064**

Instagram Followers 2023



3,831 total followers 40% ↑

- Monthly Reactions: **4,582**
- Monthly Impressions: **191,064**
- *Launched November 2020

Top Five Videos Posted in 2023	Views
Task Force for Building Decarbonization Overview	2,529
ASHRAE 2022-2023 Year in Review	1,188
Decarb 101 Part One in a Forthcoming Four-Part Series	982
What Excites You About Building Decarbonization?	896
Tech Hour #5: Decarbonizing Healthcare	884



49 videos were published to
ASHRAE's YouTube channel in 2023.

2023 Views:

47,375 (494,243 LTD)

2023 Hours watched:

2,349.5 (24,605 LTD)

Subscribers:

7,586 (+843 over CY 2022)

ASHRAE's YouTube channel host **311** published
videos in total



Other Marketing

Decarbonization Challenge

As a part of ASHRAE President Ginger Scoggins, P.E. 23-24 Society theme, *Challenge Accepted: Tackling the Climate Crisis*, a new year-long competitive grant (\$1,000 - \$10,000) program was announced. The objective was for members to implement decarbonization projects within local chapters.

Received **43 applications** from **37 various chapters**.

Emails/Newsletters

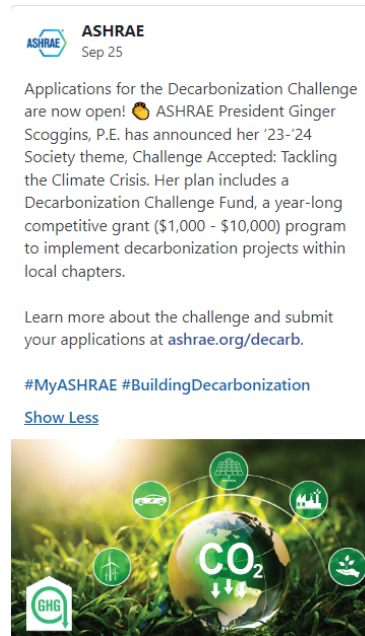
- Promoted in August – November Chapter Notes
- Created personal appeal email from EVP to Chapter Officers

Website

- Designed and launched new webpage (</DecarbChallenge>)
 - 4,632 page views during application period
- Featured plug on 2024 Winter Conference site

Graphic Design

- Graphics created for site and promotion



Social

- 21 social posts (LinkedIn, Facebook and X)

ASHRAE 365

- Two push notifications sent out

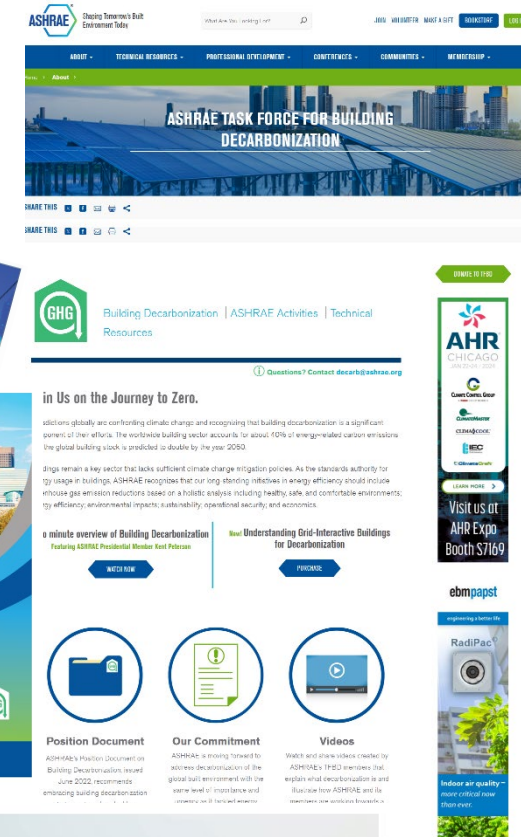
Speech Writing

- Scripting and announcement at Presidents Luncheon
- Slide created for Fall CRC Presentation

Task Force for Building Decarbonization (TFBD)



- Created and launched ashrae.org/decarb
 - **17,973** pageviews of since launch
- **9** Videos published
 - **6** Videos created in Tampa with support from the Knowledge Hub
 - **6,211** combined views
 - **228.7** hours watch time
 - **3** additional videos to be published in 2024
- Created guide covers
 - Building Performance Standard: A Technical Resource Guide
 - **2,856** downloads
 - **1,493** of which are self-indicated ASHRAE members
- **11** Social Posts
- **2** Press Releases
 - **159** Media Mentions | **147M** Potential Reach - Dec. 2023



COP 28 - UN Climate Change Conference, Dubai, UAE

OFFICIAL BLUE ZONE SIDE EVENT

Design Thinking, Global Standards, & Integrative Solutions for a Net Zero Built Environment

Partnered with AIA, AFPA, IVL/EPD and RIBA

OFFICIAL BLUE ZONE EXHIBIT

Buildings and Infrastructure | Core Climate Solutions

Partnered with ICC and Architecture 2030



Marketing/PR support:

- Created and launched ashrae.org/COP28 with **792** pageviews
- Posted livestream recording of side event resulting in **252** views
- **1** press release on ASHRAE's involvement at COP issued to **662** media contacts with combined reach of **5,520**
- **2 PPT** Presentation for Side Event / Exhibit
- **3** Social Posts with 13,008 combined impressions
- **5+** additional meetings in Dubai
- **249** marketing staff hours

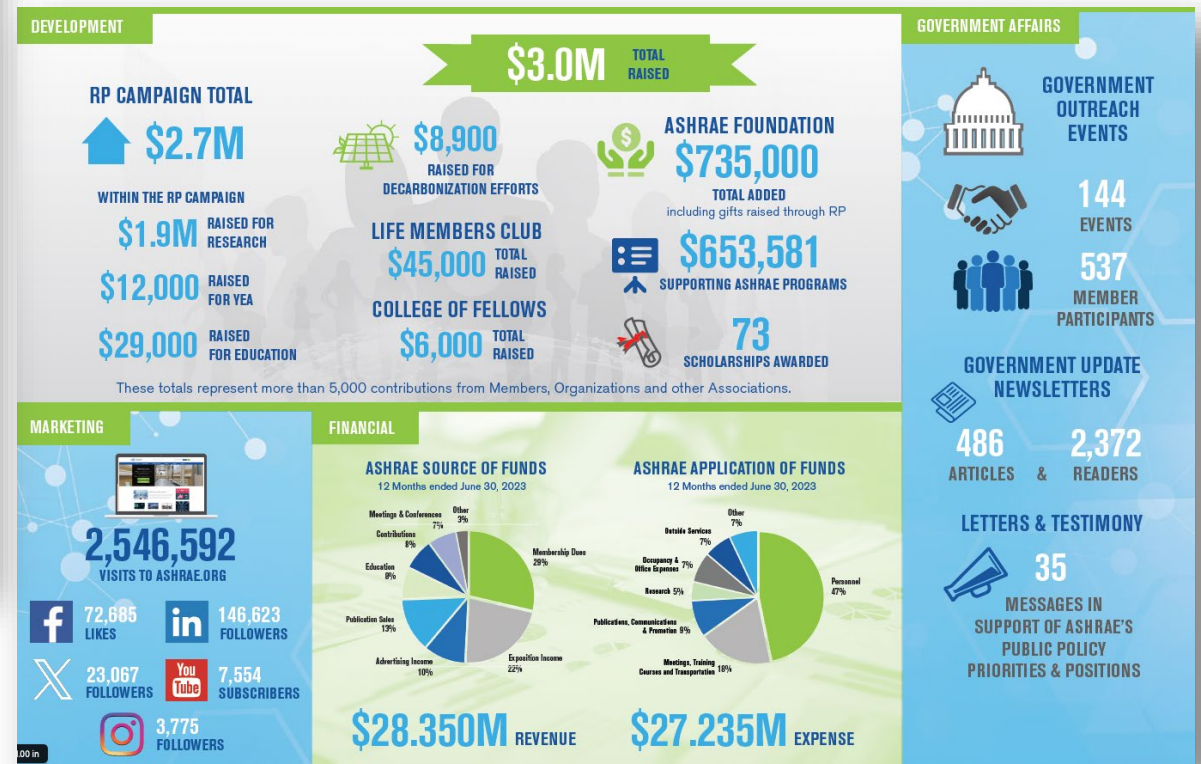
Society Snapshot

Finalized December 2023



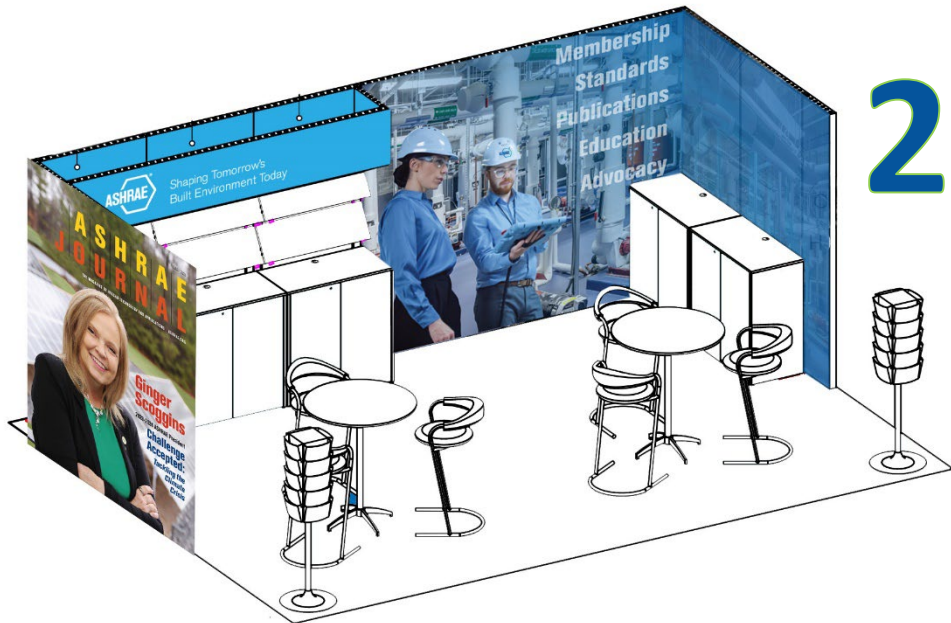
ashrae.org/societysnapshot

Annual refresh of the design and content of the Society Snapshot.



Tradeshows in 2023

What?	Where?	When?
AHR Expo - 850	Atlanta, GA, USA	February 2-6
ACREX 2023 - 125	Mumbai, India	March 14-16
AHR Mexico - 891	Mexico City, Mexico	September 19-21
Greenbuild - 225	Washington DC, USA	September 26-29



2,091 *Total number of booth visitors*

Visit us at Booth #S6810

Receive a limited-edition Challenge Accepted button and spin the prize wheel for ASHRAE Swag and 40% off an eLearning discount coupon!



Thank You!

Questions?



2024 ASHRAE WINTER CONFERENCE

CHICAGO, JAN 20-24 | AHR EXPO, JAN 22-24

- BOD ExO = Board of Directors Ex Officio
- CO = Coordinating Officer
- VP = Vice President
- DAL = Director-at-Large
- DRC = Director-and Regional Chair
- RAL = Region-at-Large
- RMCR = Region Members Council Representative,
- NVM = Non-voting Member
- * = New Member
- Dir. =Director
- MAL= Member-at-Large



2023-24 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 JEPC, COF, and LMC.

Updated January 2024

Board of Directors (Members are elected)

Ginger Scoggins, President	Steven Sill, DRC - I	Jonathan Smith, DRC - IX	Drury (Dru) Crawley, DAL
Malcolm (Dennis) Knight, President-Elect	Ronald (Ron) Gagnon, DRC - II	Buzz Wright, DRC - X	Blake Ellis, DAL
William (Bill) McQuade, Treasurer	Mark Tome, DRC - III	Eileen Jensen, DRC - XI	Arthur (Art) Giesler, DAL
George (Billy) Austin, VP	Bryan Holcomb, DRC - IV	John Constantine, DRC - XII	Kishor Khankari, DAL
Wade Conlan, VP	James (Jim) Arnold, DRC - V	Cheng Wee Leong, DRC - XIII	Luke Leung, DAL
Ashish Rakheja, VP	Susanna Hanson, DRC - VI	Mahroo Eftekhari, DRC - XIV	Corey Metzger, DAL
Chandra Sekhar, VP	Scott Peach, DRC - VII	Richie Mittal, DRC – RAL	Heather Schopplein, DAL
Jeff Littleton, Secretary	Joseph (Joe) Sanders, DRC - VIII	Douglas (Doug) Cochrane, DAL	Wei Sun, 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.

Ginger Scoggins, President
Malcolm (Dennis) Knight, President-Elect
William (Bill) McQuade, Treasurer
George (Billy) Austin, Vice President
Wade Conlan, Vice President
Ashish Rakheja, Vice President
Chandra Sekhar, Vice President
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.

Kishor Khankari, Chair
Susanna Hanson, Vice Chair
Mahroo Eftekhari
Cheng Wee Leong
Heather Schopplein
Jonathan Smith
Devin Abellon, Consultant
Dunstan Macauley, Consultant

Strategic Advisory Panel – **NEW**

Though not identified as a standing body, this panel is an ongoing appointment made by the President-Elect.

Members currently being assigned.

Continued on next page

Councils/ Committees 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.

Malcolm (Dennis) Knight, Chair
William (Bill) McQuade, Vice Chair, *
James (Jim) Arnold, Dir. (24)
Ronald (Ron) Gagnon, Dir. (24)
Bryan Holcomb, Dir. (24)
Eileen Jensen, Dir. (24)
Kishor Khankari, Dir. (24)
Cheng Wee Leong, Dir. (24)
Wei Sun, Dir. (24)
Charles Bertuch (I) (24)
Genevieve Lussier (II) (24)
Sherry Abbott-Adkins (III) (24)
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)*
Rob Craddock (XI) (24)
Tulia Rios (XII) (25)
Ching Loon Ong (XIII) (25)
Eduardo Maldonado (XIV) (26)*
Mohammed Anbari (RAL) (24)

Lizzy Seymour, Interim Staff Liaison, 8/1/23

Audit Committee

Eileen Jensen, Chair
Cheng Wee Leong*
Joseph Sanders*
Craig Wright, 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.

George (Billy) Austin, Chair
Chandra Sekhar, Vice Chair, *
Doug Cochrane, Dir. (24)
John Constantine, Dir. (24)
Blake Ellis, Dir. (24)
Arthur (Art) Giesler, Dir. (24)
Mark Tome, Dir. (24)
Suzanne LeViseur, Past Certification (24)
Megan Tosh, Past Handbook (26)*
Jason Alphonso, Past Training and Education (24)
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.

Ashish Rakheja, Chair
Wade Conlan, Vice Chair, *
Drury (Dru) Crawley, Dir. (24)
Susanna Hanson, Dir. (24)
Luke Leung, Dir. (24)
Richie Mittal, Dir. (24) & MAL (26)*
Steven Sill, Dir. (24)
Constantinos Balaras, Past DRC (25)
Paul Francisco, Past Standards (24)
Carl Huber, Past Technical Activi. (25)
Michael Pouchak, Past Res. Admin. (26)*
Christopher (Chris) Phelan, MAL (24)
Larry Smith, MAL (25)
Sarah Maston, Consultant (24)
Stephanie Reiniche, Staff Liaison

Continued on next page

Continued on next page

Councils/ Committees Reporting to the Board of Directors Continued

Development Committee

Tiffany Bates Abruzzo , Chair
Darryl Boyce, Vice Chair*
Mike Beda, Life Members Club
Greg Pavlak, Scholarship Trustee*
Dave Branson, College of Fellows
Aakash Patel, RP ExCom
Lester Periera, RP ExCom
Haley Goslinga, RP ExCom*
Don Colliver, Foundation ExCom

T. Randall (Randy) Jones, Foundation ExCom*
Mike Hart, Foundation ExCom*
Jason Alphonso, Member-at-Large*
Bogi Setty, Member-at-Large
Pankaj Dharkar, Member-at-Large
George (Billy) Austin, CO*
Chuck Gullede, Consultant
Kirstin Pilot, Staff Liaison

Finance Committee

William (Bill) McQuade*
George (Billy) Austin*
Michael Cooper
Chris Gray*
Sarah Maston
Ahmed Alaa Eldin Mohamed
Ashish Rakheja*
Matt Rowe*
Craig Wright, Staff Liaison

Planning Committee

Stephanie (Steph) Kunkel, Chair
Trenton (Trent) Hunt, Vice Chair
Devin Abellon*
Douglas (Doug) Cochrane*
Rupesh Iyengar*
Jake Kopocis
Farhan Mehboob
Michael Patton
Madison Schultz*
Andres Sepulveda
Chad Smith
Jonathan Smith*

Mahroo Eftekhari, Consultant*
Sheila Hayter, Consultant*
Dunstan Macauley, Consultant
Corey Metzger, Consultant
Heather Schopplein, Consultant*
Michael (Mick) Schwedler, Consultant*
Jeff Littleton, NVM, EVP
Vanita Gupta, Staff Director*
Wade Conlan, CO*
Chandrias Jolly, Staff Liaison

Society Rules Committee

Ronald (Ron) Gagnon, Chair
Elbert (Bert) Phillips, Vice Chair
Ioan Dobosi*
Spencer Morasch
Heather Schopplein*
Adrienne Thomle
Ashish Rakheja, CO
Chandrias Jolly, Staff Liaison

Nominating Committee

Chair, Mich Schwedler | Vice Chair, Farooq Mehboob

Region Members

I ~~Richard Vehlou~~ **Joseph L. Furman 9/21/23**
II Isabelle Lavoie
III James Grant
IV Jimmy Leonida
V Jack Kibort
VI Mark Miller
VII Karen Thrasher
VIII Mark Fly
IX Jessica Renner
X Robert Kunkel
XI Jeff Hurd
XII Daniel Rogers
XIII Ching Man Tracy Pang
XIV Bratislav Blagojevic
RAL Krishnan Viswanath

Region Alternates

I ~~Joseph L. Furman~~ **Spencer Morasch 9/21/23**
II Nicolas Lemire
III Roger Jones
IV Charlie Curlin
V Steve Erhman
VI Fiona McCarthy
VII ~~Tony Horton~~ **Jeff Gatlin 10/2/23 Grant Page 12/1/2023**
VIII Chris Ahne
IX Trent Hunt
X Marites Calad
XI Greg Fluter
XII Eduardo Conghos
XIII Han Guan Den Low
XIV Marko Ignjatovic
RAL Abbass Sajid

Board Elected Members

David Underwood – XI
Sheila Hayter - IX
Adeeba Mehboob – RAL
Dunstan Macauley - III
~~Devin Abellon – X,~~ **Chris Gray – VII 9/22/23**
~~Chris Gray – VII,~~ **Costas Balaras – XIV 9/22/23**
~~Sarah Maston – I,~~ **Robin Bryant – XII 9/22/23**
~~Costas Balaras – XIV,~~ **Guy Perreault – II, 9/22/23**

Board Elected Alternates

~~Robin Bryant – XII,~~ **Edward Tsui – XIII 10/5/23**
~~Guy Perreault – II,~~ **Bjarne Olesen – XIV 10/5/23**
~~Tom Lawrence – IV,~~ **Lee Millies – V 10/5/23**
~~Edward Tsui – XIII,~~ **Bill Klock – VIII 10/5/23**
~~Bjarne Olesen – XIV,~~ **Karine Leblanc – X 10/5/23**
~~Lee Millies – V,~~ **Julia Keen – IX 10/5/23**
Jennifer Leach – III 9/21/23
Cesar Luis Lim – XIII 9/22/23

Candace DeVaughn, Staff Liaison

Continued on next page

Committees Reporting to Members Council

Chapter Technology Transfer Committee

Andrew (Andy) Reilman, Chair
Daniel Redmond, 1st Vice Chair
Heric Holmes, 2nd Vice Chair
Frank Rivera (I)
Abhi Khurana (II)
Matthew (Matt) Archey (III)
Christopher (Chris) Adams (IV)
Matthew Klok (V)*
Eric Johansen (VI)*
Kevin Muldoon (VII)*
Kenneth Shifflett (VIII)
Abigail Brophy (IX)
Tyler Bradshaw (X)
Matt Parkes (XI)*
Thiago Portes (XII)
Sivakumar Gadam (XIII)
Conor Murray (XIV)*
Osama Khataya (RAL)
John Constantini, Chapt. Prog. Coord.
Elizabeth Zakelj, Tech Hour Coord.*
Wei Sun, BOD ExO
Malcom (Dennis) Knight, CO*
Rhiannon Masterson, Staff Liaison

Communications Committee

Anuj Gupta, Chair
Daniel Bourque, Vice Chair
Nissun Feiner
Jeanette Hay*
Kinga Hydras
Sandeep Mendiratta*
Thursten Simonsen
Bradley White*
James (Jim) Arnold, BOD ExO*
Malcom (Dennis) Knight, CO*
Joslyn Ratcliffe, Staff Liaison

Conferences & Expositions Committee

Raul Simonetti, Chair
Maggie Moninski, Vice Chair
Ahmed Abdel Salam
Ehab Mamdouh Abdelkader
Atila Biyikoglu
Aaron Boranian
Craig Bradshaw
Kevin Brown*
Kristen Cetin
Joe Chow
Jon Cohen*
Brian Fronk
Lina Hashem
Cindy Callway*
Money Khanna*
Suzanne LeViseur
James Liston
Stephanie Mages
Anoop Peediyakkann
Elbert (Bert) Phillips
Erik Sanchez
Som Shrestha
Vinod Venugopal*
David Yashar*
Ng Yong Kong
Davide Ziviani
Cheng Wee Leong, BOD ExO*
Malcom (Dennis) Knight, CO*
Tony Giometti, Staff Liaison

Government Affairs Committee

Robert (Rob) Hoadley, Chair
Sheila Hayter, Vice Chair
Mohammed (Basel) Anbari, Members Council Rep.
Jason Alphonso, PubEd Council Rep.*
Chris Phelan, Tech Council Rep.
Tim Wentz, Member-at-Large
Andrew Persily, Member-at-Large*
Michael (Mike) Wolf, Member-at-Large
Artorius Reyes, Member-at-Large
William Fisher (I)*
Mike Genin (II)
RJ Hartman (III)
Weston Hockaday (IV)
Louis Van Belle (V)
Beth Tomlinson (VI)
Douglas (Doug) Cage (VII)*
Eleazar Rivera (VIII)*

Peter Koneck-Wilwerding (IX)
Tracey Jumper (X)
Geoffrey (Geoff) Jenks (XI)*
Timothy Theriault (XII)
Yew Sin (Albert)(XIII)
Ioan Dobosi (XIV)
Ahmed Bolbol (RAL)
Sonya Pouncy, Commun. Coord.
Bryan Holcomb, BOD ExO*
William (Bill) McQuade, CO*
Alice Yates, Staff Liaison

Honors and Awards Committee

Isabelle Lavoie, Chair
Thomas (Tom) Phoenix, Vice Chair*
Mohammad Al Tassi
Adam Davis
Maged Hashem
Pamela (Pam) Immekus*
Karine Leblanc
Scott Martin*
Daniel (Dan) Rogers
Mohammad Sajid
Juliana Trigo*
Wei Sun, BOD ExO
Malcom (Dennis) Knight, CO*
Rhiannon Masterson, Staff Liaison

Continued on next page

Committees Reporting to Members Council Continued

Membership Promotion Committee

Daniel Chudecke, Chair
 Jason Urso, 1st Vice Chair
 Louise McKenzie, 2nd Vice Chair
 Chonghui Liu (I)
 Reaz Usmanali (II)*
 Ryan Westlund (III)
 Timothy G. Cannon (IV)
 Akshay Bhargava (V)
 Fiona McCarthy (VI)
 Stephen (Steve) Grant (VII)
 Ron McCarty (VIII)
 Mark Penchoff (IX)
 Nicolas Rosner (X)
 Gregory (Greg) Jernstrom (XI)
 Guillermo Massucco (XII) *
 Sam Hui (XIII)
 Adelio Gaspar (XIV)*
 Adil Inam (RAL)*
 Robert (Rob) Druga, Consultant*
 Bryan Holcomb, BOD ExO*
 Malcom (Dennis) Knight, CO*
 Daniel Gurley, Staff Liaison

Research Promotion Committee

Aakash Patel Chair
 Lester Pereira, 1st Vice Chair
 Haley Goslinga, 2nd Vice Chair
 Andrew E. Manos, 3rd Vice Chair
 Adeeba Mehboob, 4th Vice Chair
 Eric Fontaine (I)*
 David Sinclair (II)*
 Laura Petrillo-Groh (III)
 Brian Justice (IV)
 Lane Snowberger (V)
 Kelly Gunn (VI)*
 Jennings Davis (VII)
 Chris Dolan (VIII)
 Dahl Carmichael (IX)
 Kevin Baldwin (X)
 John Farley (XI)
 Javier Korenko (XII)
 Suei Chea (XIII)
 Aleksandar Andjelkovic (XIV)*
 Muhammad Omer Kahn (RAL)*
 Kishor Khankari, BOD ExO
 Malcom (Dennis) Knight, CO*
 Julia Mumford, Staff Liaison

Student Activities Committee

Kellie Huff, Chair
 Shaun Nienhueser, Vice Chair
 Ashley Keller (I)
 Elizabeth Primeau (II)
 Andrew (Andy) Hobson (III)
 Natalie McDonald (IV)*
 Robert (Bob) Snow III (V)
 Kevin Summers (VI)
 Nancy McBee (VII)
 Jacqueline (Jacky) Hay (VIII)
 Corey Chinn (IX)*
 Omar Rojas (X)
 Justin Albo (XI)*
 Juliana Trigo (XII)*
 Fu Jen Wang (XIII)
 Triantafyllos Triantafyllopoulos (XIV)*
 Yashkumar Shukla (RAL)
 Dennis O'Neal, Accred. Rep/ABET Board
 Mansour Zenouzi, Accred. Rep/ABET EAC
 Robert Bittle, Accred. Rep/ABET ETAC
 Eileen Jensen, BOD, ExO*
 Malcom (Dennis) Knight, CO*
 Katie Thomson, Staff Liaison

Young Engineers in ASHRAE Committee

Branislav Cvijetinovic, Chair
 Bruno Martinez, Senior Vice Chair
 Elise Kiland, Junior Vice Chair
 Elizabeth Jedrlinic (I)
 Benjamin Oliver (II)*
 Tyler Berry (III)*
 Ben Bingham (IV)*
 Paul Fernandez (V)
 Drew Samuels (VI)
 Blake Forsythe (VII)*
 Marisa Kamstra (VIII)
 Marie VanderVliet (IX)
 Elise Backstrom (X)*
 Cailin MacPherson (XI)

Kieron Nanan (XII)
 Chak Mou Lam (XIII)
 Joshua Vasudevan (XIV)
 Money Khanna (RAL)*
 Eman Mohamed, Member-at-Large *
 Chris Kriepps, Member-at-Large
 Jake Lenahan, CIBSE Liaison
 Louise McKenzie, MP Liaison*
 Shaun Nienhueser, SA Liaison*
 Zachary Alderman, Consultant
 Madison Schultz, Consultant
 Ron Gagnon, BOD ExO*
 Malcom (Dennis) Knight, CO*
 Jeanette McCray, Staff Liaison

Continued on next page

Committees Reporting to the Publishing and Education Council

Certification Committee

Nicholas H Armstrong, Chair
 Suz Ann M Arroyo, 1st Vice Chair
 Badri Patel, 2nd Vice Chair
 Rodrigo Arias
 Marius Balan
 Gregory M Jones
 Apichit Lumlertpongpana
 Carlos Alberto Mitroga
 Vikram Murthy
 Keith H Reihl
 Marianna Vallejo
 Mark A Tome, BOD ExO
 George (Billy) Austin, CO
 Tim Kline, Staff Liaison

Historical Committee

Robert Thomas Pollard, Chair
 Norman Grusnick, Vice Chair
 Khalid Gulzar
 Andrew B Pearson
 Gregory A Schnable
 Akinbowale O Soluade
 Henry Frederick Stehmeyer
 Arthur L Giesler, BOD ExO
 George (Billy) Austin, CO
 Julia Harr, Staff Liaison

Training and Education Committee

Jesse Fisher, Chair
 Kimberly Pierson, Vice Chair
 Tim Ashby
 Joseph T Firrantello
 Vanessa Freidberg
 KokZhen Law
 Adeeba Mehboob
 James Piscopo
 Tahir Raza
 Zeeshan Ahmed Siddiqui
 Ashley N Weekly
 Gerardo Alfonso
 Douglas (Doug) Cochrane, BOD ExO
 George (Billy) Austin, CO *
 Karen Murray, Staff Liaison

Publications Committee

Vinay Ananthachar, Chair
 Megan Tosh, Vice Chair
 Mohamed Eltaieb Ibrahim Alagraa
 Atilla Biyikoglu
 Robin Bryant
 Jennifer A Isenbeck
 Stephen P Kavanaugh
 Javier C Korenko
 Cameron R Labunski
 Francis A Mills
 Kurt Monteiro
 George Pantelidis
 Drew Champlin
 Blake Ellis, BOD ExO
 George (Billy) Austin, CO *
 Cindy Michaels, Staff Liaison

Handbook Committee (Members Elected to Committee)

Harris Sheinman, Chair
 Joseph Furman, Vice Chair

Subcommittee for 2024 HVAC Systems and Equipment

Joseph Furman, Chair
 Derek Crowe
 Nicolas Lemire
 Ahmed Medhat
 Satish Iyengar
 Chee Sheng Ow

Subcommittee for 2025 Fundamentals

Stephanie Mages, Chair
 Sonya Pouncy
 Caroline Calloway
 Frederic Granzow
 Marija S Todorovic
 Jeffrey G Boldt

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

 John Constantinide, BOD ExO*
 George (Billy) Austin, CO *
 Heather Kennedy, Staff Liaison

Continued on next page

Committees Reporting to the Technology Council

Environmental Health Committee

William (Bill) Bahnfleth, Chair
 Marwa Zaatari, Vice Chair
 Dimitris Charalambopoulos*
 Mark Ereth
 Benjamin (Ben) Jones*
 Howard Kipen*
 Linda Lee
 Kenneth Mead
 Farhad Memarzadeh
 Corey Metzger
 Conor Murray*
 Lisa Ng*
 Kathleen Owen
 Max Sherman*
 Donald (Don) Weekes
 Drury (Dru) Crawley, BOD ExO*
 Ashish Rakheja, CO*
 Steve Hammerling, Staff Liaison

Global Technical Interaction Committee– [NEW](#)

Akinbowale Soluade, Chair
 Ashish Rakheja, Vice Chair, CO
 Jonathan Rajala
 Douglas Fick
 Kevin Mercer
 Steven Bushby
 Drake Erbe
 Thiam Leong Chen
 Hassan Ali Younes
 Fabio Clavijo
 Cheng Wee Leong
 Jyotirmay Mathur
 George Pantelidis
 Jaap Hogeling
 Eleazar Rivera
 Susanna Hanson, BOD ExO
 Ryan Shanley, Staff Liaison

Residential Buildings Committee

William (Bill) Healy, Chair
 Rachel Romero, Vice Chair
 Michael Blanford
 Darcy Carbone*
 Wesley Davis*
 Steven Emmerich
 Philip Fairey
 Jingjuan Feng*
~~Dean Gamble~~ Xudong Wang 10/11/23*
 Jaap Hogeling
 Li Lan*
 Carol Marriott
 Michael Pouchak
 Yashkumar Shukla
 Pawel Wargocki*
 Steven Sill, BOD ExO*
 Ashish Rakheja, CO*
 Derrick Nesfield, Staff Liaison

Refrigeration Technology Committee for Comfort - Process - Cold Chain

Stephen (Steve) Kujak, Chair
 Douglas (Doug) Scott, Vice Chair
 Roberto Aguilo
 Andrew Beall*
 Didier Coulomb
 Nicole Dunbar
 Ayman Eltalouny
 Dustin Lilya*
 Apichit Lumlertpongpana
 Kashif Nawaz
 Bruce Nelson*
 Roddam Simha
 Harshal Surange
 Xudong Wang
 Don Brandt, Consultant*
 Richie Mittal, BOD ExO*
 Ashish Rakheja, CO
 Michael (Mike) Vaughn, Staff Liaison

Research Administration Committee

(Members Elected to Committee)

William (Bill) Murphy, Chair
 Natascha Milesi Ferretti, Vice Chair
 Chris Gray (27) *
 Srinivas Katipamula (27) *
 Matthew Mullen (27) *
 Zheng O'Neill (27) *
 Wen Bin (27) *
 Dennis Landsberg (26)
 Douglas Scott (26)
 Carl Huber (26)
 James Bogart (25)
 Roland Charneux (25)
 Jin Wen (24)
 Stefan Elbel (24)
 Hywel Davies, Consultant (24)
 Xudong Wang Consultant (24)
 Drury (Dru) Crawley, BOD ExO*
 Ashish Rakheja, CO*
 Michael (Mike) Vaughn, Staff Liaison

Standards Committee (Members Elected to Committee)

~~Jonathan Humble,~~
 Douglas (Doug) Fick, Chair, 12/31/23
~~Douglas (Doug) Fick, Vice Chair~~
 Kelley Cramm (27)*
 Abdel Darwich (27)*
 Drake Erbe (27)*
 Kenneth Monroe (27)*
 Daniel Nall (27)*
 Philip Naughton (27)*
 Douglas (Doug) Tucker (27)*

Jaap Hogeling (26)
 Jennifer Isenbeck (26)
 Phillip Johnson (26)
 Kathleen Owen (26)
 Karl Peterman (26)
 Christopher Seeton (26)
 Paolo Tronville (26)

Patricia (Pat) Graef (25)
 Paul Lindahl (25)
 Justin Prosser (25)
 William Walter (25)
 Julie Majurin (25)
 Lawrence (Larry) Markel (25)
 Margaret Mathison (25)

Gwelen Paliaga (25)
 Gerald Kettler (24)
 Jay Kohler (24)
 David Robin (24)
 James Lutz (24)
 Susanna Hanson, BOD ExO*
 Ashish Rakheja, CO*
 Ryan Shanley, Staff Liaison

Continued on next page

Committees Reporting to the Technology Council Continued

Technical Activities Committee (Members Elected to Committee)

James Bennett, Chair
Kevin Mercer, Vice Chair
Jason Atkisson
Vikrant Aute
Tina Brueckner
Ongun Kazanci
Money Khanna
Patrick Marks
Gursaran Mathur
Kashif Nawaz
Lan Chi Nguyen Weekes
Kevin Marple
Douglas Reindl
Satheesh Kulankara
Brad Cochran
Joy Altwies, 7/19/23
Luke Leung, BOD ExO
Ashish Rakheja, CO
Steven Hammerling, Staff Liaison





2023-24 Presidential Appointments (Scoggins)

*Appointments as displayed are for the 2023-24 Society year and includes
ASHRAE Representatives, Intersociety Representatives, Coordinating Groups, Liaison Committees,
BOD Ad Hocs, and Task Groups.*

As of January 2024

***MOU with ASHRAE**

Intersociety/ ASHRAE Reps.

Name	Appointees	Position
AABC Commissioning Group *	Wade Conlan	ASHRAE Rep.
AIA Liaison Committee *	Darryl Boyce	Chair
	Bill McQuade	Member
	Dan Nall	Member
	Lizzy Seymour	Staff Liaison
AiCARR ASHRAE Group*	Ginger Scoggins	President
	Dennis Knight	President - Elect
	Bill McQuade	Treasurer
American Council of Engineering Companies	Billy Austin	ASHRAE Rep.
American Society for Healthcare Engineering*	Traci Hanegan	ASHRAE Rep.
APPA: Leadership in Educational Facilities *	Dunstan Macauley	ASHRAE Rep.
	Darryl Boyce	Consultant
ASHRAE Collaboration with Egypt Ministry of Environment	Ahmed Alaa	Group Leader
	Mahmoud Fouad	Group Member
	Lina Maged	Group Member & Coordinator
Building Owners and Managers Association *	Sarah Maston	ASHRAE Rep.
	Bill McQuade	Consultant
CIBSE/ASHRAE Workgroup	Sheila Hayter	Chair
	Tim Wentz	Member
CIBSE/ASHRAE/ REHVA Workgroup	Andres Sepulveda	Chair
	Mahroo Eftekhari	Member
	Jeff Littleton	EVP
CBSC - Code Advisory Position Opening	Scott Wayland	ASHRAE Representative
Efficient and Healthy Schools Program Partnership with DOE	John Constantine	ASHRAE Rep.

Global Cold Chain Alliance *	Don Brandt	ASHRAE Rep.
IEQ Global Alliance*	Bill Bahnfleth	ASHRAE Rep.
	Corey Metzger	ASHRAE Rep.
Illumination Engineering Society	Corey Metzger	ASHRAE Rep.
International Association of Plumbing & Mechanical Officials	Phillip Trafton	ASHRAE Rep.
International Code Council	Bill McQuade	ASHRAE Conference Rep.
International Facility Management Association*	Jennifer Isenbeck	ASHRAE Rep.
International Network for Women in Cooling initiative	Sarah Maston	ASHRAE Rep.
	Sonya Pouncy	ASHRAE Rep.
National Association of Women in Construction	Susanna Hanson	ASHRAE Conference Rep.
National Council of Examiners for Engineering and Surveying - Exam Writer/ Mechanical Engineering Examination	Kevin Amende	ASHRAE Rep.
National Council of Examiners for Engineering and Surveying - Item Writer/ Architectural Engineering Examination	Tom Lawrence	ASHRAE Rep.
National Council of Examiners for Engineering and Surveying Participating Organizations Liaison Council – Licensing That Works	Dennis Wessel	ASHRAE Rep.
National Environmental Balancing Bureau	Don Hill	ASHRAE Rep.
National Institute of Building Sciences (NIBS) Board	Chuck Curlin	ASHRAE Rep.
National Institute of Building Sciences (NIBS) Building Information Management (BIM) Council	Jennifer Lather	ASHRAE Rep.
New Buildings Institute	Mick Schwedler	ASHRAE Rep.
PAHO/WHO Pan American Health Organization	Tim Wentz	Chair
	Wade Conlan	Member
	Ashish Rakheja	Member
	Stephanie Reiniche	Staff
Rocky Mountain Institute	Bill McQuade	ASHRAE Rep.
Technical Advisory Committee of the Clean Cooling Collaborative (KCEP)	Bill McQuade	ASHRAE Rep.
	Dunstan Macauley	ASHRAE Rep.
United Nations Environment Programme*	Tim Wentz	Chair
	Dennis Knight	intended President-Elect
	Bill McQuade	intended Treasurer
	Ahmed Alaa Eldin Mohamed	Member
	Jeff Littleton	EVP
	Mark Owen	Staff

Ad Hocs and Task Groups

Name	Appointees	Position
DEI Subcommittee	Kishor Khankari	Chair
	Susanna Hanson	Vice Chair
	Heather Schopplein	Member
	Jonathan Smith	Member
	Mahroo Eftekhari	Member
	Cheng Wee Leong	Member
	Devin Abellon	Consultant
	Dunstan Macauley	Consultant
	Tanisha Meyers Lisle	Staff
HQ Building Ad Hoc	Darryl Boyce	Chair
	Jayson Bursill	Member
	Don Brandt	Member
	John Constantinide	Member
	Paul Torcellini	Member
	Jeff Littleton	EVP
	Mike Vaughn	Staff
Policies for Collaboration Ad Hoc	Tim Wentz	Chair
	Zeki Poyraz	Member
	Andres Sepulveda	Member
	Apichit Lumlertpongpana	Member
	Ross Montgomery	Member
	Joyce Abrams	Liaison/ Members Council
ASHRAE at International Conferences Task Group	Andres Sepulveda	Chair
	Ron Gagnon	Member
	Art Giesler	Member
	Cheng Wee Leong	Member
	Richie Mittal	Member
	Raul Simonetti	NVM/CEC Chair
	Farooq Mehboob	Consultant
	Tony Giometti	Staff
ASHRAE Task Force for Building Decarbonization - ExCom	Kent Peterson	Chair
	Don Colliver	Vice Chair
	Bing Liu	Member
	Luke Leung	Member
	Clay Nesler	Member
	Blake Ellis	Member
	Stet Sanborn	Member
	Ginger Scoggins	Liaison to the Board of Directors

ASHRAE Membership Model Ad Hoc	Ken Fulk	Chair
	Ashish Rakheja	Vice Chair
	Jonathan Smith	Member
	Billy Austin	Member
	Rob Craddock	Member
	Doug Fick	Member
	Kishor Khankari	Member
	Jason Alphonso	Member
	Sarah Maston	Member
	Lizzy Seymour	Staff Liaison
	Craig Wright	Staff
	Mark Owen	Staff

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		2022-23 Mehboob		2023-24 Scoggins	
				F2F	Total					(F2F)	(V)	(F2F)	(V)	(F2F)	(V)	(F2F)	(V)	(F2F)	(V)
1	15	CRC			3		CRC						CRC	CRC					
1	1	Boston	Boston, MA	1	1			1											
1	3	Rhode Island	Providence, RI	1	1							1							
1	4	Connecticut	Hartford, CT	1	1	1													
1	6	Long Island	Garden City, NY	0	0														
1	7	New Jersey	Newark, NJ	1	1									1					
1	8	New York	New York, NY	1	2		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	0	0														
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	2	2									1		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			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						1	
2	117	NB/PEI	Moncton, NB	2	3			1		1					1				
2	141	Windsor	Windsor, ON	1	2			1				1							
3	11	CRC			2					CRC				CRC					
3	21	Philadelphia	Phildelphia, 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	0	1							1							
3	28	Richmond	Richmond, VA	0	1							1							
3	98	Lehigh Valley	Allentown, PA	1	3							2		1					
3	125	Roanoke	Roanoke, VA	0	1							1							
3	134	Anthracite	Scranton, PA	1	2							1		1					
4	8	CRC			3	CRC	CRC						CRC						
4	29	North Piedmont	Greensboro, NC	4	5	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		2022-23 Mehboob		2023-24 Scoggins	
				F2F	Total					(F2F)	(V)	(F2F)	(V)	(F2F)	(V)	(F2F)	(V)	(F2F)	(V)
4	30	Southern Piedmont	Charlotte, NC	3	4	1				1			1	1					
4	31	South Carolina	Columbia, SC	1	1									1					
4	32	Atlanta	Atlanta, GA	2	2					1				1					
4	97	Greenville	Greenville, SC	1	1									1					
4	106	Triangle	Raleigh/Durham, NC	2	3	1							1	1					
4	11	Charleston	Charleston, SC	2	2		1							1					
4	Section	Myrtle Beach		1	1		1												
4	Section	Savannah		1	1		1												
5	12	CRC			3		CRC						CRC		CRC				
5	38	Cleveland	Cleveland, OH	4	5		1		1				1	1				1	
5	39	Columbus	Columbus, OH	4	5		1		1				1	1				1	
5	40	Cincinnati	Cincinnati, OH	3	3				1					1				1	
5	41	Dayton	Dayton, OH	3	3				1					1				1	
5	42	Toledo	Toledo, OH	1	1				1										
5	43	Central Indiana	Indianapolis, IN	3	4				1				1	1				1	
5	44	Evansville	Evansville, IN	0	1								1						
5	45	Detroit	Detroit, MI	3	4		1						1	1				1	
5	47	Western Michigan	Grand Rapids, MI	4	4		1		1					1				1	
5	90	Akron/Canton	Akron/Canton, OH	1	2								1	1					
5	103	Northern Indiana	Elkhart, IN	4	5		1		1				1	1				1	
5	120	Fort Wayne	Fort Wayne, IN	4	5		1		1				1	1				1	
6	11	CRC			1								CRC						
6	48	Wisconsin	Milwaukee, WI	2	4				1				2	1					
6	49	Illinois	Chicago, IL	1	2								1	1					
6	50	Central Illinois	Peoria, IL	1	2								1	1					
6	51	Iowa	Des Moines, IA	1	3								2	1					
6	52	Minnesota	Minneapolis, MN	4	4			1	1			1		1					
6	54	St. Louis	St. Louis, MO	1	2								1	1					
6	95	Madison	Madison, WI	2	3				1				1	1					
6	107	Northeast Wisconsin	Green Bay, WI	2	3				1				1	1					
6	115	La Crosse Area	La Crosse, WI	4	6		1	1					2	2					
6	123	Mississippi Valley	Davenport, IA	1	2								1	1					
6	159	Cedar Valley	Cedar Rapids, IA	1	1									1					
7	14	CRC			4			CRC		CRC			CRC	CRC					
7	55	Louisville	Louisville, KY	3	4							1	1	1				1	
7	56	Memphis	Memphis, TN	1	1									1					
7	57	Birmingham	Birmingham, AL	2	2				1					1					
7	58	Mobile	Mobile, AL	0	1								1						
7	59	New Orleans	New Orleans, LA	1	1											1			
7	60	Baton Rouge	Baton Rouge, LA	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		2022-23 Mehboob		2023-24 Scoggins	
				F2F	Total					(F2F)	(V)	(F2F)	(V)	(F2F)	(V)	(F2F)	(V)	(F2F)	(V)
7	61	Mississippi	Jackson, MS	1	1									1					
7	88	Nashville	Nashville, TN	2	2									1				1	
7	99	East Tennessee	Knoxville, TN	1	2								1	1					
7	114	Tennessee Valley	Chattanooga, TN	1	2								1	1					
7	128	Bluegrass	Lexington, KY	1	1									1					
7	130	Northwest Florida	Pensacola, FL	0	0														
7	133	North Alabama	Huntsville, AL	2	2									1				1	
7	192	West Virginia	Charleston, WV	2	2									2					
8	16	CRC			1					CRC									
8	62	Arkansas	Little Rock, AR	4	5	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	3	3				1	1				1					
8	69	Northeastern Oklahoma	Tulsa, OK	3	3				1					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	0	0														
8	173	Guadalajara	Guadalajar, MEX	0	0														
8	208	Northwest Arkansa	Fayetteville AR	3	4	1		1		1			1						
9	14	CRC			6	CRC	CRC		CRC	CRC			CRC	CRC					
9	53	Kansas City	Kansas City, MO	3	4	1			1				1	1					
9	72	El Paso	El Paso, TX	1	1									1					
9	73	Rocky Mountain	Denver, CO	4	5	1			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	2	4	1			1				2						
9	77	New Mexico	Albuquerque, NM	1	1									1					
9	93	South Dakota	Sioux Falls, SD	1	2								1	1					
9	127	Black Hills	Rapid City, SD	1	1			1											
9	131	Big Sky	Billings, MT	1	1				1										
9	135	Idaho	Boise, ID	0	0														
9	148	Pikes Peak	Colorado Springs, CO	2	3				1				1	1					
9	150	Ozarks	Springfield, MO	2	3	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		2022-23 Mehboob		2023-24 Scoggins	
				F2F	Total					(F2F)	(V)	(F2F)	(V)	(F2F)	(V)	(F2F)	(V)	(F2F)	(V)
10	14	CRC			2	CRC				CRC									
10	81	Sacramento Valley	Sacramento, CA	2	3		1	1				1							
10	82	Golden Gate	San Francisco, CA	5	6		1	1	1			1	1		1				
10	83	San Joaquin	Fresno, CA	4	5	1		1	1			1	1						
10	84	Southern California	Los Angeles, CA	6	7	1	1	2	1			1	1						
10	85	San Diego	San Diego, CA	4	5		1	1	1			1	1						
10	86	Central Arizona	Phoenix, AZ	2	2				1				1						
10	87	Tucson	Tucson, AZ	2	3				1			1	1						
10	92	Southern Nevada	Las Vegas, NV	1	1								1						
10	101	San Jose	San Jose, CA	5	6		1	1	1			1	1		1				
10	105	Orange Empire	Anaheim, CA	5	7	1	1	1	1			2	1						
10	108	Hawaii	Honolulu, HI	2	4			1		1		1		1					
10	126	Northern Nevada	Reno, NV	0	0														
10	144	Sierra Delta	Sierra Delta, CA	0	0														
10	155	Tri County	Redlands, CA	4	5	1	1		1			1	1						
11	11	CRC			3		CRC	CRC	CRC						1				
11	17	Manitoba	Winnepeg, MB	2	4	1			1			1		1					
11	18	Southern Alberta	Calgary, AB	2	3					1		1	1						
11	19	Northern Alberta	Edmonton, AB	2	3	1				1		1							
11	20	British Columbia	Vancouver, BC	5	7		1		1	1		1	1	1			1		
11	78	Inland Empire	Spokane, WA	1	2							1					1		
11	79	Puget Sound	Seattle, WA	2	6							1	1	3			1		
11	80	Oregon	Portland, OR	3	7		1		1			1		3			1		
11	95	Regina	Regina, SK	3	6		1		1			2	1	1					
11	102	Saskatoon	Saskatoon, SK	3	5		1			1		1	1	1					
11	122	Alaska	Anchorage, AK	0	1							1							
11	145	Vancouver Island	Victoria, BC	2	3				1	1		1							
12	17	CRC			3	CRC		CRC		CRC								1	
12	34	Jacksonville	Jacksonville, FL	5	6			1	1	1		1	1					1	
12	35	Florida West Coast	Tampa, FL	7	8	1	1	1	1	1		1	1					1	
12	36	Miami	Miami, FL	5	6			1	1	1		1	1					1	
12	94	Central Florida	Orlando, FL	6	7	1	1		1	1		1	1					1	
12	104	Gold Coast	Ft. Lauderdale, FL	5	6			1	1	1		1	1					1	
12	109	Spacecoast (section 2020)		5	5	1	1	1	1	1									
12	110	Puerto Rico	San Juan, PR	0	0														
12	139	Southwest Florida	Fort Meyers, FL	5	6	1	1		1			1	1					1	
12	172	Brasil	Sao Paulo, BRA	6	8	1	2		1	1		1		1				1	
12	section	Curitiba	Curitiba, BRA	1	1				1										
12	178	Argentina	Buenos Aries, ARG	2	4		1	1				2							
12	190	Columbia	Bogota, Cali	4	7		1	1	1	1		2		1					

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				F2F	Total					(F2F)	(V)	(F2F)	(V)	(F2F)	(V)	(F2F)	(V)	(F2F)	(V)
12				1					1										
12	196	Chile	Santiago, CHL	3	4	1	1	1				1							
12	199	Ecuador	Guayaquil, ECU	2	2			1	1										
12	202	Paraguay	Asuncion, PRY	0	0														
12	209	ASHRAE Caricom	Charlottesville, TTO	0	3							2		1					
12	213	South Brasil	Porto Alegre, BRA	1	3							2						1	
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	2	4		1	1				1		1					
13	149	Malaysia	Kuala Lumpur, MYS	1	3			1				1		1					
13	157	Taiwan	Taipei, TWN	1	3							1		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	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	5	5	1	1	1	1					1					
14	176	Danube	Timisoara, ROM	2	3	1	1								1				
14	177	Portugal	Lisbon, PRT	1	1									1					
14	182	Spain	Madrid, ESP	3	3				1					1		1			
14	203	Cyprus	Nicosia, CYP	2	2		1	1											
14	204	Ireland	Dublin, IRL	4	5		1		1					1	1			1	
14	205	UK Midlands	Central England	4	4		1	1		1				1					
14	206	UK London and Southeast	London, UK	1	1									1					
14		Israel	Ramat Gan, ISR	0	0														
14	Section	Glasgow		2	2		1	1											
RAL	32	CRC			5	CRC		CRC	CRC				CRC		CRC				
RAL	158	India	New Delhi, IND	3	7	1		1		1			3		1				
RAL	160	Saudi Arabia	Dhahran, SAU	0	1								1						
RAL	161	Cairo	Cairo, EGY	1	2					1			1						
RAL	162	Lebanese	Beirut, LBN	0	1								1						
RAL	163	Western India	Ahmedabad, IND	2	5			1	1				2		1				
RAL	164	Kuwait	Kuwait, City, KWT	1	2								1					1	
RAL	169	ASHRAE Bangalore	Bangalore, IND	1	2	1							1						
RAL	171	Sri Lankan	Colombo, LKA	1	2								1					1	
RAL	174	Pakistan	Karachi, PAK	3	7	1	1						2		2	1			
RAL	175	ASHRAE Falcon	Dubai, UAE	2	3					1			1					1	

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				F2F	Total					(F2F)	(V)	(F2F)	(V)	(F2F)	(V)	(F2F)	(V)	(F2F)	(V)
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	185	Chennai	Chennai, IND	0	1							1							
RAL	186	Pune	Pune, IND	0	2							2							
RAL	187	ASHRAE Nigeria	Lagos, NGA	0	1							1							
RAL	188	ASHRAE Mumbai	Mumbai, IND	2	4	1						1		1		1			
RAL	189	Central Pakistan	Lahore, PAK	1	4		1					2		1					
RAL	191	ASHRAE Deccan	Hyderabad, IND	1	2	1						1							
RAL	193	Turkish	Istanbul, TUR	2	4		1					2				1			
RAL	197	Bangladesh	Dhaka, BGD	1	2	1						1							
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				1			
RAL	212	Jordan	Amman, JOR	0	2							1		1					
RAL	215	East India	Kolkata, IND	0	2							2							
RAL	216	Rajasthan	Jaipur, IND	0	5							3		2					
RAL	217	Chandigarh	Chandigarh, IND	0	4							3		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				0															
				Totals		40	46	42	67	31	0	3	154	94	44	11	0	32	0