



Publishing and Education Council (PEC)

Tuesday February 1, 2022

Caesars Palace, Las Vegas NV

Voting Members	Position	Guests
Donald Brandt	Chair	David Soltis
Dunstan Macauley	Vice Chair	Cindy Michaels
Kelley Cramm	Director	Heather Kennedy
Chris Gray	Director	Tim Kline
Steven Marek	Director	
Randy Schrecengost	Director	
Mark Tome	Director	
Suzanne LeViseur	Past Certification	
Cynthia Callaway	Past Handbook	
Jason Alphonso	Past TEC	
Mark Fly	Past Publications	
<u>Non-Voting Members</u>		
Kurt Monteiro	Certification Chair	
Kimberly Cowman	Certification Vice Chair	
Michael Patton	Handbook Chair	
Scott Fisher	Handbook Vice Chair	
Spencer Morasch	Historical Chair	
Nissun Feiner	Historical Vice Chair	
Adeeba Mehboob	Publications Chair	
Gerardo Alfonso	Publications Vice Chair	
Keith Reihl	TEC Chair	
James Vallort	TEC Vice Chair-Operations	
Jesse Fisher	TEC Vice Chair-Planning	
Mark Owen	Staff Liaison	

Additional Distribution:

Jeff Littleton, Executive Vice President, Candace DeVaughn,
ASHRAE Staff Directors, Publications & Education Managers

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Motions

Meeting of February 1, 2022

No.	Page	Motion
1	4	Approved the PEC minutes of June 22, 2021, Virtual meeting. Approved 12-0-0, CNV
2	9	Approved funding and recommended BOD the Task Force on Building Decarbonization for the rest of SY 21-22 with \$300K from the general budget for products that are being developed about decarbonization. Approved 10-0-0, CNV
3	10	Approved recommending to BOD an addition to the Rules of the Board (ROB) as shown in Attachment A of the Certification Committee Report. Approved 10-0-0, CNV
4	11	Approved changes to the Publications Committee's ROB as shown in Attachment A of the Publications Committee's Report. Approved 10-0-0, CNV
5	11	Approved changes to the committee's MOP as shown in Attachment B of the Publications Committee's Report Approved 10-0-0, CNV

Action Items

Meeting of February 1, 2022

- | | | |
|---|-------|---|
| 1 | Staff | Post the approved minutes for June 22, 2021, Virtual meeting.

Complete. |
|---|-------|---|

1. Call to Order

Mr. Brandt called the meeting to order at 8:02 a.m.

2. ASHRAE Commitment to Care

Mr. Brandt reviewed with the council the ASHRAE Commitment to Care.

The health and safety of all ASHRAE conference attendees is a top priority. Out of respect for our fellow attendees, we commit to wear masks indoors, monitor our health, seek medical attention if symptoms develop and adhere to all ASHRAE Commitment to Care protocols. We are committed to the well-being of one another.

3. ASHRAE Code of Ethics Commitment

Mr. Brandt reviewed with the council the ASHRAE Code of Ethics.

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 we shall avoid all real or perceived conflicts of interests.

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

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

4. Introduction of Members and Visitors

Members of the council roll call was conducted with an introduction of staff and other visitors. Subcommittee and Committee Rosters have been posted to the PEC Basecamp account for review.

5. Review of Agenda

Mr. Brandt reviewed the agenda with the council.

6. Previous Meeting Minutes Review for Approval

It was moved and seconded:

(1) Approve the draft minutes as distributed for the June 22, 2021, Virtual meeting.

MOTION (1) Approved 12-0-0, CNV

An action was assigned to staff to post the approved minutes on the PEC page of the ASHRAE website and the PEC Basecamp website. **(ACTION ITEM 1)**

7. Review of Motions

Mr. Owen reviewed with council members motions from the meeting of June 22, 2021.

No.	Motion
1	Approved the PEC minutes for the previous meeting minutes. Approved 8-0-0, CNV
2	Approved Fiscal Subcommittee recommendation for sunseting the Operations & Performance Management Professional (OPMP) certification program. Approved 8-0-0, CNV

8. Review of Action Items

Mr. Owen reviewed with council members actions items from the meeting of June 22, 2021.

No.	Responsible	Action
1	Staff	Post the approved minutes for February 2, 2021, Virtual Winter Meeting on the PEC page of the ASHRAE website and the PEC Basecamp website. Complete.
2	Staff	Report the difference in cost between a system for on-line viewing of ASHRAE Standards TOC that would allow access to members without registration and access for non-members that would require registration versus a system requiring registration for access to anyone. Complete.

9. Review of PEC MBOs (Attachment A)

Mr. Brandt reviewed the PEC MBOs with the council.

10. Subcommittee Reports

10.1 Products (Attachment B)

The **Handbook Committee (HBC)** Report to the Products Subcommittee was given by Mr. Patton and shown in Attachment A of the Products Subcommittee Report to PEC.

Mr. Patton reported on the following Handbook Subcommittees items:

- Review/Training (Mages) reported more than 20 attendees at the online TC training. The Authoring Portal was reviewed by Heather Kennedy.
- Electronic (Sheinman) continued to refine the committee Basecamp file system and reported on efforts to template the various users file systems.
- Functional (Furman) submitted a written report. The ARG, MOP, ROB were reviewed, and some action items established.
- Strategic Planning (Fisher) reported that he is reviewing aspects of committee activities

Handbook Committee reported on the following Handbook Volume reports items:

- Fisher (2022 Refrigeration) reported no problems in getting the submissions in.
- Sheinman (2023 Applications) reported that his liaisons are sending the message to their TCs that it is crunch time for spring chapter deadlines. One TC is not responding, and Harris will take the initiative directly.
- Kennedy for Furman (2024 Systems and Eq) Heather indicated that the Liaisons are having difficulty getting responses from their assigned TC sub chairs and even TC Chairs. A list of those unresponsive will be made for further engagement.
- Mages (2025 Fundamentals) reported progress with Liaisons getting in contact with TC Chairs and Handbook Subcommittee chairs

Updates to the HBC 2021-2022 MBOs are shown in *Attachment A of the HBC Report to the Products Subcommittee*.

The **Historical Committee** Report to the Products Subcommittee was given by Mr. Morasch and shown in Attachment B of the Products Subcommittee Report to PEC.

Historical Committee reviewed a **PEC Referred Motion from Region VII Fall 2021 CRC, Memphis Chapter Memphis Chapter – Motion 6A (11/4/2021):**

“That Regional Historians be added to the Society Historical Committee as full voting members with all rights, and privileges, and responsibilities pertaining thereto.”
(Attachment A of the Historical Committee Report to the Products Subcommittee)

Background: Currently, the Regional Historians are allowed and encouraged to attend the Historical Committee meetings as guests. They, in effect, have a voice but no vote. There is a vast divide between the work and objectives of the Historical Committee and the expectations of the Regional and Chapter Historians, to the point that replies to Regional and Chapter inquiries of the Historical, Committee are delayed or go completely unanswered. Further, this disconnect between the Historical Committee and the grassroots (e.g., Regions and Chapters) is made publicly obvious by the resources on the Society Historical Committee’s webpage being so old and out of date. In at least one case, the PowerPoint presentation is so outdated as to have the previous ASHRAE logo from nearly a decade ago still on it. Grassroots representation by, and voting authority of, Regional Historians would keep the Historical Committee much more in tune and in contact with the Grassroots and would likely result in a better historical archive and more participation in the Gold Ribbon and Lou Flagg awards programs. This would in turn incentivize Chapters to appoint active Chapter Historians.

Fiscal Impact: \$15,000.00 per year (15 Historians x 2 Conferences/yr. x \$500 Avg. Airfare)

Historical Committee Response: The motion was postponed until after an Ad Hoc committee could be appointed to investigate the consequences of approving the motion for Historical Committee. Concerns included Regional Historian term limits and the lack of Regional Historian attendance in the past and the effect that might have on Historical Committee achieving quorum at meeting. Historical Committee will meet to vote on

this motion in May 2022 and make a report to PEC at the Annual Meeting in Toronto in June 2022.

Mr. Morasch reported Historical Committee voted to approve establishing two-way liaisons with YEA, CTTC, Research Promotion and Membership Promotion Committees for collaboration and cross-marketing to inspire others to volunteer and contribute to Historical Committee.

Mr. Morasch reported Historical Committee will appoint an Ad Hoc committee to investigate a partnership between the United Engineering Foundation, and the AIAA, AIChE, ASCE, IEEE, SPE & SWE, and has approved supporting communication with the Life Members Club on possible future fundraising efforts for the purpose of engaging with the Engineering & Technology History Wiki (ETHW).

Updates to the Historical Committee 2021-2022 MBOs are shown in *Attachment B of the Historical Committee Report to the Products Subcommittee*.

The **Publications Committee** Report to the Products Subcommittee was given by Ms. Mehboob and shown in Attachment C of the Products Subcommittee Report to PEC.

Publications Committee voted to select the winner for the 2022 Journal Paper Award, the title, and authors of which *ASHRAE Journal* have been forwarded to the Honors and Awards Committee for award presentation at the 2022 ASHRAE Annual Conference.

Publications Committee voted to develop a peer review process for the *ASHRAE Journal* podcasts. A subcommittee will work on this in the coming months.

Publications Committee reported on feedback PEC MBO 1 from SY 2020-2021 PEC Chair Bill Dean ("Create a Sales Business Plan for PEC by identifying 3 to 5 digital product strategies") is included in *Attachment A of the Publications Committee Report to the Products Subcommittee*.

Publications Committee reported on feedback PEC MBO 2 from SY 2020-2021 PEC Chair Bill Dean ("To develop a PEC Business Model that includes offering ASHRAE products and services to non-commercial entities") is included in *Attachment B of the Publications Committee Report to the Products Subcommittee*.

Publications Committee suggestions for ways to incorporate ETF and TFBID data into PEC products and services are included in *Attachment C of the Publications Committee Report to the Products Subcommittee*.

Publications Committee passed a motion presented by Presidential Member Tim Wentz that ASHRAE endorse the Mechanical Contractors Association of America (MCAA) publication *Change Orders, Productivity and Overtime: A Primer for the Construction Industry* and forwarded it to PEC shown in *Attachment D of the Publications Committee Report to the Products Subcommittee*.

Updates to the Publications Committee 2021-2022 MBOs are included in *Attachment E of the Publications Committee Report to the Products Subcommittee*.

The **Research Journal Subcommittee** Report to the Products Subcommittee was given by Mr. Marek and shown in Attachment D of the Products Subcommittee Report to PEC.

The Publisher's Report from Taylor & Francis has been delayed and will be distributed to the Research Journal Subcommittee as soon as staff receive it.

Dr. Spitler gave the Editor's Report shown in *Attachment A of the Research Journal Subcommittee Report to the Products Subcommittee*.

10.2 Professional Development (Attachment B)

Certification Committee Report to the Professional Development Subcommittee was given by Mr. Monteiro and shown in Attachment A of the Professional Development Subcommittee Report to PEC.

Certification Committee reported completion of its annual Management System Review, with resulting decisions and actions related to the improvement of certification services. All seven ASHRAE certifications are ANSI-accredited.

Certification Committee reported a joint Certification Committee - Training and Education Committee (TEC) Task Force developed four ideas for products and services that PEC could develop, in light of the large volume of valuable and timely information the Epidemic Task Force (ETF) recently has created. The Task Force also considered decarbonization and building resiliency in developing their ideas.

In order of preference, the Task Force generated the following recommended new product/service ideas:

- Electrical Designer Membership (tie for 1st)
- Net-Zero Building Designer Certification (tie for 1st)
- Sustainability and Resilience Infographic
- Resilient Building Design Platform

Certification Committee reported, following an evaluation of the HBDP the committee will initiate an update of the certification scheme in 2022-23.

Certification Committee reported through 12/31/2021, 161 certification applications have been received, versus 147 received during the same period in 2020-21.

Certification Committee reported since its launch in October 2021, the Certification Study Guide: Certified HVAC Designer (CHD) (Member Price \$56) had sold over 300 copies. Featuring a 100-question CHD practice exam.

Certification Committee reported that the *Certification Study Guide: Building Energy Modeling Professional* (BEMP) will be available for sale in February/March 2022. Featuring a 100-question BEMP practice exam.

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Updates to the Certification Committee 2021-2022 MBOs are included as *Attachment A of the Certification Committee Report to the Professional Development Subcommittee*.

The **TEC** Report to the Professional Development Subcommittee was given by Mr. Reihl and shown in Attachment B of the Professional Development Subcommittee Report to PEC.

TEC reported the following information items:

- Discussions are underway with associate societies to co-market education course.
- Coordination with the ASHRAE Task Force for Building Decarbonization to produce a suite of education courses is making great progress.
- The committee is closely monitoring the trends of technology transfer in this pandemic and are seeking ways to maintain the growth experienced in eLearning in the post pandemic era.
- Reference Manual update is in progress and submitted to the committee for review
- The combined total of all course registrants is 435 for the 2022 Winter Meeting.

Updates to the TEC 2021-2022 MBOs are shown in *Attachment A of the TEC Report to Professional Development Subcommittee*.

10.3 Fiscal

Mr. Brandt gave the Fiscal Subcommittee Report. (Attachment D)

It was moved and seconded:

- (2) That PEC recommending to the BOD approve funding the Task Force on Building Decarbonization for the rest of SY 21-22 with \$300K from the general budget for products that are being developed on the subject of decarbonization.**

Background: The task force has not been funded since being formed in February of 2021. As they have developed content it has been put on hold. The immediate need is a PTAR on Smart grid – building interface, starting a decarbonization standard and adding addendum to Standards 90.1 and 90.2 (not necessarily in order of priority). The funding will be split between the Publishing and Education and Technology departments. The motion was discussed and reviewed by Professional Development Fiscal Subcommittees and then approved by the PEC. Motion has been approved by TEC, Professional Development Subcommittee and Fiscal Subcommittee (*Approved 11-0-0 CNV*)

Fiscal Impact: \$300K from SY 21-22 Budget

MOTION (2) Approved 10-0-0, CNV

Mr. Owen gave a financial overview for Publishing & Education Departments using the latest PEC Dashboard for December 2021.

Mr. Martin gave an overview of the ASHRAE Journal Advertising Report.

Actual sales financial reports for ASHRAE Journal are shown in Attachment A of the ASHRAE Journal Advertising Report. The Journal plus programs revenue is \$1,716,000 for the first six months of FY2021-22 with a budget of \$1,631,500 through December. Revenue is \$337,000 more than the prior year. Exclusive of all programs, Journal actual advertising sales is \$967,900 with a budget of \$1,007,800. Exclusive revenue is \$39,900 less than budget and \$120,700 more than the prior year through December.

ASHRAE Journal is advertisers' No. 1 choice for the past 14 years, as shown in Attachment B of the ASHRAE Journal Advertising Report. Paid advertising share-of-market (SOM) ratio for the 2021 calendar year is 62.5% in a three-book pages sold. While the Journal SOM was 68% in 2020, all three publications gained in pages sold during the past calendar year.

To control expenses during the pandemic and its impact on printing and mailing issues, Journal staff cut controlled circulation of ASHRAE Journal and developed additional programs to reduce losses. For example, a Journal Podcast was launched with sponsored advertising. Also, the Info Center directory advertising has been extended throughout every issue, in the Journal Show Guide as well as the Journal newspaper for AHR Expo.

Online Advertising. ASHRAE.org advertising revenue has increased to \$501,400 in actual sales through December, which is \$138,900 more than sold at this time last year. Staff anticipates exceeding the \$950,000 budget amount for FY2021-22 due to demand and new offerings. Online advertising is increasingly important source of non-dues revenue to the Society, while ASHRAE Journal remains the core offering from ASHRAE Media sales.

HPB Magazine. Since print and digital publication of High Performing Buildings (HPB) magazine was discontinued and its content published on HPBmagazine.org and ASHRAE Journal, Revenue-earning offerings such as the HPB newsletter, website, and supplier webinars continued to be offered, resulting in \$101,900 sold in online revenue through December. Staff projects revenue will exceed the \$115,000 budget in FY2021-22.

10.4 Planning

Mr. Macauley gave the subcommittee report.

It was moved and seconded:

- (3) That PEC recommend the BOD approve an addition to the Rules of the Board (ROB) as shown in Attachment A of the Certification Committee Report.**

Background: Successful certifying bodies consistently recognize their own certification designations in their own electronic and print media. Examples of such certifying bodies are ASPE, IFMA and AEE.

Certification Committee has been aware of the uneven recognition of ASHRAE certification designations in ASHRAE print and electronic media. Certification staff have worked with the Marketing department to develop guidelines which appear in the *ASHRAE Marketing Content Guide*, which call for the consistent recognition of ASHRAE certification designations in ASHRAE print and electronic media wherever the P.E., P.Eng. and Ph.D. designations also appear.

Despite these and related efforts, the uneven recognition of ASHRAE certification designations persists. In its Dec. 7, 2021, meeting, the Certification Committee reviewed several examples of 2021-22 ASHRAE media which did not correctly cite ASHRAE certification designations. Not correctly recognizing ASHRAE certification designations in ASHRAE print and electronic media wherever the P.E., P.Eng. and Ph.D. designations also appear communicates to Members, certificants, prospects and the built environment at large that ASHRAE does not value its own certification programs.

ASHRAE Certification designations are ASHRAE certification marks, as defined by the United States Patent and Trademark Office, similar in stature to trademarks. As there are Rules of the Board which currently address the name “ASHRAE” and the ASHRAE logo as trademarks of ASHRAE, a Rule of the Board regarding ASHRAE certification marks likewise is needed to establish the importance of this ASHRAE property and establish rules describing their appropriate use in ASHRAE media. Such a Rule of the Board would provide firm guidance to volunteer leaders and staff for years to come.

Certification status may be confirmed by Members and staff in the online Certification directory. On an as-needed basis, ASHRAE IT could modify any reports listing members.
(Certification Committee Approved 9-0-0 CNV)

Financial Impact: None.

MOTION (3) Approved 10-0-0, CNV

It was moved and seconded:

- (4) That PEC approve changes to the Publications Committee’s ROB as shown in Attachment A of the Publications Committee’s Report.**

Background: These changes reflect changes to ASHRAE Journal department products and add PTAR responsibilities.

Financial Impact: None.

MOTION (4) Approved 10-0-0, CNV

It was moved and seconded:

- (5) That PEC approve changes to the committee’s MOP as shown in Attachment B of the Publications Committee’s Report**

Background: These changes reflect changes to ASHRAE Journal department products and add PTAR responsibilities and an annual review requirement for internal documents.

Financial Impact: None.

MOTION (5) Approved 10-0-0, CNV

11. Items Referred by PEC to Other Groups

None.

12. Items Referred from Other Groups to PEC

12.1 **OPS recommends to Technology Council and I so move that the budget and development of Standards Project Committee User's Manuals be permanently referred to Publication and Education Council.**

Background: Historically, user's manuals development cost has ranged from \$35,000 to \$120,000 per manual. The range in costs is affected by the size of the standard, the number of changes since the last version, or if the effort is a first-time user's manual. The most recent user's manual development costs were roughly \$40K (for Standards 62.1-2019 and 62.2-2019) and \$85,000 (for Standard 90.1-2019). The costs for these three ASHRAE standards recur every three years. The development timeline is roughly one year from start to finish. Repeated attempts to shorten the timeline have been unsuccessful. The steps required for development and publication are as follows:

- The SSPC prepares a request for a user's manual detailing requested changes from previous version or justification for a brand-new user's manual.
- The request and allocation of funds must be approved by SPLS, Standards Committee, Special Projects, and Tech Council
- A Work Statement is created by the SSPC and reviewed by staff for consistency with ASHRAE procedures and policies and with publication requirements
- The SSPC develops a list of potential bidders for the user's manual work
- Staff assembles the full RFP (including work statement and all attachments). The RFP is sent to the list of potential bidders. An announcement about the RFP is sent out to the Standard's listserve, included in one of ASHRAE's eNewsletters, and posted on the ASHRAE website.
- A Project Monitoring Subcommittee (PMS) is formed by the SSPC and approved by SPLS.
- Proposals are received and assembled by staff. If not enough bids received, then additional solicitations may be needed.
- The proposals are sent to the PMS along with an evaluation form to rate the proposals and bidders based on the criteria specified in the work statement.
- The PMS reviews and rates the proposals and then meets to make a final selection and recommendation for the contractor. Representatives from SPLC on the PMS participate in the process to ensure that all procedures and policies are properly followed during the selection process.
- The recommendation is sent to SPLS for review and approval. SPLS approves contractor (or if there are concerns about the process or procedures followed for the selection, either overrides the recommendation or sends the recommendation back to the PMS for reconsideration).
- A contract for the work is developed by staff and sent to the selected Contractor for review and signature.
- The Project begins as per the agreed upon start date.

- The PMS and/or SSPC assess and comment on the progress of the user's manual through review of drafts at intervals as specified in the contract. Typically, these include an expanded outline, a preliminary draft, a second draft, and a final draft. In many cases, the second draft and final draft are combined into a single review.
- After the review of the final draft, a final document is distributed to the PMS and then the SSPC for review and approval. The votes for approval are typically done by letter ballot. Negative votes by the SSPC result in a recirculation ballot where reasons for negative votes are distributed to all SSPC member for consideration during a second letter ballot.
- Additional issues are often raised during the approval process and these are addressed on a case by case basis with the committee member and resolved as needed.
- After all reviews and approvals, the final document is completed and submitted to ASHRAE with all other required deliverables as specified in the work statement and contract (i.e., graphics files, supplemental material, associated spreadsheets, and any required permissions.)
- The final draft and all required deliverables are provided to Publications staff to begin the publication process (final editing and formatting).
- Publications develops a set of galley proofs for with questions and queries that are reviewed and answered by select SSPC/PMS members.
- The User Manual is Published.

The proposal to move development from Technology to Publications would allow for the shortening of the process by eliminating many of the currently required review and approval steps as detailed above. It is estimated that the development timeline would be cut in half which would allow the user's manual to publish closer to the publication of the associated standard. A shorter timeline with fewer steps is also expected to reduce the required cost for development.

This referral would include the recommendation that that subject matter experts (SME) from the relevant SSPC be engaged by Publications for involvement in the development process as appropriate. A successful example of this process was the development of the IgCC user's manual by ICC. The ICC contracted with several SMEs from SSPC 189.1 to develop the content and then selected others on the committee to review the drafts for accuracy. This greatly shortened the development time and the cost.

Projected Fiscal Impact: Development Savings of \$112,500 every 3 years

12.2 Memphis Chapter – Motion 6A (11/4/2021):

That Regional Historians be added to the Society Historical Committee as full voting members with all rights, and privileges, and responsibilities pertaining thereto.

Background: Currently, the Regional Historians are allowed and encouraged to attend the Historical Committee meetings as guests. They, in effect, have a voice but no vote. There is a vast divide between the work and objectives of the Historical Committee and the expectations of the Regional and Chapter Historians, to the point that replies to Regional and Chapter inquiries of the Historical, Committee are delayed or go completely unanswered. Further, this disconnect between the Historical Committee and the grassroots (e.g. Regions and Chapters) is

made publicly obvious by the resources on the Society Historical Committee's webpage being so old and out of date. In at least one case, the PowerPoint presentation is so outdated as to have the previous ASHRAE logo from nearly a decade ago still on it. Grassroots representation by, and voting authority of, Regional Historians would keep the Historical Committee much more in tune and in contact with the Grassroots and would likely result in a better historical archive and more participation in the Gold Ribbon and Lou Flagg awards programs. This would in turn incentivize Chapters to appoint active Chapter Historians.

Fiscal Impact: \$15,000.00 per year (15 Historians x 2 Conferences/yr. x \$500 Avg. Airfare)

The motion was referred to the Historical Committee for consideration. The committee will report back to council at the Annual Meeting in Toronto.

12.3 Kansas City Chapter – Motion 6B (11/4/2021):

That non-current ASHRAE Handbook editions be made available to dues-paying ASHRAE members (Full or Associate Member grade) in an electronic format, in lieu of the hardbound handbook.

Background: Many ASHRAE Members have kept older versions of ASHRAE Handbooks for reference in hard copy, however new Members do not have access to older versions of the Handbook and many people have been converting to utilize more digital content. This could be offered as either a member benefit or an additional revenue stream.

Fiscal Impact: \$2,000-3,000.

12.4 Hellenic Chapter – Motion 24 (11/4/2021):

ASHRAE to include, as per its policy, SI units in its online and instructor led training courses.

Background: ASHRAE's greatest assets are its technical expertise and training, and thus attracts and sustains members throughout the world. However, most of the training courses are in IP units and practically impossible to use in countries that use SI units. There is also a need to consider international regulations and practices when adapting the material for a global audience.

Fiscal Impact: TBD.

13. Old Business

None.

14. New Business

None.

15. Adjourn

Mt. Brandt adjourned the meeting 12:01pm.



COMMITMENT TO CARE

2022 ASHRAE Winter Conference, Jan. 29-Feb. 2, Las Vegas

ASHRAE is committed to the health and safety of our members and conference attendees. ASHRAE is closely monitoring guidance from the [Centers for Disease Control and Prevention](#), the [World Health Organization](#), and [local health agencies](#) regarding travel and events.

In Advance of the Conference

- Attendees must “accept” [ASHRAE’s liability waiver](#) when registering for the conference.
- Everyone attending the conference and committee meetings is required to register for the conference for safety purposes. There will be a new “Committee Meeting Only” registration category for those who will not attend the Technical Program. It will be free to register to attend the committee meetings only, but a donation of at least \$25 is encouraged to help cover the costs of hybrid capabilities.
- It is *recommended* that attendees are fully vaccinated. Proof will not be required.
- Attendees located in the US who have registered before January 15 will be mailed a COVID-19 rapid antigen test that should be self-administered using the specific instructions included on how and when to perform the test before departing for Las Vegas. Attendees who register after January 15 are strongly encouraged to take a COVID-19 test 24 hours before departure.
- Attendees who test positive prior to arrival cannot enter the conference and can elect to cancel their in-person registration or transfer to a virtual registration without penalty. Requests must be sent to meetings@ashrae.org.

At the Conference

- Masks for vaccinated and unvaccinated attendees are required indoors.
- Scan-and-go badge and ticket printing stations are available in registration for a contact-less experience.
- Color-coded lanyards are available for attendees to indicate their level of comfort regarding distancing.
- Meeting rooms are set to allow for some physical distance for those who choose it.
- Appropriate signage to reinforce safety reminders.
- Hand sanitizing stations will be positioned throughout the meeting space.
- For international attendees who require negative COVID tests for return flights, the AHR Expo will have testing available at the Las Vegas Convention Center. Visit ahrexpo.com/international-travel for more information.
- Attendees will be sent an app notification each morning as a reminder to self-monitor for newly developed symptoms.
- If symptoms develop, attendees should NOT attend meetings or sessions and can join the conference virtually.
- Rapid COVID antigen tests are available and complimentary at the Medical Desk administered by Vital Circle, ASHRAE’s onsite testing partner. A donation is appreciated to help cover the cost of this service and can be made at registration.
- A Daily COVID-19 Update will be available in ASHRAE 365 within the 2022 ASHRAE Winter Conference Event Notifications section. This update will be made available by 5:30 pm daily and will include the number of positive cases among attendees (if any) and conference related events attended from those who tested positive (if made available).

After the Conference

- If an attendee tests positive for COVID-19 within 14 days of leaving the conference, the attendee is required to notify ASHRAE staff immediately.
- ASHRAE will communicate to attendees, if needed, up to 14 days after the last day of the conference.

Last Review Date: January 20, 2022

MBO Submission to Planning

Council Publishing and Education Council

Committee:

Committee:							Strategic Plan Tally												
MBO #	Description	Metric (how do we determine success?)	Initiative #	Goal #	Completion Date	Financial Assist Req'd?	MBO Comments	Initiative #				Goal 1		Goal 2			Goal 3		
								1	2	3	4	a	b	a	b	c	a	b	c
1	Continue to create and identifying digital product strategies.	3 to 5 digital product strategies are developed	2	2c	6/30/2022	No			x							x			
2	Continue to develop ASHRAE products and services for governmental and other non-commercial entities.	An outward facing Business Plan is developed by the Council.	2	2b, 2c	6/30/2022	No			x							x	x		
3	Develop new products & services aligned with Strategic Plan initiatives 1 & 2 (ETF & TFBD).	The development of at least one new certification program based on member input.	1 & 2	1b, 2b, 2c	6/30/2022	Yes		x	x			x			x	x			
4	Expand our line of Educational products to include newer HVAC Systems in the F2F format, virtual learning and self-directed text.	Working with the current PEAC, PEC develops a series of training paths that result in certifications or program graduations for participants in the future.	1, 2 & 3	1b, 2b, 2c, 3a	6/30/2022	No		x	x	x		x			x	x	x		
5	Analyze Membership trends statistics with respect to industry classification, membership grades, regions, demographics etc. Review value proposition of ASHRAE membership and products and services. Based on the analysis recommend actions and a plan to reinvigorate membership growth.	Work with Membership Development Task Group to analyze data collected	1, 2, 3	2a, b, c	6/30/2022	No		x	x	x									
Publishing and Education Council Totals								3	5	2			2		3	4	1		

TEC-Certification Joint Task Force: New ETF-Decarbonization Products & Services

Nick Armstrong

Suz Ann Arroyo

Kurt Monteiro

Keith Reihl

Chandra Sekhar

Ashley Weekly

Kevin White

ASHRAE Staff:

Tim Kline

Karen Murray

Job to be Done: Electrical Design

- ✓ Experience: Electrical Design fundamentals
- ✓ Customer Circumstances: Electrical designers don't have a place to go to learn their trade, some say IEEE but it is not as active as ASHRAE worldwide from what I've seen. Firms are MEP we could be a one stop learning shop.
- ✓ Problem Solved: Opportunity to learn online and in person, while accessing up-to-date resources and design tools
- ✓ Powerful Social/Emotional Dimension: MEP Firms inclusive for electrical. Right now Electrical is left out. Essential for decarbonization.

Electrical Design classes/Certification: Multi-sided with Positive Network effects

✓ Multiple-sides:

- Designers: architects, code officials, mechanical & electrical engineers
- Third parties: advertisers, employers
- ASHRAE (platform owner)

✓ Positive Network Effects:

- Designers
- Designers \leftrightarrow Advertisers
- Designers \leftrightarrow Employers

Electrical Design classes/Certification: Value Creation & Capture

Value Creation	Users	Value Capture
Convenient access to updated standards, guidelines, and handbooks; access to tools; opportunities to collaborate; job postings and advertising Include NEC resources on ASHRAE website	ASHRAE (platform owner) NEC	Payment; data; network effects; brand awareness
Online and in person classes	Designers-	Education resource
MEP collaboration; more innovative, inclusive of MEP team, better designs; data; payment	Designers- paid access	Collaboration; enhanced innovation; convenient access to updated standards, guidelines and handbooks; data
Ad revenue	Advertisers	Conversions
Job posting revenue	Employers	Skilled new-hires

Electrical Design classes/certification: Aligning Processes & Removing Obstacles

- MEP Principal concerns
- Client concerns
- ASHRAE publication and membership sales
- Collaborate with NEC / IES / IEEE
- Electrical is an essential part of the path to decarbonization and is already included in 90.1/189.1/90.2/189.2.
- May include Plumbing in future as well with collaboration with ASPE.

Electrical Design classes/certification: Projected Contribution Income Statement

- Increase membership with Electrical designers/engineers joining
- Increase revenue with Electrical coursework
- Collaboration with IEEE / NEC / IES could help each society
- There are as many electrical folks as mechanical. Anticipate after a decade 10,000 electrical members.
- Include microgrid, solar, wind and Cogen.
- Could do the same thing with Plumbing and ASPE.

**NET-ZERO BUILDING
DESIGNER**

CERTIFICATION

Why?

- Global Decarbonization is not going away!
- ASHRAE's distinguished history provides a platform to be among the first:
 - ASHRAE – Building EQ (building)
 - USGBC – LEED Zero Certification (building)
 - International Living Future Institute – Zero Energy Certification (professional)
 - Energy & Environmental Building Alliance – Zero Energy Professional Designation
 - EDGE Certification – Zero Carbon (building)
- ASHRAE currently provides MANY resources on this topic for exam & study guide material.
- Provide tools for maintaining Net-Zero certification (and building certification) for years to come.
- Adaptable to ever-changing industry trends.

Net-Zero Building Certification

PURPOSE:

- Educate professionals and provide guidelines for the Net-Zero building design and certification.
 - Push for educating professionals on strategies for implementation
 - Educating owners on the benefits of Net-Zero design
- Further ASHRAE's existing initiatives:
 - Ties with ASHRAE Decarbonization Task Force
 - ASHRAE Net Zero Headquarters

Development Plan

- Create guidelines (or further develop existing ones) for Net-Zero design.
- Utilize existing ASHRAE resources for course (or course series) development.
- Exam blueprint/exam development.
- Continued development of applicable Continuing Education courses.

Resources Available Through ASHRAE

- ALI/E-learning:
 - Advanced Designs for Net Zero Buildings
 - Designing Toward Net-Zero Energy Commercial Buildings
 - Achieving Zero-Energy Building Design
- Publications:
 - The Advanced Energy Design Guide—Achieving Zero Energy series
 - ASHRAE Journal (MANY articles)
 - ASHRAE Journal Podcast - Demisifying Decarbonization
- GTC:
 - Archive of Designing Toward Net-Zero Energy Commercial Buildings - with Live Q&A
- ASHRAE Conferences:
 - Seminars, Papers, Forums, etc.

Exam Creation: Contribution Income Statement

- Recent CHD Exam for comparison:

2022-23 Projected Contribution Income Statement

Price per Certification Application	\$ 450.00	Certification Sales	\$ 33,750.00
No. of certification applications	75		
Price per Recertification Application	\$ 300.00	Recertification Sales	\$ 19,350.00
No. of recertification applications (86% renewal rate)	\$ 64.50		
		Total Sales	\$ 53,100.00
Variable Expense per Certification Application	\$ 60.00	Variable Expense	\$ 4,500.00
		Contribution Margin	\$ 48,600.00
Fixed Expense 1 is item banking		Fixed Expense 1	\$ 8,680.00
Fixed Expense 2 is minimum exam development, averaged across a 5-year period		Fixed Expense 2	\$ 4,300.00
Fixed Expense 3 is minimum guidelines development, averaged across 2-year period		Fixed Expense 3	\$ 7,500.00
		Total Avoidable Fixed Expense	\$ 20,480.00
		Net Operating Income	\$ 28,120.00

Continuing Education

- Continue to develop courses, webinars, etc. targeted to continuing education for certification renewals.
- Renewal Reminders: Provide links to ASHRAE education resources that apply to continuing education requirements.

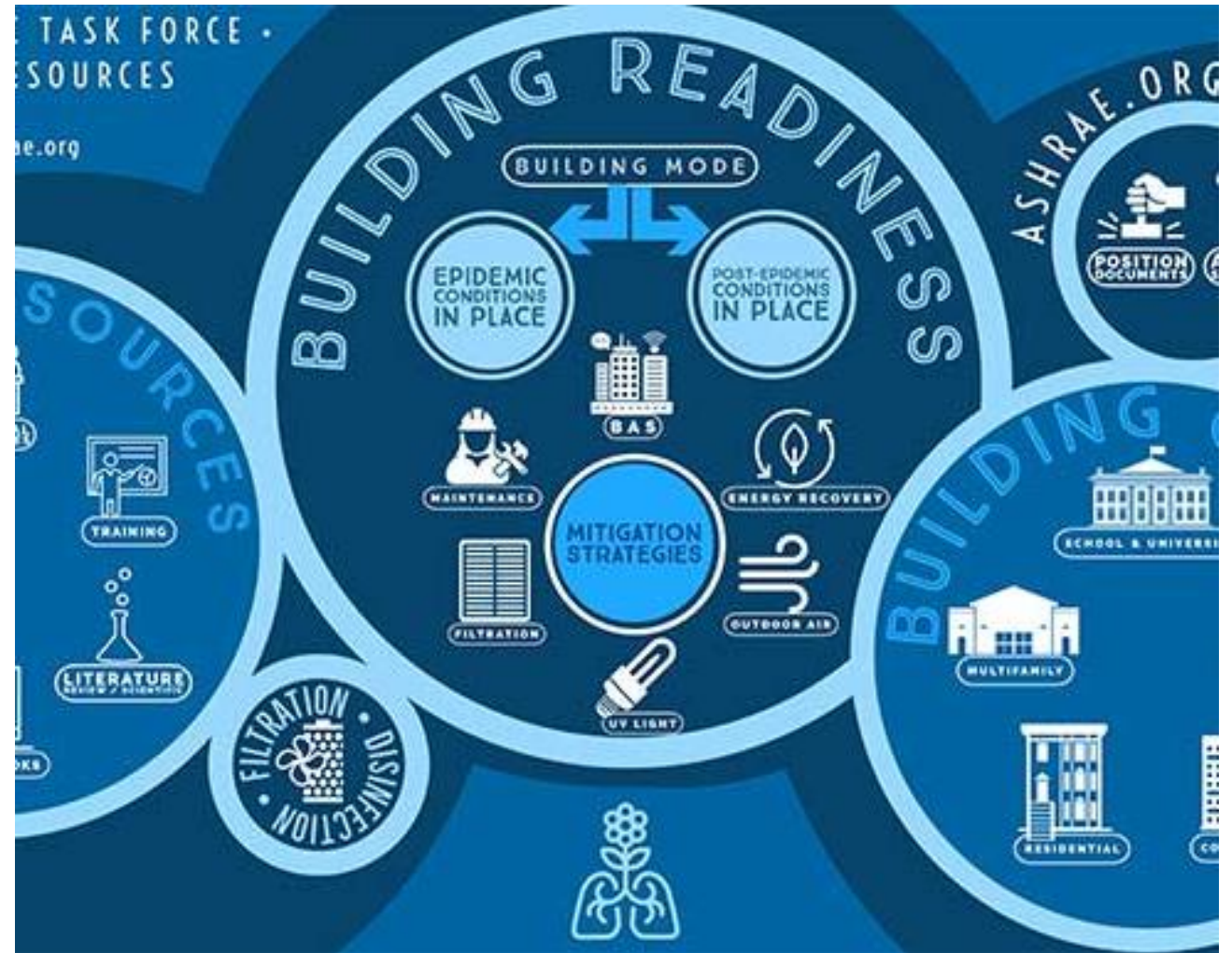
Look Ahead

- Potential for Net Zero Building Certification
 - Similar to LEED Zero Building Certification / EDGE Building Certification (Zero Carbon)
 - Point(s) for team member with ASHRAE Net Zero Certification
- Building Net Zero Certification Maintenance
 - Renewal every 3? years
 - Submit proof of maintaining Net Zero status
 - Professionals for evaluating Net Zero Certification Maintenance

Sustainability and Resilience

ASHRAE Resources for Long Term Action

The Covid-19 Info graphic has been found to be the most visited link on the ASHRAE website. The purpose of this product is to model a clearinghouse of information for Sustainability/Resilience similar to the Covid-19 infographic to allow users to easily access existing (and future) subject matter in a similar manner.



Existing ASHRAE links for use in new infographic

- Energy efficiency measures (Partial page)

Energy Efficiency Measures to Consider

The following list is a reference resource of energy efficiency measures (EEMs) to consider when performing an energy audit. The list is organized by end use and building component and includes some water efficiency measures.

The list was developed by ASHRAE Standard Project Committee 100 in 2011 as part of the committee's rewrite of ANSI/ASHRAE Standard 100-2006. The list was developed as a reference guide to address commercial and residential occupancies, though much of the content pertains primarily to commercial and institutional buildings. Although the list covers most typical EEMs, it is by no means all inclusive. It is intended as a starting point to aid in the development of energy efficiency projects. Since Standard 100 was still in review at the time of publication of *Procedures for Commercial Building Energy Audits*, Second Edition, the reader may wish to check the published edition of Standard 100 for the most up-to-date copy of this list.

Building Envelope

- Walls
 - Insulate walls. Retrofit insulation can be external and internal.
 - External post insulation makes large savings possible, as this type of insulation not only contributes to a reduction of the heat loss through large wall surfaces but also eliminates the traditional thermal bridges where floor and internal wall are anchored in the exterior wall.
 - Internal insulation is typically done when external insulation is not allowed (e.g., for historical buildings). Design location and selection of insulation and vapor barrier to avoid condensation.
 - Insulate cavity walls using spray-in insulation. Design location and selection of insulation and vapor barrier to avoid condensation.
 - Consider converting an internal courtyard into an atrium to reduce external wall surfaces.
- Roofs
 - Use cool roofs (high-reflectance roofing material) with reroofing projects.
 - Determine roof insulation values and recommend roof insulation as appropriate.
 - Insulate ceilings and roofs using spray-on insulation.
 - Where appropriate, exhaust hot air from attics.
- Floors
 - Insulate floors.
 - Insulate floors using spray-on insulation.
 - Insulate basement walls with a slab over an unheated basement.
- Windows
 - Replace single-pane and leaky windows with thermal/operable windows to minimize cooling and heating losses.
 - Install exterior shading such as blinds or awnings to cut down on heat loss and to reduce heat gain.
 - Install storm windows and multiple-glazed windows.
 - Use tinted or reflective glazing or solar films.
 - Adopt weatherization/ventilation improvements.

COLUMN ENGINEER'S NOTEBOOK

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Daniel H. Hall

Building Resilience For the MEP Engineer

BY DANIEL H. HALL, P.E., BEMP, HOB, FAIA, FELLOW/LIFE MEMBER ASHRAE

Although the term “resilience” has become a hot button in the high performance building community, it seems to have different meanings in different contexts. This column will try to identify these differences and discuss the issues the concept raises for MEP engineers.

A common definition of resilience is the capacity to adapt to changing conditions and to maintain or regain functionality and vitality in the face of stress or disturbance. It's the ability to endure the disturbance, and, then, to bounce back after the disturbance with little interruption of service. In the architectural and sustainability communities, the differences in the interpretation of resilience tend to be generated by the definition of the changing conditions and of stress or disturbance.

For some, long-term trends such as dwindling fossil fuel resources or the increased temperatures and water shortages associated with global climate change are the kind of stresses that must be addressed. For others, more acute situations, such as terrorist attacks or extreme weather events, are the disturbances that must be overcome. Fundamentally, these two situations are very different, in that the former assumes continuing almost business-as-usual occupancy of the facility while the latter assumes a substantially modified temporary occupancy, followed by prompt resumption of business-as-usual when the disturbance has ended. The latter type of resilience is more difficult to address in that the nature of the temporary use may vary and even in the simplest of cases is difficult to define.

Designing for a gradually changing climate is significantly different from designing for a sudden catastrophic event. Interior conditions and occupancy functions can be assumed to be defined operating procedure. Outdoor design conditions may vary from currently published conditions based upon the specified future horizon and a selected projection for temperature rise. While scenarios for global climate change

are available, based upon different assumptions about the global level of carbon emissions from National Oceanic and Atmospheric Administration (NOAA) and Intergovernmental Panel on Climate Change (IPCC), translation of these scenarios into modification of design temperatures for specific sites is very difficult.¹

Even so, results of the analysis of regional projections for climate change can be applied to existing design conditions for a specific site, and the resulting uncertainty can be factored into design calculations.² Life-cycle cost studies can be performed using energy modeling results calculated with weather data altered to reflect future conditions and projected future energy costs.³ Feasibility studies for other sustainable measures, such as rainwater harvesting and renewable energy generation, can also be performed using altered weather data.

Design of building systems to accommodate extraordinary events, on the other hand, includes not only making assumptions about the impact of the event on the building, but also the desired functionality of the building during and after the event and the impact of the event on the surrounding community and its infrastructure.

Building resilience is inseparable from community resilience. To the extent that community infrastructure can survive disasters or other extraordinary events, the demands of building resilience systems are reduced. As an example, a community served by flood-proofed natural gas pumping stations with backup generation, along with seismic design of distribution systems, would greatly improve the effectiveness of a building's backup

Daniel H. Hall, P.E., FAIA, is vice president at Sydnor Hennessy Group, New York.

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05.2016

PREPARING
TO THRIVE:
**THE BUILDING
INDUSTRY
STATEMENT ON
RESILIENCE**



*Helping communities construct
a more certain future.*



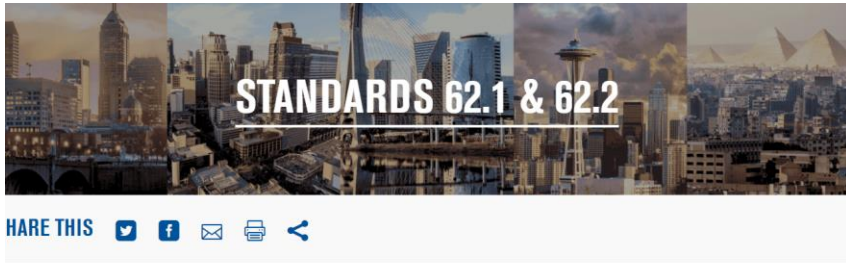
Table of Contents:

[I. Infectious Aerosol Position Document statements](#)

[II. Short-list references associated with Position Document](#)

[III. Annotated reference list of relevant studies by category](#)

[IV. References: General](#)



The Standards for Ventilation and Indoor Air Quality

ANSI/ASHRAE Standards 62.1 and 62.2 are the recognized standards for ventilation system design and acceptable indoor air quality (IAQ). Expanded and revised for 2019, both standards specify minimum ventilation rates and other measures in order to minimize adverse health effects for occupants.

ANSI/ASHRAE Standard 62.1-2019

Ventilation for Acceptable Indoor Air Quality

First published in 1973 as Standard 62, Standard 62.1 should be used to guide the improvement of IAQ in existing buildings. Standard 62.1 outlines minimum ventilation rates and other measures intended to provide IAQ that is acceptable to human occupants and that minimize adverse health effects.

Standard 62.1 has been fully revised for the first time since 2004 to include three procedures for ventilation design: the IAQ Procedure, the Ventilation Rate Procedure, and the Natural Ventilation Procedure. 62.2 New technology and the latest research ensure that the information in the standard is means of achieving this goal have evolved.



Industry Statement on Resilience

Representing nearly 1.7 million professionals, America's design and construction industry is one of the largest sectors of this nation's economy, generating over \$1 trillion in GDP. We are responsible for the design, construction, and operation of the buildings, homes, transportation systems, landscapes, and public spaces that enrich our lives and sustain America's global leadership.

We recognize that natural and manmade hazards pose an increasing threat to the safety of the public and the vitality of our nation. Aging infrastructure and disasters result in unacceptable losses of life and property, straining our nation's ability to respond in a timely and efficient manner. We further recognize that contemporary planning, building materials, and design, construction and operational techniques can make our communities more resilient to these threats.

Drawing upon the work of the National Research Council, **we define resilience as the ability to prepare and plan for, absorb, recover from, and more successfully adapt to adverse events.**

As the leaders of this industry, we are committed to significantly improving the resilience of our nation's buildings, infrastructure, public spaces, and communities.

- **We research** materials, design techniques, construction procedures, and other methods to improve the standard of practice.
- **We educate** our profession through continuous learning. Through coordinated and continuous learning, design, construction and operations professionals can provide their clients with proven best practices and utilize the latest systems and materials to create more resilient communities.
- **We advocate** at all levels of government for effective land use policies, modern building codes, and smarter investment in the construction and maintenance of our nation's buildings and infrastructure.
- **We respond** alongside professional emergency managers when disasters do occur. Industry experts routinely work in partnership with government officials to survey damage, coordinate recovery efforts, and help communities rebuild better and stronger than before.
- **We plan** for the future, proactively envisioning and pursuing a more sustainable built environment.

The promotion of resilience will improve the economic competitiveness of the United States. Disasters are expensive to respond to, but much of the destruction can be prevented with cost-effective mitigation features and advanced planning. Our practices must continue to change, and we commit ourselves to the creation of new practices in order to break the cycle of destruction and rebuilding. Together, our organizations are committed to build a more resilient future.

CULTIVATORS

led the effort to establish and implement the Statement with their industry peers



FOUNDERS

united to define the goals and objectives of a resilient built environment



AMPLIFIERS

joined the founding signatories in committing to the advancement of Statement goals





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ASHRAE TASK FORCE FOR BUILDING DECARBONIZATION

SHARE THIS



ASHRAE's Task Force for Building Decarbonization (TFBD) was formed in Spring 2021 as an initiative of President Chuck Gulledge and President-Elect Mick Schwedler. Jurisdictions globally are confronting climate change and recognizing that building decarbonization is an important component in their efforts. The worldwide building sector accounts for about 40% of energy-related carbon emissions and buildings remain a major sector that lacks sufficient mitigation policies. As the standards authority for energy usage in buildings, ASHRAE recognizes that our long-standing initiatives in energy efficiency should be expanded to building decarbonization.



Comments

- Sustainability and Resiliency are intertwined
- The infographic used for Covid-19 is a very popular site and the format lends itself to this usage
- There are a myriad of applicable existing publications related to sustainability and resilience but presently appear to have no central clearing house
- A curation of existing documentation is needed for this endeavor
- Possibly a formal statement and or preamble is necessary for inclusion as a precursor to the formatting and selection of subject materials

TEC-Certification Joint Task Force: New ETF-Decarbonization Products & Services

Nick Armstrong

Suz Ann Arroyo

Kurt Monteiro

Keith Reihl

Chandra Sekhar

Ashley Weekly

Kevin White

ASHRAE Staff:

Tim Kline

Karen Murray

Job to be Done: Resilient Building Design

- ✓ Experience: Innovative resilient building design
- ✓ Customer Circumstances: Well-intentioned designers face multiple, limiting pressures. Poor opportunity for innovation
- ✓ Problem Solved: Opportunity to collaborate in real time, while accessing up-to-date resources and design tools
- ✓ Powerful Social/Emotional Dimension: A safer, more secure and healthier future for people and the planet

Resilient Building Design Digital Platform: Multi-sided with Positive Network effects

✓ Multiple-sides:

- Designers: architects, code officials, mechanical & electrical engineers
- Third parties: advertisers, employers
- ASHRAE (platform owner)

✓ Positive Network Effects:

- Designers
- Designers \leftrightarrow Advertisers
- Designers \leftrightarrow Employers

Resilient Building Design Digital Platform: Value Creation & Capture

Value Creation	Users	Value Capture
Convenient access to updated standards, guidelines, and handbooks; access to tools; opportunities to collaborate; job postings and advertising	ASHRAE (platform owner)	Payment; data; network effects; brand awareness
Limited collaboration; data	Designers- free access	Limited collaboration
Full collaboration; more innovative, better designs; data; payment	Designers- paid access	Collaboration; enhanced innovation; convenient access to updated standards, guidelines and handbooks; data
Ad revenue	Advertisers	Conversions
Job posting revenue	Employers	Skilled new-hires

Resilient Building Design Digital Platform: Aligning Processes & Removing Obstacles

- MEP Principal concerns
- Client concerns
- ASHRAE publication and membership sales

Resilient Building Design Digital Platform: Projected Contribution Income Statement

	2022-23	2023-24		2022-23	2023-24
ASHRAE Member sub. fee	9.95	9.95	Platform Member Subscriptions	199000	995000
# of Member subscriptions	20,000	100,000	Platform Non-member Subscriptions	149750	149750
Monthly subscription fee	29.95	29.95	Advertising fees	50,000	250,000
# of non-member subscriptions	5,000	5,000	Job posting fees	50,000	150,000
Advertising fees	50,000	250,000	Total Sales	448,750	1,544,750
Job posting fees	50,000	150,000	Variable Expense	89,750	308,950
Variable expense = 20% of sales			Contribution Margin	359,000	1,235,800
Fixed Expense 1- platform creation	500,000	0	Fixed Expense 1	500,000	0
Fixed Expense 2 - annual platform maintenance	100,000	100,000	Fixed Expense 2	100,000	100,000
			Total Avoidable Fixed Expense	600,000	100,000
			Net Operating Income	-241,000	1,135,800

**2022-23 Projected Contribution Income Statement
Sustainability/Resiliency Infographic**

Price for Creation of Infographics	0	
Estimated No. of Hits on InfoGraphic/ Year	20000	
		Assume
Estimated No. of Hits to embeded products	2000	10%
Estimated No. of Product Purchases	100	Assume 5%
Average cost per Product	\$ 100.00	
Total Sales	\$ 10,000.00	

Referenced Document Below

2022-23 Projected Contribution Income Statement

Price per Certification Application	435	Certification Sales	32625
No. of certification applications	75		
Price per Recertification Application	259	Recertification Sales	27195
No. of recertification applications (86% renewal rate)	105		
		Total Sales	59820
Variable Expense per Certification Application	60	Variable Expense	<u>4500</u>
		Contribution Margin	55320
Fixed Expense 1 is item banking		Fixed Expense 1	8680
Fixed Expense 2 is minimum exam development, averaged across a 5-year period		Fixed Expense 2	4300
		Total Avoidable Fixed Expense	<u>12980</u>
Note: Fixed Expense = item banking fee, does not include exam development expense. Every 5 years a JTA, item writing, new form and standard setting workshop must be completed, at a minimum, which is \$21,485.		Net Operating Income	42340

Note: Fixed Expense = item banking fee, does not include exam development expense. Every 5 years a JTA, item writing, new form and standard setting workshop must be completed, at a minimum, which is \$21,485.

**2021 Society Handbook Committee Report,
Winter Hybrid Virtual meeting 30 January, 2022**

To: Publications and Education Council, and PEC Products Subcommittee

Submitted by: Michael P. Patton, Handbook Committee Chair

1. Subcommittees

- a. Review/Training (Mages) reported more than 20 attendees at the online TC training. The Authoring Portal was reviewed by Heather Kennedy.
- b. Electronic (Sheinman) continued to refine the committee Basecamp file system and reported on efforts to template the various users file systems.
- c. Functional (Furman) submitted a written report. The ARG, MOP, ROB were reviewed and some action items established.
- d. Strategic Planning (Fisher) reported that he is reviewing aspects of committee activities

2. Volume reports

- a. Fisher (2022 Refrigeration) reported no problems in getting the submissions in.
- b. Sheinman (2023 Applications) reported that his liaisons are sending the message to their TCs that it is crunch time for spring chapter deadlines. One TC is not responding and Harris will take the initiative directly.
- c. Kennedy for Furman (2024 Systems and Eq) Heather indicated that the Liaisons are having difficulty getting responses from their assigned TC sub chairs and even TC Chairs. A list of those unresponsive will be made for further engagement.
- d. Mages (2025 Fundamentals) reported progress with Liaisons getting in contact with TC Chairs and Handbook Subcommittee chairs

3. General

- a. Heather reported on the changes to procedures put in place to ensure all revisions are captured accurately and completely.
- b. Heather reported that a new staff position has been authorized for Handbook
- c. There are reports of Handbook liaisons not being recorded on the TC rosters. Heather said that she was in contact with TAC to correct the situation.
- d. Chris Grey demonstrated for those assembled the path to get to a member's committee assignments and rosters. Liaisons were encouraged to compare their committee assignments with the rosters listed on the Member Profile.
- e. The 2022 refrigeration gally proofs need to be returned by the end of March to get them submitted to the printer in a timely manner.
- f. Voted to approve the new chapter from TC2.3, 2.4, 2.9 with input from the ETF for a Handbook chapter on in-room air cleaning equipment.
 - i. A vote of members in attendance approved the chapter. (18-0-1-CNV).

- g. Liaisons were encouraged to poll their TCs about adding ETF and DTF content or referencing relevant documents developed by the TFs in chapter revisions.

4. MBOs were reviewed and updated (attached)

Respectfully submitted,

Michael P. Patton
Handbook Chair
30 January, 2022

Handbook Committee
MBOs for Society Year 2019-2020
Chair: Suzanne LeVisuer Date: 23 June 2019

Attachment D
PEC Report to BOD
January 2022 - Las Vegas Winter Conference

Updated 30 January 2022

Handbook Committee MBOs 2021-2022

Michael Patton Chair

	Objective	Completion Date	Fiscal Impact	Responsible Party	Status	Comment
1	Coordinate with Staff to review and improve Staff procedures to ensure all Volume edits are included	1-Feb-22	none to Positive	HB Excom	complete	A procedure was added to present galley proofs for sign off to TCs for ALL chapters regardless of edit/revision status.
2	Review single topic/multi TC Chapters responsibility to one TC	30-Jun-22	None	Vol Chairs/Review Sub Committee	On-going	Required to smooth rewrite/edit process
3	Encourage TCs to develop extra features (spreadsheets, sidebar discussions, video, etc.) for Handbook Online. Suggest using YEA members	30-Jun-22	None	HBC	Continuous	Continuing 2021 MBO
4	Develop a HBC Vision Statement	30-Jun-22	None	HBC	Yet to commence	Crafting a vision statement will provide continuity as Volume chairs rotate through the Chair position
5	Address volume imbalances through appointment of Ad-Hoc	30-Jun-22	Could reduce mailing costs	HBC ExCom	Ad-Hoc Assembled	Applications and Fundamental volumes are nearly twice the size of Refrigeration volume. Look at the possibility of shifting some material to a different volume.

Handbook Committee
MBOs for Society Year 2019-2020
Chair: Suzanne LeVisuer Date: 23 June 2019

6	Review ARG for clarity on material to be included in the HB volumes vs that set for other publications (deign Guides, Users manuals)	30-Jun-22	Could reduce page count	Functional	Assigned	Additiona guidance in the ARG (Author's and Reviewer's Guide) could move contenct to other publicaitons such as user and design guides.



**Historical Committee
Report to Products Subcommittee
of Publishing & Education Council (PEC)
Meeting of January 30, 2022**

Action Items

None.

Information Items

1. Historical Committee reviewed a PEC **Referred Motion from Region VII Fall 2021 CRC, Memphis Chapter Memphis Chapter – Motion 6A (11/4/2021):**

“That Regional Historians be added to the Society Historical Committee as full voting members with all rights, and privileges, and responsibilities pertaining thereto.”
(Attachment A)

Background: Currently, the Regional Historians are allowed and encouraged to attend the Historical Committee meetings as guests. They, in effect, have a voice but no vote. There is a vast divide between the work and objectives of the Historical Committee and the expectations of the Regional and Chapter Historians, to the point that replies to Regional and Chapter inquiries of the Historical, Committee are delayed or go completely unanswered. Further, this disconnect between the Historical Committee and the grassroots (e.g. Regions and Chapters) is made publicly obvious by the resources on the Society Historical Committee’s webpage being so old and out of date. In at least one case, the PowerPoint presentation is so outdated as to have the previous ASHRAE logo from nearly a decade ago still on it. Grassroots representation by, and voting authority of, Regional Historians would keep the Historical Committee much more in tune and in contact with the Grassroots and would likely result in a better historical archive and more participation in the Gold Ribbon and Lou Flagg awards programs. This would in turn incentivize Chapters to appoint active Chapter Historians.

Fiscal Impact: \$15,000.00 per year (15 Historians x 2 Conferences/yr. x \$500 Avg. Airfare)

Historical Committee Response: The motion was postponed until after an Ad Hoc committee could be appointed to investigate the consequences of approving the motion for Historical Committee. Concerns included Regional Historian term limits and the lack of Regional Historian attendance in the past and the effect that might have on Historical Committee achieving

quorum at meeting. Historical Committee will meet to vote on this motion in May 2022 and make a report to PEC at the Annual Meeting in Toronto in June 2022.

2. Historical Committee voted to approve establishing two-way liaisons with YEA, CTTC, Research Promotion and Membership Promotion Committees for collaboration and cross-marketing to inspire others to volunteer and contribute to Historical Committee.
3. Historical Committee will appoint an Ad Hoc committee to investigate a partnership between the United Engineering Foundation, and the AIAA, AIChE, ASCE, IEEE, SPE & SWE, and has approved supporting communication with the Life Members Club on possible future fundraising efforts for the purpose of engaging with the Engineering & Technology History Wiki (ETHW).
4. Historical Committee will develop a document reporting on diversity in ASHRAE and the HVACR industry.
5. Historical Committee is planning to reinstitute the Historians Newsletter on a quarterly basis. There have been some changes to the committee's membership that has delayed the first issue.
6. Historical Committee discussed the Pilot Historical Plaque Project which was installed in Orange, Texas and the possibility of pursuing other similar projects in the future
7. Historical Committee is developing recommendations for Historical 2022-2023 PAOE points.
8. Historical Committee discussed the necessity of continuity of communication, to keep Regional and Chapter Historians involved in history at the Society level the ASHRAE email aliases.
9. Historical Committee have begun developing the policy parameters for the ASHRAE archive. There is no current guideline, and a comprehensive policy is still needed to ensure future material is not lost.
10. Historical Committee have chosen Shelia Hayter for the next Leadership Voices interview to be conducted virtually. The committee will also pursue posting a recorded interview with Steve Comstock.
11. Historical Committee reviewed their MBOs shown in Attachment B.

Respectfully submitted,
Spencer Morasch, Historical Committee Chair



Shaping Tomorrow's Built Environment Today

180 Technology Parkway, Peachtree Corners, GA 30092 ▪ Tel 678.539.1104 ▪ www.ashrae.org

Joyce Abrams
Director Member Services

jabrams@ashrae.org

TO: Don Brandt, Publishing and Education Council Chair
Mark Owen, Publishing and Education Council Staff Liaison

FROM: Joyce Abrams

DATE: December 7, 2021

SUBJECT: Members Council Referrals to Publishing and Education Council

During the Members Council November 2021 virtual fall meeting, the council referred the motions below to Publishing and Education Council for consideration. Please note the motions below were not vetted by Members Council. I appreciate your keeping me advised of your actions. Let me know if you have any questions. Thank you.

Memphis Chapter – Motion 6A (11/4/2021):

That Regional Historians be added to the Society Historical Committee as full voting members with all rights, and privileges, and responsibilities pertaining thereto.

Background: Currently, the Regional Historians are allowed and encouraged to attend the Historical Committee meetings as guests. They, in effect, have a voice but no vote. There is a vast divide between the work and objectives of the Historical Committee and the expectations of the Regional and Chapter Historians, to the point that replies to Regional and Chapter inquiries of the Historical Committee are delayed or go completely unanswered. Further, this disconnect between the Historical Committee and the grassroots (e.g. Regions and Chapters) is made publicly obvious by the resources on the Society Historical Committee's webpage being so old and out of date. In at least one case, the PowerPoint presentation is so outdated as to have the previous ASHRAE logo from nearly a decade ago still on it. Grassroots representation by, and voting authority of, Regional Historians would keep the Historical Committee much more in tune and in contact with the Grassroots and would likely result in a better historical archive and more participation in the Gold Ribbon and Lou Flagg awards programs. This would in turn incentivize Chapters to appoint active Chapter Historians.

Fiscal Impact: \$15,000.00 per year (15 Historians x 2 Conferences/yr. x \$500 Avg. Airfare)

Kansas City Chapter – Motion 6B (11/4/2021):

That non-current ASHRAE Handbook editions be made available to dues-paying ASHRAE members (Full or Associate Member grade) in an electronic format, in lieu of the hardbound handbook.

Background: Many ASHRAE Members have kept older versions of ASHRAE Handbooks for reference in hard copy, however new Members do not have access to older versions of the Handbook and many people have been converting to utilize more digital content.

This could be offered as either a member benefit or an additional revenue stream.

Fiscal Impact: \$2,000-3,000.

Hellenic Chapter – Motion 24 (11/4/2021):

ASHRAE to include, as per its policy, SI units in its online and instructor led training courses.

Background: ASHRAE's greatest assets are its technical expertise and training, and thus attracts and sustains members throughout the world. However, most of the training courses are in IP units and practically impossible to use in countries that use SI units. There is also a need to consider international regulations and practices when adapting the material for a global audience.

Fiscal Impact: TBD.

Attachment E								
PEC Report to BOD								
January 2022 - Las Vegas Winter Conference								
MBO Submission to PEC Planning								
FINAL - July 30, 2021								
Revised with Committee Assignments - Oct 19, 2021								
Author:	Spencer Morasch - Chair, Historical Committee							
Council:	Publishing and Education Council							
Committee:	Historical Committee							
Reference Document	ASHRAE Strategic Plan 2019-2024							
Society Year:	2021-2022							
MBO #	Description	Metric	Historical Committee Assigned	Committee Members	Strategic Plan Initiative #	Strategic Plan Goal #	Completion Date	Financial Assist Req'd?
		(how do we determine success?)		Chair in RED colored font.	(can be more than 1)	(can be more than 1)		
example	Explore frequent use of digital live trainings for Grassroots, which will provide quick feedback and help from Grassroots.	Max 3-5 best practices			3 & 4	1b, 2a,b,c 3a,b	11/30/2020	No
1	Develop proposals to improve the opportunities for Regional Historians to participate in Society Historical Committee activities	Continue on-line participation of Regional Historian's at Society Historical Committee Meetings	Communications / Regional Historian Guidelines Committee	Niss Feiner / Wei Sun / Spencer Morasch (ExO)	3	2c, 3a	6/30/2022	No
2	Develop PAOE Recommended Changes to 2022-2023 Society Year PAOE	To get ahead of the PAOE Committee Cycle with proposal for the following year's (Society Year 2022-2023) PAOE Letter in Summer 2022, Historical PAOE subcommittee needs to work with the PAOE subcommittee of Members Council during the Fall 2021 to Submit recommendations.	Communications / Regional Historian Guidelines Committee	Niss Feiner / Wei Sun / Spencer Morasch (ExO)	4	2a	12/31/2022	No
3	Encourage younger members of ASHRAE to have interest in history-related activities of the Society	Proposing to keep the PAOE line item "For a local Chapter Historical activity performed by an actively engaged YEA member". Reference 2021-2022 PAOE Newsletter - Tag# YEA8 (under YEA)	Communications / Regional Historian Guidelines Committee	Niss Feiner / Wei Sun / Spencer Morasch (ExO)	4	2a	6/30/2022	No
4	Historical Category PAOE Update Summary Report at Annual & Winter Conferences to include copy similar to 2019-2020 Annual Meeting. Most recent report dated 1/11/2021 was included with Historical Comm. Meeting Minutes of June 3, 2021 (Attachment C).	To encourage Regional Historians to target the below PAR performing Chapters in their Region based on the previous year's Historical PAOE Summary.	Communications / Regional Historian Guidelines Committee	Niss Feiner / Wei Sun / Spencer Morasch (ExO)	4	2a	1/31/2022	Yes
5	Encourage Chapter Historians who don't Attend their Regional CRC to complete the Chapter Historians Training Power Point and promote on-line History Workshop participation at CRCs	Update the Chapter Historians Training PowerPoint. Add points for submittal of a completed MBO with phone discussion with Regional Historian prior to August 30 of current fiscal year. Promote on-line workshop participation at CRCs	Communications / Regional Historian Guidelines Committee	Niss Feiner / Wei Sun / Spencer Morasch (ExO)	4	2a	6/30/2022	No
6	Foster collaboration with other international societies to improve our historical research and support history-related activities of the Society	1. Continue work on collaboration. HC has links with similar groups in CIBSE and AiCARR - opportunity to pursue to work w/similar committees in CEN, International Institute of Ammonia Refrigeration (IIAR), International Institute of Refrigeration (IIR), & Global Cold Chain Alliance (GCCA). 2. Continue work to investigate ASHRAE membership in the IEEE History Center. Grow support in the Life Members Club to fundraise and create an endowment fund that would provide ongoing financial support to sustain membership in the IEEE History Center.	Morasch & Feiner	Spencer Morasch & Niss Feiner	4	2b	6/30/2022	No for some groups, but YES for IEEE History Center
7	Leadership Recall - Arrange for videos at Winter Conference - January 2022	Arrange two Presidential interviews. Review other potential interviewees	Awards / Leadership Recall Committee	Niss Feiner / Robert Pollard / Spencer Morasch (ExO)	4	1b, 2c	1/31/2022	Possibly
8	Leadership Recall - Arrange for videos at Annual Conference - June 2022	Arrange two Presidential interviews. Review other potential interviewees	Awards / Leadership Recall Committee	Niss Feiner / Robert Pollard / Spencer Morasch (ExO)	4	1b, 2c	6/30/2022	Possibly
9	Digitize Archived Journals + Transactions	Encourage digitalization of all Society Journals and Transactions	Administrative / Archives Committee	Glen Remington / Norman Grusnick / Atilla Biyikoglu / S. Morasch (ExO)	3	3b	6/30/2022	Yes
10	Historical Awards - Encourage submission of nominations for Chapter Historian Gold Ribbon Awards and the Society Lou Flagg Historical Award.	A min. of one Gold Ribbon Award Nominee in each Region, and at least two nominations submitted for the Lou Flagg Historical Award	Administrative / Archives Committee	Glen Remington / Norman Grusnick / Atilla Biyikoglu / S. Morasch (ExO)	4	2a	12/31/21 for Lou Flagg Award, 6/30/22 for Gold Ribbon Award Nominations.	No
11	Historical Committee Newsletter - Resume publishing a newsletter for the target audience of Regional & Chapter Historians.	4 Newsletters published during the Society year.	Communications / Regional Historian Guidelines Committee	Niss Feiner / Wei Sun / Spencer Morasch (ExO)	4	1b, 2a, 2c	4 Editions: Target publish dates of July, Oct., Jan. & April.	No



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Publications Committee Report to the Products Subcommittee of the Publishing and Education Council

Monday, January 31, 2022, 7:30-9:30 a.m.

Action Items for PEC

1. Publications Committee recommends Products Subcommittee approve changes to the committee's ROB as shown in **Attachment A**. These changes reflect changes to ASHRAE Journal department products and add PTAR responsibilities.
2. Publications Committee recommends Products Subcommittee approve changes to the committee's MOP as shown in **Attachment B**. These changes reflect changes to ASHRAE Journal department products and add PTAR responsibilities and an annual review requirement for internal documents.

Information Items

Major Motions Passed:

1. Publications Committee voted to select the winner for the 2022 Journal Paper Award, the title and authors of which *ASHRAE Journal* have been forwarded to the Honors and Awards Committee for award presentation at the 2022 ASHRAE Annual Conference.
2. Publications Committee voted to develop a peer review process for the *ASHRAE Journal* podcasts. A subcommittee will work on this in the coming months.

Other:

1. Feedback for PEC MBO 1 from SY 2020-2021 PEC Chair Bill Dean ("Create a Sales Business Plan for PEC by identifying 3 to 5 digital product strategies") is included in **Attachment C**.
2. Feedback for PEC MBO 2 from SY 2020-2021 PEC Chair Bill Dean ("To develop a PEC Business Model that includes offering ASHRAE products and services to non-commercial entities") is included in **Attachment D**.
3. Suggestions for ways to incorporate ETF and TFBD data into PEC products and services are included in **Attachment E**.
4. In December, Publications Committee passed the motion presented by Presidential Member Tim Wentz that ASHRAE endorse the Mechanical Contractors Association of America (MCAA) publication *Change Orders, Productivity and Overtime: A Primer for the Construction Industry* and forwarded it to PEC (see **Attachment F**). The committee has since learned that the Technology Council MOP covers ASHRAE endorsement of external documents via their Document Review Subcommittee (DRSC); therefore, the motion was also forwarded to the DRSC.
5. Updates on the Publications Committee MBOs for the 2021-2022 Society year are included in **Attachment G**.

Respectfully submitted,
Adeeba Mehboob, Chair, Publications Committee
30 January 2022

Attachment A

Changes to Publications Committee portion of the Rules of the Board

[NOTE: Sections not affected have been omitted from this attachment and noted as such.]

2.419.001 SCOPE AND PURPOSE

[Section not affected.]

2.419.002 MEMBERSHIP

[Section not affected.]

2.419.003 OPERATION

2.419.003.1 General Requirements

- A. This committee shall oversee the editorial policies of ASHRAE's Special Publications, *ASHRAE Transactions* and other conference proceedings, ~~ASHRAE's magazines (such as *ASHRAE Journal* and *High Performing Buildings*)~~, and ASHRAE's electronic newsletters. The committee shall be subject to these conditions:

[List not affected.]

- B. ASHRAE shall produce Special Publications that shall be defined as all technical publications in print format (except for the ASHRAE Handbook series; standards, guidelines, and user's manuals; ASHRAE's research journal, and ASHRAE's magazines), such as non-series books (including books resulting from ASHRAE Research Projects and Special Projects), books in the Advanced Energy Design Guide series and the ASHRAE Datacom Series, charts, and tools, as well as all technical publications in machine-readable format, such as audio and visual presentations, software, databases, apps, and online resources. These special publications may be generated from proposals submitted directly to Publications Committee or from accepted Publication Topic Acceptance Requests (PTARs), which Publications Committee reviews before providing recommendations to Research Administration Committee (RAC) for the final vote regarding funding.
- C. *[Section not affected.]*
- D. The objective of *ASHRAE Journal* shall be to lead in communication of heating, ventilating, air-conditioning and refrigeration information to and from the profession, industry, and related interests. (ROB 520-144-007). Editorial and advertising content of *ASHRAE Journal* shall be directed toward the professional education of persons engaged in industries related to heating, ventilating, air conditioning, and refrigeration. (86-06-22-18L) ~~The objective of *High Performing Buildings* shall be to focus on practices and technologies to promote better buildings and offer practical solutions. Articles will include when available measured performance data and lessons learned through the design, construction and operation of today's best performing buildings.~~
- E. The objective of ASHRAE's electronic newsletters shall be to communicate news to various audiences. ~~ASHRAE eSociety~~ Insights, distributed to members only, includes news of members, chapters, regions, Society committees, and International Associates. (ROB 520-144-007; 86-06-22-18L) *ASHRAE Journal Newsletter*, distributed to members only, connects news of industry trends with articles from ~~the~~ *ASHRAE Journal*'s archive of peer-reviewed content. *ASHRAE HVAC&R Industry News* curates the latest trends and announcements from the industry to a large readership of members and non-members. *HPB Newsletter* combines online ~~first versions of~~ HPB ~~print~~ articles and *ASHRAE Journal* articles with links to external articles related to energy efficiency, resiliency and sustainability for a diverse audience of ASHRAE engineers, architects, facilities managers and building owners.

Attachment B

Changes to Publications Committee Manual of Procedures

[NOTE: Sections not affected have been omitted from this attachment and noted as such.]

Contents

[Section not affected.]

Table of Abbreviations

[Section not affected.]

STRUCTURE

[Section not affected.]

SUBCOMMITTEES AND LIAISONS

[First two paragraphs not affected.]

The chair shall appoint members of the Publications Committee to the PTAR Subcommittee. The PTAR Subcommittee shall review, discuss, and vote to accept or reject submitted Publication Topic Acceptance Requests (PTARs) before providing recommendations to Research Administration Committee (RAC) for the final vote regarding funding.

The chair shall ~~appoint members of~~accept volunteers from the Publications Committee to be liaisons to each section of the Technical Activities Committee (TAC). TAC Section Liaisons shall contact the TC chairs in their assigned TAC section to communicate about upcoming Special Publications and/or the relevance of older Special Publications on the market. TAC Section liaisons shall also attend the TC/TG/MTG Chair's Breakfast meetings at the Annual and Winter Conferences to communicate with TC chairs and convey information to or from the chairs and Publications Committee.

[Last paragraph not affected.]

DUTIES

The Publications Committee identifies the technical information needs of the HVAC&R industry not met through the ASHRAE Handbook series, ASHRAE's research journal, standards, guidelines, or user's manuals and oversees editorial policies and delivery of products to the marketplace. This includes the editorial policies of ~~ASHRAE's magazines (such as ASHRAE Journal and High Performing Buildings),~~ ASHRAE's electronic newsletters, *ASHRAE Transactions* and other conference proceedings, and ASHRAE Special Publications, which are technical publications in print format, such as non-series books (including books resulting from ASHRAE Research Projects, PTARs, and Special Projects), books in the Advanced Energy Design Guide series and the ASHRAE Datacom Series, charts, and tools, as well as all technical publications in machine-readable format, such as audio and visual presentations, software, databases, apps, and online resources.

The responsibilities of the individual committee members are as follows:

[First bullet not affected.]

- Provide suggestions, comments, or feedback on ASHRAE ~~Journal's magazines~~ and ASHRAE's electronic newsletters.

[Sub-bullets not affected.]

[Next bullet and sub-bullets not affected.]

- Recommend to RAC publications submitted through the PTAR process that the committee feels should be awarded funding for the research and work required to produce the publication.
 - The committee reviews PTARs based on the input of the Director of Publications and Education regarding the justification/feasibility and projected sales of the proposed publication, the market need for a publication on the topic, whether the market is already saturated with other guidance on the topic, the age of other available guidance on the topic, and the appropriateness of the content for a stand-alone publication versus a Handbook chapter.
 - For a proposal to be considered, RAC provides a PTAR to the committee. Each PTAR Subcommittee member reviews the PTAR submission and fills out the PTAR Evaluation Form. The PTAR Subcommittee chair assembles all score sheets and develops a master PTAR Evaluation Form for presentation to the full Publications Committee, who discuss the PTAR and vote to accept or reject the proposal (full committee votes are: Accept as is, Accept with comments, or Reject). The PTAR Subcommittee chair forwards the master evaluation form and the voting results to RAC; if a PTAR is accepted with comments, those comments are submitted with the voting results to RAC for RAC to consider during their review.
 - When reviewing proposed projects, the committee shall endeavor to maintain confidentiality regarding the material submitted, if requested.
 - Following review and approval of the final technical content by the project's cognizant TC, Special Publications staff will edit and format the manuscript for publication.
- Recommend to the Products Committee of the Publishing and Education Council ~~those~~ Special Publications that the committee feels should be published and their methods of publication.
 - Committee members evaluate the suitability of proposed Special Publications based on the value of ~~a~~-the proposed publication to the membership, the size of the expected audience, and the potential to recover publishing costs through sales of the publication. *[Two additional sub-bullets not affected.]*
 - When reviewing proposed projects~~unsolicited material~~, the committee shall endeavor to maintain confidentiality regarding the material submitted, if requested. *[Additional sub-bullet not affected.]*
- Ensure that all Special Publications are current and timely. *[Sub-bullets not affected.]*

OPERATION

[First six paragraphs not affected.]

The committee shall develop procedures for maintaining current and accurate descriptions of the committee's responsibilities as listed in the Publications Committee portion of the Rules of the Board, as described in this Manual of Procedures, and as detailed in the committee's Reference Manual.

Attachment C

Publications Committee Feedback for PEC MBO 1 from SY 2020-2021

In response to PEC MBO 1, “Create a Sales Business Plan for PEC by identifying 3 to 5 digital product strategies,” the Publications Committee submits the following suggestions.

Preliminary suggestions reported to the Products Subcommittee at the 2021 ASHRAE Annual Conference:

- Explore virtual reality for products
- Explore packaging together publications for college courses or for certification or other types of continuing education
- Create apps that go with our publications

Additional suggestions generated by the 2021-2022 Publications Committee subcommittee created to focus on this MBO:

- Produce video content such as the following:
 - Technology Award winner videos (possibly free the day of first airing and watchable for a small fee later)
 - Informational videos
 - Hands-on training videos (possibly sponsored)
 - Offering the videos in different languages (transcripts possibly a lower cost option)
 - Virtual technical tours of factories

Attachment D

Publications Committee Feedback for PEC MBO 2 from SY 2020-2021

In response to PEC MBO 2, “To develop a PEC Business Model that includes offering ASHRAE products and services to non-commercial entities,” the Publications Committee submits the following suggestions.

Preliminary suggestions reported to the Products Subcommittee at the 2021 ASHRAE Annual Conference:

- Work with Government Affairs Committee
- Work with the academic sphere (including universities)
- Encourage government agencies to share our content/offerings when educating others about certain topics
- Engage the chapters
- Guide customers to other related publications after they have downloaded the AEDGs for free (publications that will help them meet their goals)

Additional suggestions generated by the 2021-2022 Publications Committee subcommittee (2022) created to focus on this MBO:

- Work with Government Affairs Committee (GAC) to:
 - Provide a means for continuous feedback from GAC on the changing needs of the global communities’ policy makers, code officials, and ASHRAE members: are ASHRAE’s products what is needed, or what modifications, additions, or new products are needed?
 - Provide HVAC education in the public sector (for example, for facility managers).
 - Support codes and standards development for developing countries.
 - Offer subscriptions to government entities that use our standards and other publications.
- Develop a targeted non-technical summary of standards for government officials, building owners, etc. in order to promote standards and guidelines and other applicable publications.
- Target the educational sector with publications similar to certifications—work with universities to determine which documents and what price points.
- Work with the Epidemic Task Force to promote our publications.
- Produce carbon-related products developed by the Task Force for Building Decarbonization.

Attachment E

Publications Committee Feedback Regarding PEC Using ETF Information

In response to the cross-council request before the 2021 Annual Conference that committees suggest ways to capitalize on the valuable and timely information generated by the Epidemic Task Force (ETF) and Task Force for Building Decarbonization (TFBD) and how to incorporate their gathered data into PEC products and services, the Publications Committee submits the following suggestions.

Preliminary suggestions reported to the Products Subcommittee at the 2021 ASHRAE Annual Conference:

- Solicit content from TCs
- Produce design guides
- Publish *ASHRAE Journal* articles on the information
- Include the content in Handbook chapters

Additional suggestions generated by the 2021-2022 Publications Committee subcommittee created to focus on this task:

- Collect all ETF one-page guidance into a single PDF and post it on the ASHRAE website for free download.
- Make the longer ETF guidance PDFs separate downloads available for sale in the bookstore or keep them posted for free.
- Work with Alice Yates to promote ETF and TFBD publications and training to groups she's worked with before, such as General Services Administration (GSA) and NYSEDA.
- Promote and produce publications to assist governments making goals for decarbonization.

Additional suggestions shared with a member of Publications Committee by a member of the TFBD (which means these ideas are likely also being shared with other committees and councils):

- Develop a Carbon Audit Guidebook
- Embodied Carbon of Various Materials Metrics (possibly on a regional basis world-wide)
- Operational Carbon Metrics
- Carbon Definitions (for analysis, design and performance verification purposes)
- Optimization of Embodied versus Operational Carbon
- Carbon Analysis Tools for Designers
- Carbon Tools for Code Officials – Residential and Commercial Buildings (initially)
- Educational Carbon-based Tools Development & Outreach – Designers, Policy Makers and General Public
- Subscription Service for Government Officials and Policy Makers – Non-technical summaries developed by Standards Committees and Technical Committees/Task Groups of new ASHRAE Standards, Design Guides, technical publications, etc... Provide options for sought summaries to subscribers and the languages these summaries would be provided in.
- Provide a means for continuous feed-back from GAC (and its RVCs) on the changing needs of the global communities' policy makers, code officials and the ASHRAE members who are striving to meet the carbon-reduction challenges they are under—are ASHRAE's products what is needed or what modifications, additions or new products are needed?

Attachment F
Motion to Endorse MCAA Publication
MOTION

Pub/ED Council
Publication Committee

Date 12-2-21
Day Sa Su M Tu W Th F

MOVED BY: Megan Tosh

SECONDED BY: Abdel Darwich

MOTION: That ASHRAE endorse the Mechanical Contractors Association of America's (MCAA) publication, Change Orders, Productivity and Overtime: A Primer for the Construction Industry.

BACKGROUND:

1. As of May 31, 2021, our membership included 17,892 consulting engineers, 4,478 contractors and 2,788 design/build contractors, approximately 50% of ASHRAE's total membership. All these professions grapple daily with issues revolving around change orders, productivity, and overtime. It would benefit our members to have a consistent, quantifiable methodology for addressing this long-term and contentious problem. The MCAA manual has been successfully used in court and arbitration decisions for many years and thus would give our members confidence in resolving disputes equitably.
2. The American Society of Civil Engineers (ASCE) recently published Standard 71-21, 'Identifying, Quantifying, and Proving Loss of Productivity. As this publication has already made it to market, it is not likely that another similar Standard could be supported by the industry. Thus, ASHRAE would not be in a good position to develop its own Standard on the topic.
3. The National Electrical Contractors Association (NECA), the Sheet Metal and Air Conditioning Contractors National Association (SMACNA) and the American Subcontractors Association (ASA) have all endorsed the MCAA publication. MCAA is requesting that ASHRAE similarly endorse the publication to provide a uniform basis across the mechanical industry to address change orders, productivity, and overtime issues amongst all parties.
4. MCAA and ASHRAE have enjoyed a long and collaborative relationship beginning in 1894 when ASHRAE's predecessor, the American Society of Heating and Air-Conditioning Engineers (ASHAE) formed out of the MCAA. Endorsing MCAA's publication on Change Orders, Productivity, and Overtime would renew and strengthen this important relationship between the two organizations.
5. MCAA's Change Orders, Productivity and Overtime: A Primer for the Construction Industry, is under continuous maintenance, which results in a revised edition on approximately a two-year cycle. It the intent of this motion to endorse the publication, not the edition. The endorsement would then automatically apply to the current edition, thus avoiding the need to renew the endorsement every time a new edition was published. The 2020 edition is the current edition.

FISCAL IMPACT: None

Vote count: For 7 Against 0 Abstaining 0
Chairman voting? Yes _____ No X
Motion passed Y Motion failed _____
Referred to: Publishing and Education Council

Attachment G

Publications Committee MBOs for Society Year 2021-2022

Chair: Adeeba Mehboob Date: 30 January 2022

MBO #	Description	Metric	Initiative #	Goal #	Estim. Compl. Date	Financial Assist Req'd?
1	Identify and initiate a pilot Applications guide	Based on member survey results have Meetings with Handbook Committee, TEC, TCs. Contact and Identify Potential Authors. Initiate pilot guide.	3 & 4	1a, 1b, 3a	30-Jun-22	Maybe
2	Recommend to PEC at least two Digital Product Strategies, in response to PEC MBO 1 (2020-21)	Investigate and identify the business case of ASHRAE Apps , Report to Products Subcommittee	3 & 4	1a, 1b, 2c,	COMP	No
3	Recommend to PEC at least one ASHRAE Product or Service targeted to non commercial entities, in response to PEC MBO 2 (2020-21)	Investigate and identify the business case of ASHRAE Apps , Report to Products Subcommittee	3 & 4	1a, 1b, 3a, 3c	COMP	No
4	Develop Publications Performance Metrics for the Publications Committee	PubC Dashboard, Information database	3	1b, 3b	Jan 22	No
5	Support Journal Editor in reviewing and enhancing the quality of the ASHRAE Journal	Provide Feedback and Recommendations for topics for Technical Feature Articles, review editorial calendar, Solicit journal articles from international authors, coordinate with CTTC	4	1a, 1b, 2a, 2c, 3c	22-Jan	No
6	Support Editor in reviewing and enhancing the quality of the ASHRAE newsletter	Provide Feedback and Recommendations for Newsletter content and editorial quality	4	1a, 1b, 2a, 2b, 2c, 3c	22-Jan	No
7	Suggest at least two ideas on how ASHRAE can incorporate data gathered as part of the ETF or the Decarbonization TF into PEC products and services.	Report to Products Subcommittee	3 & 4	1a, 1b, 2b, 3c	COMP	No
8	Identify all unprofitable/unused publications and formulate an action plan.	database and Identification of publications, proposed action plan. Report to Products Subcommittee. Propose stagewise review, targeting books first likely instead of standards or transactions.	3	3a,	30-Jun-22	No
9	Increase International Outreach of ASHRAE Publications	Identify potential ASHRAE Publications of interest to International markets, engage regions and local chapters in awareness and marketing,	4	1a, 1b, 2a, 2b, 3a, 3b, 3c	30-Jun-22	No

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Publications Committee Feedback for PEC MBO 2 from SY 2020-2021

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 - Provide HVAC education in the public sector (for example, for facility managers).
 - Support codes and standards development for developing countries.
 - Offer subscriptions to government entities that use our standards and other publications.
- Develop a targeted non-technical summary of standards for government officials, building owners, etc. in order to promote standards and guidelines and other applicable publications.
- Target the educational sector with publications similar to certifications—work with universities to determine which documents and what price points.
- Work with the Epidemic Task Force to promote our publications.
- Produce carbon-related products developed by the Task Force for Building Decarbonization.

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- Operational Carbon Metrics
- Carbon Definitions (for analysis, design and performance verification purposes)
- Optimization of Embodied versus Operational Carbon
- Carbon Analysis Tools for Designers
- Carbon Tools for Code Officials – Residential and Commercial Buildings (initially)
- Educational Carbon-based Tools Development & Outreach – Designers, Policy Makers and General Public
- Subscription Service for Government Officials and Policy Makers – Non-technical summaries developed by Standards Committees and Technical Committees/Task Groups of new ASHRAE Standards, Design Guides, technical publications, etc... Provide options for sought summaries to subscribers and the languages these summaries would be provided in.
- Provide a means for continuous feed-back from GAC (and its RVCs) on the changing needs of the global communities' policy makers, code officials and the ASHRAE members who are striving to meet the carbon-reduction challenges they are under—are ASHRAE's products what is needed or what modifications, additions or new products are needed?

Motion to Endorse MCAA Publication

MOTION

Pub/ED Council Date 12-2-21
Publication Committee Day Sa Su M Tu W Th F
MOVED BY: Megan Tosh
SECONDED BY: Abdel Darwich

MOTION: That ASHRAE endorse the Mechanical Contractors Association of America's (MCAA) publication, Change Orders, Productivity and Overtime: A Primer for the Construction Industry.

BACKGROUND:

1. As of May 31, 2021, our membership included 17,892 consulting engineers, 4,478 contractors and 2,788 design/build contractors, approximately 50% of ASHRAE's total membership. All these professions grapple daily with issues revolving around change orders, productivity, and overtime. It would benefit our members to have a consistent, quantifiable methodology for addressing this long-term and contentious problem. The MCAA manual has been successfully used in court and arbitration decisions for many years and thus would give our members confidence in resolving disputes equitably.
2. The American Society of Civil Engineers (ASCE) recently published Standard 71-21, 'Identifying, Quantifying, and Proving Loss of Productivity. As this publication has already made it to market, it is not likely that another similar Standard could be supported by the industry. Thus, ASHRAE would not be in a good position to develop its own Standard on the topic.
3. The National Electrical Contractors Association (NECA), the Sheet Metal and Air Conditioning Contractors National Association (SMACNA) and the American Subcontractors Association (ASA) have all endorsed the MCAA publication. MCAA is requesting that ASHRAE similarly endorse the publication to provide a uniform basis across the mechanical industry to address change orders, productivity, and overtime issues amongst all parties.
4. MCAA and ASHRAE have enjoyed a long and collaborative relationship beginning in 1894 when ASHRAE's predecessor, the American Society of Heating and Air-Conditioning Engineers (ASHAE) formed out of the MCAA. Endorsing MCAA's publication on Change Orders, Productivity, and Overtime would renew and strengthen this important relationship between the two organizations.
5. MCAA's Change Orders, Productivity and Overtime: A Primer for the Construction Industry, is under continuous maintenance, which results in a revised edition on approximately a two-year cycle. It the intent of this motion to endorse the publication, not the edition. The endorsement would then automatically apply to the current edition, thus avoiding the need to renew the endorsement every time a new edition was published. The 2020 edition is the current edition.

FISCAL IMPACT: None

Vote count: For 7 Against 0 Abstaining 0
Chairman voting? Yes _____ No X
Motion passed Y Motion failed _____
Referred to: Publishing and Education Council

Publications Committee MBOs for Society Year 2021-2022

Chair: Adeeba Mehboob **Date:** 30 January 2022

MBO #	Description	Metric	Initiative #	Goal #	Estim. Compl. Date	Financial Assist Req'd?
1	Identify and initiate a pilot Applications guide	Based on member survey results have Meetings with Handbook Committee, TEC, TCs. Contact and Identify Potential Authors. Initiate pilot guide.	3 & 4	1a, 1b, 3a	30-Jun-22	Maybe
2	Recommend to PEC at least two Digital Product Strategies, in response to PEC MBO 1 (2020-21)	Investigate and identify the business case of ASHRAE Apps, Report to Products Subcommittee	3 & 4	1a, 1b, 2c,	COMP	No
3	Recommend to PEC at least one ASHRAE Product or Service targeted to non-commercial entities, in response to PEC MBO 2 (2020-21)	Investigate and identify the business case of ASHRAE Apps, Report to Products Subcommittee	3 & 4	1a, 1b, 3a, 3c	COMP	No
4	Develop Publications Performance Metrics for the Publications Committee	PubC Dashboard, Information database	3	1b, 3b	Jan 22	No
5	Support Journal Editor in reviewing and enhancing the quality of the ASHRAE Journal	Provide Feedback and Recommendations for topics for Technical Feature Articles, review editorial calendar, solicit journal articles from international authors, coordinate with CTTC	4	1a, 1b, 2a, 2c, 3c	22-Jan	No
6	Support Editor in reviewing and enhancing the quality of the ASHRAE newsletter	Provide Feedback and Recommendations for Newsletter content and editorial quality	4	1a, 1b, 2a, 2b, 2c, 3c	22-Jan	No
7	Suggest at least two ideas on how ASHRAE can incorporate data gathered as part of the ETF or the Decarbonization TF into PEC products and services.	Report to Products Subcommittee	3 & 4	1a, 1b, 2b, 3c	COMP	No
8	Identify all unprofitable/unused publications and formulate an action plan.	database and Identification of publications, proposed action plan. Report to Products Subcommittee. Propose stagewise review, targeting books first likely instead of standards or transactions.	3	3a,	30-Jun-22	No
9	Increase International Outreach of ASHRAE Publications	Identify potential ASHRAE Publications of interest to international markets, engage regions and local chapters in awareness and marketing,	4	1a, 1b, 2a, 2b, 3a, 3b, 3c	30-Jun-22	No



Research Journal Subcommittee Report to Products Subcommittee of PEC January 12, 2022

Motions

None.

Action Items

1. Mr. Owen reviewed the financial statements with the subcommittee.
2. The Publisher's Report from Taylor & Francis has been delayed and will be distributed to the Research Journal Subcommittee as soon as staff receive it.
3. Dr. Spitler gave the Editor's Report shown in Attachment A which including:

2021 Submission Stats

- 347 submissions started
- 329 submissions completed
- 70 papers still in review
- 52 rejections by recommendation of AE, w/o sending out for review
- 56 rejections by recommendation of AE & reviewers
- 46 accepted

2021 Special Issues

- Thermal Science and Technology 2019 (Issue 1)
- Building Simulation 2019 (Issue 8)
- Clima2019 (Issue 1 of 2022)

Best paper award

- 10/29: Associate and Guest Editors requested to nominate best papers.
- 12 nominations received
- 12/8 Jury formed: Claridge, Owen, Lin, Zilio
- Jury members ranked the papers; all members independently ranked the same paper as best.
- 12/21 Jury met very briefly and reached a decision.
- 1 Recommendation sent to Rhiannon Masterson

Science and Technology for the Built Environment

Jeffrey D. Spitler

January 12, 2022

Some revisions made to slides 5, 6, 13, 14

Journal metrics



Usage

- **105K** annual downloads/views



Citation

metrics

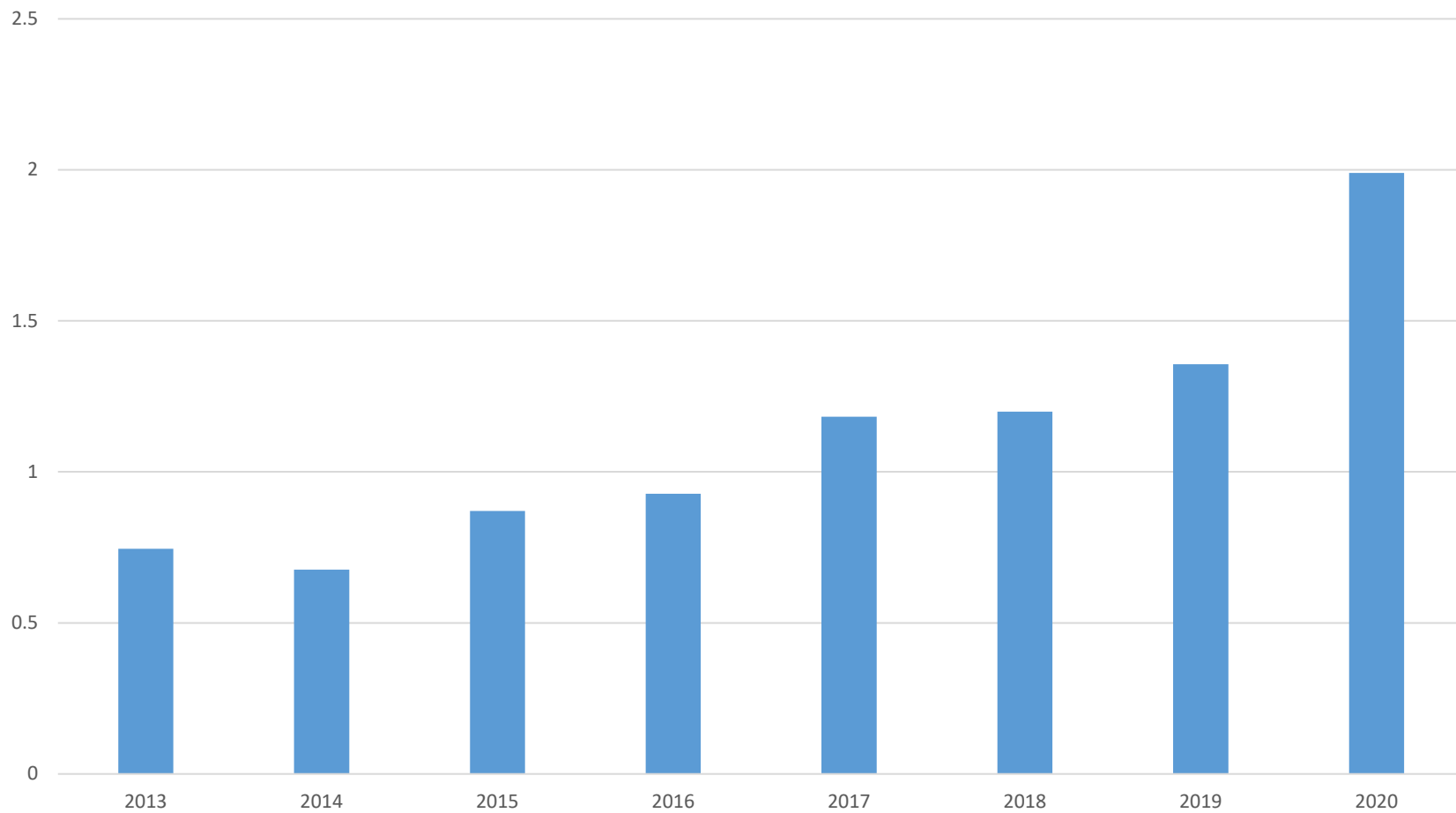
- **1.990 (2020)** Impact Factor
- **1.811 (2020)** 5 year IF
- **2.7 (2020)** CiteScore
- **Q2 (2020)** CiteScore Best Quartile
- **0.92 (2020)** SNIP
- **0.51 (2020)** SJR



Speed/acceptance

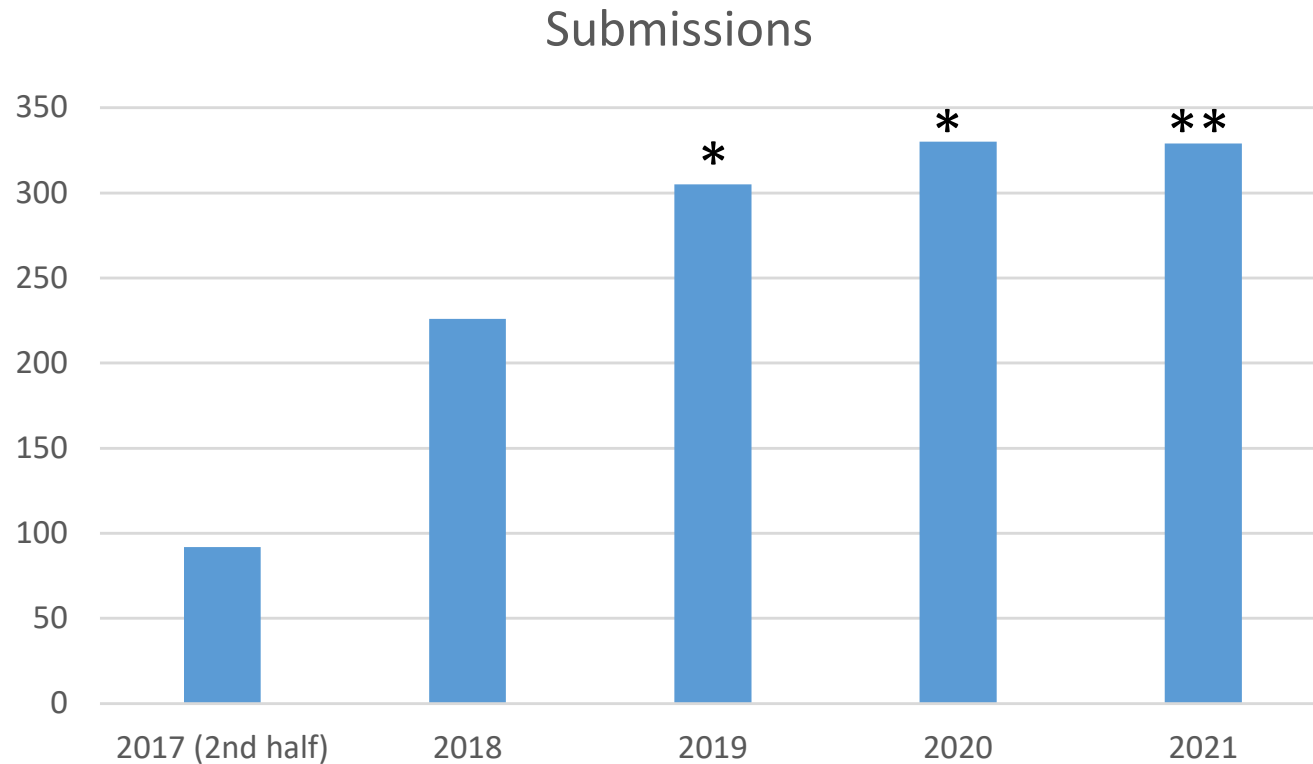
- **23** days avg. from acceptance to online publication

Impact Factor



Best paper award

- 10/29: Associate and Guest Editors requested to nominate best papers.
- 12 nominations received
- 12/8 Jury formed: Claridge, Owen, Lin, Zilio
- Jury members ranked the papers; all members independently ranked the same paper as best.
- 12/21 Jury met very briefly and reached a decision.
- 12/21 Recommendation sent to Rhiannon Masterson



2017 & 2018 come from T&F

* 2019-2020 count all submissions, even those “abandoned” without finishing the submission.

** 2021 excludes unfinished submissions.

2021

- 347 submissions started
- 329 submissions completed
- 70 papers still in review
- JDS rejected 105 papers without sending out to AE
 - Common reasons: case studies, out of scope, poor English, lack of technical rigor.
- 52 rejections by recommendation of AE, w/o sending out for review
- 56 rejections by recommendation of AE & reviewers
- 46 accepted

2021 Special Issues

- Thermal Science and Technology 2019 (Issue 1)
- Building Simulation 2019 (Issue 8)
- Clima 2019 (Issue 1 of 2022)

2021 Editorial Board Meetings

- As in 2020, held online meetings in July.
- Two meetings to accommodate both hemispheres.
- And a one-on-one meeting.
- 100% participation.

2021 Editorials

- Ray Cohen obituary
- Thermal Science and Technology 2019 (Issue 1)
- Building Simulation 2019 (Issue 8)
- From 2020:
 - Integrating IAQ control strategies to reduce the risk of asymptomatic SARS CoV-2 infections in classrooms and open plan offices (Zhang)
9683 views; 18 references, Altmetric score 391

Misconduct allegations

- None!

Associate Editors

- 5 Associate Editors with terms expiring this year +1 who might prefer to be replaced:
 - Michel Bernier(I will ask to stay on)
 - Zhang O'Neill (I will ask to stay on)
 - Jørn Toftum (I will ask to stay on)
 - Jensen Zhang (I will check to see if he wishes to stay on.)
 - Yongchan Kim (I will check to see if he wishes to stay on.)
 - Roberto Lamberts (Stayed on as a favor, but I think would prefer to be replaced.)

Associate Editors

- Given 75% increase in submissions since 2017, consider expanding Editorial Board
- Fiscal impact?
 - Few AEs attend in-person editorial board meetings (at summer meeting)
 - Continuing meeting online after pandemic?

Reviewer Board

- Concept:
 - Recruit members from junior and mid-level faculty, recent PhD graduates.
 - Commitment to review ~4 papers per year in a timely fashion (2 weeks or less).
- Current status:
 - 47 members
 - 39 were invited to review at least one paper.
 - On average, each reviewer board member was invited to review 2.4 papers
 - Of 92 invitations, 90 were accepted.

Distribution of review requests for 39 review board members that received one invitation.

Areas of Expertise	Invited	Agreed	Unavail- able <i>Revised</i>
Building simulation, indoor air quality, green building design, urban ventilation, c	9	9	
Variable-speed HVAC systems, model predictive control, grid-interactive efficien	6	6	
HVAC system fault detection and diagnosis, smart building, HVAC system optimal	6	6	
Building envelope, heat, air and moisture modeling and testing, durability, therm	5	5	
Data-driven modeling; Numerical optimization; Building thermal dynamics; Mode	5	5	
human thermal comfort	4	4	
Modeling and optimization of HVAC&R systems and components, machine learni	3	2	1
Heat and moisture transfer, thermal insulation, dehumidification	3	3	
Data analytics; Machine learning; Deep learning; Building energy predictions; Fau	3	3	
Phase change heat transfer, supercritical heat transfer, transcritical heat pumps,	3	3	
Demand response, advanced control, grid-interactive efficient buildings, district l	3	3	
Desiccant cooling, evaporative cooling, radiant cooling and heating, heat recovery	3	3	
Occupant behavior modelling, building simulation, building control systems, urba	3	3	
Fin-tube heat exchangers, unitary equipment testing methods, building internal l	2	2	
Building energy efficiency, ground source heat pump, uncertainty analysis in HVA	2	2	
Fault detection and diagnostics, Model-based predictive controls, Data-driven me	2	2	
Indoor environmental quality management and control, building environment an	2	2	
heat exchanger, heat and mass transfer	2	2	
Optimal design of zero/low energy buildings, uncertainty-based optimal design c	2	2	
Thermal energy storage and desiccant-based dehumidification	2	2	
Ground Source Heat Pumps, Building Energy Simulation, Surface Water Heat Pum	2	2	
Heat transfer, Fluid flow, CFD, Numerical methods, Application of thermal storag	2	2	
Indoor environmental quality, building energy consumption, building retrofits, n	2	2	
Enhanced heat transfer, Single and Two Phase Flow, Heat Exchangers	1	1	
Residential energy efficiency, indoor environmental quality (IEQ), human-buildir	1	1	
Ground source heat pump systems based on energy piles, measurement of therm	1	1	
Room air distribution, HVAC systems, demand-controlled ventilation, air cleaning	1		1
Compressors, heat exchangers, model development, refrigeration systems	1	1	
Model-based predictive control, virtual sensing, district energy	1	1	
Ground-source heat pump systems, Thermal energy storage, Heat pump systems	1	1	
Ground-source heat pump systems, solar energy systems, natural ventilation, nov	1	1	
Building energy simulation, occupant behavior, indoor climate, Big data analysis,	1	1	
Indoor air quality and comfort; energy system dynamics, controls, optimization ar	1	1	
Building simulation; Occupant behaviour	1	1	
Radiant heating and cooling systems, Indoor Environmental Quality (IEQ), Person	1	1	
Daylighting, Lighting, Visual comfort, Glare, Window view	1	1	
Building heat transfer, cooling and heating load calculation, fin and tube heat exc	1	1	
Thermal comfort, indoor air quality, buildings' energy performance, user			
behavior	1	1	
Building energy simulation, solar thermal energy system simulation, district ener	1	1	

Special Issues – 2022 and beyond

- AI and Smart Buildings – 7 papers submitted
- BPACS – 9 papers submitted; 2 accepted; 1 rejected
- IAQ 2020 – 9 papers submitted; 1 accepted; 3 rejected
- Field-measured performance: issued general call for papers, but unlikely to come to fruition (2 submitted, 1 rejected)
- Clima 2022 – Discussions in progress

The first 3 should publish as topical sections this year.

General Plans

- Arranging two Editorial Board meetings.
- Pandemic is going to delay or eliminate some opportunities for special issues based on conferences.
 - Will ask the Editorial Board to help identify non-conference-based topical issues.

Attachment C
PEC Report to BOD
January 2022 - Las Vegas Winter Conference



Certification Committee MBOs Society Year: 2021-2022

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

Vision: A healthy and sustainable built environment for all.

Goal #1: Position ASHRAE as an Essential Knowledge Resource for a Sustainable, High-Performance Built Environment.

Goal #2: Maximize Member Value and Engagement.

Goal #3: Optimize ASHRAE's Organizational Structure to Maximize Performance.

Certification Committee Scope: The Certification Committee is responsible for developing, implementing, and monitoring ASHRAE certification programs.

Chair: Kurt Monteiro, P. Eng., HBDP, HFDP

Date: Jan. 24, 2024

Objective	SP 2019- 24 ¹	Completion Date	Fiscal Impact	Responsible Party	Status	Comment
1. Attain 80% recertification rate for the 2021 renewal class, exceeding the industry average of 76%.	2C	3/31/2022	Revenue growth.	Chair, Certification Committee, Staff	In progress.	- Hard copy reminders sent in Nov., with emails following up. Leveraging digital badging and "Value of Certification" survey data. 168 applications received in December.
2.1 Grow the number of certification applications by 10% over the 2020-21 total of 341, to a total of 375 applications.	3A	6/30/2022	Revenue growth.	Chair, Certification Committee, Staff	Through 12/31/2021, 161 applications rcvd, vs. 147 rcvd in 2020-21, a 9.5% increase.	Leverage CHD and BEMP Study Guides, remote online proctored examination, and digital badging.
2.2 Achieve 300 sales of CHD Study Guide.	3A	6/30/2022	Revenue growth.	Chair, Certification Committee, Staff	COMPLETED.	305 sold through 12/31/2021, since publication in October, 2020.
2.3 Achieve 200 sales of BEMP Study Guide.	3A	6/30/2022	Revenue growth.	Chair, Certification Committee, Staff	In progress	BEMP Study Guide to be published in February 2022.
2.4 Achieve 80% digital badge acceptance rate.	2C	6/30/2022	Revenue growth.	Chair, Certification Committee, Staff	In progress	- Through 1/20/2022, all-time acceptance rate is 78%, vs. Credly 67% average. A "reminder" appeal is planned.
3.1 Enhance relevancy of ASHRAE certification to ASHRAE members and the industry in general.	2C	6/30/2022	Revenue growth.	Chair, Certification Committee, HVAC Designer Exam Subcommittee, Staff	In progress	Consider leveraging 1. recognition of ASHRAE certification designations in ASHRAE media, 2. CHD and BEMP Study Guide sales, 3. remote online proctored examination, 4. digital badging, 5. podcasts, 6. marketing to Membership segments 7. "Value of Certification" survey data

3.2 Ensure consistent recognition of ASHRAE certificant designations in ASHRAE print and electronic media wherever the P.E., P.Eng. and Ph.D. designations also appear.	2A	6/30/2022	Revenue growth.	Chair, Certification Committee, Staff	<i>In progress</i>	- This is a 1/29/2022 agenda item; Discussion with Ex-O and Coordinating Officer to identify appropriate channel on 1/12/2022.
3.3 Leverage Chapter Technology Transfer Committee (CTTC) channels for enhanced communication.	2A, 3B	9/30/2022	Possible revenue growth.	Chair, Certification Committee, Member Services staff, Certification Staff	<i>In progress</i>	1. "Certification" presentation for delivery at Chapter meetings developed and posted to ashrae.org webpage with Chapter resources; 2. "Chapter Notes" monthly newsletter populated (e.g. Oct. & Nov. issues) with "Certification" items
3.4 Recommend Developing Economies Member Certification application fee structure.	2A	1/29/2022	Undetermined	Chair, Certification Committee, Staff	<i>- This is a 1/29/22 agenda item.</i>	- Consider maintaining the Member Recertification application fee at \$195.
3.5 Cross-promote certification and training for each certification program.	1A & B; 3A	6/30/2022	Revenue growth	Chair, Certification Committee, Staff	<i>In progress</i>	- Currently planned for select winter-spring ALI online, instructor-led training. - Measure efficacy
4.1 Manage certification programs against the ANSI/ISO/IEC 17024 accreditation standard.	2B	6/30/2022	Currently budgeted.	Chair, Certification Committee, Staff	<i>In progress</i>	- Year 2 Annual Surveillance application due March 2022. - Ensure execution of new P&Ps developed to fulfill reaccreditation application requirements.
4.2. Plan BEMP Job Task Analysis (JTA) to begin 7/1/2022.	3A	6/30/2022	Currently budgeted.	Chair, Certification Committee, Staff	<i>Applications for Foundation funding of BEMP & HBDP JTAs submitted for Winter Conference consideration.</i>	- Pursue Foundation funding - Identify vendor
4.3. Recruit 2022-25 class of Exam Subcommittee members.	2A	6/30/2022		Chair, Certification Committee, Nominations Task Force, Staff		Certification Committee to review and approve slate at 2022 Annual Conference meeting.
4.4. Pursue opportunities to strengthen the Security of Examination Materials (ANSI 7.4) procedure for Item Development.	3A	6/30/2022		Chair, Certification Committee, Staff		Consider expertise of PSI and ANSI-accredited peers.
5. Monitor the effectiveness of certification programs, and recommend and implement any steps to improve program effectiveness.	3A	6/30/2022	None.	Chair, Committee Task Force, Staff		- Task Force 6-month review of BEAP and HBDP held 1/19/2022. Follow-up to be scheduled for April, after recertification "grace period" ends March 31.
6. Finalize 2021-22 MBOs.	2:A, B, C; 3:A, B	9/30/2021	To be determined.	Chair, Certification Committee, Staff	COMPLETED	
7. A joint Certification Committee - Training and Education Committee (TEC) Task Force to develop ideas for products and services that PEC could develop, in light of the large volume of valuable and timely information the Epidemic Task Force (ETF) recently has created.	3A	12/31/2021	None.	Mr. Armstrong, Ms. Arroyo, Mr. Monteiro, Mr. Reihl, Ms. Weekly, and Mr. White, Staff	COMPLETED	Four (4) new product proposals generated for PEC consideration at Winter Conference. Follow-up PEC requests may be forthcoming.

8. Evaluate the certification and recertification application fee schedule and recommend any possible updates in the 2022 Winter Conference meeting.	3A	1/29/2022	None. Possible 2022-23 revenue increase.	Chair, Certification Committee, Staff		Any recommendations to be forwarded to the ASHRAE staff Director of Publications and Education for evaluation.
9. Conduct strategic planning session.	3A	6/30/2022	None	Chair, Certification Committee, Staff		- Completion date moved to June Annual Conference, in hopes of greater in-person participation. Pre-work may be needed in advance: - Consider strategic planning tools, such as PESTEL, Porter's Five Forces, VRIO, customer segmentation.

Recommendations for Strategic Planning:

'2019-24 Strategic Plan: Goals & Objectives

1. Position ASHRAE as an Essential Knowledge Resource for a Sustainable, High-Performance Built Environment

- A. Utilize a holistic approach to ASHRAE's offerings and activities to drive positive economic, environmental and social impact through innovation in building design and operations.
- B. Expand capabilities globally to create, aggregate and disseminate essential information and knowledge focusing on emerging market trends and transformative approaches

2. Maximize Member Value and Engagement

- A. Infuse enthusiasm, vitality and diversity throughout ASHRAE events and services
- B. Expand the impact of collaboration and partnerships with industry organizations, universities and government agencies
- C. Leverage technology to increase member engagement, awareness and value

3. Optimize ASHRAE's Organizational Structure to Maximize Performance

- A. Prototype and launch new approaches that will increase ASHRAE's relevance and speed to market for key offerings
- B. Optimize ASHRAE's organizational systems and structures to increase capacity, efficiency and effectiveness
- C. Cultivate industry and member philanthropy to extend ASHRAE's impact and reach



**Professional Development Committee
Report to Publishing and Education Council (PEC)**

ASHRAE 2022 Winter Conference – Las Vegas

Motion

The Training and Education Committee recommends the Professional Development Subcommittee approve the following:

Motion:

To fund the Task Force on Building Decarbonization for the rest of SY 21-22 with \$300K from the general budget for products that are being developed on the subject of decarbonization.

Background:

The task force has not been funded since being formed in February of 2021. As they have developed content it has been put on hold. The immediate need is a PTAR on Smart grid – building interface, starting a decarbonization standard and adding addendum to Standards 90.1 and 90.2(not necessarily in order of priority). The funding will be split between the Publishing and Education and Technology departments.

Fiscal Impact: \$300K from SY 21-22 Budget

Motion Passed: 9-0

Information Items

1. Discussion are underway with associate societies to co-market education course.
2. Coordination with the ASHRAE Task Force for Building Decarbonization to produce a suite of education courses is making great progress.
3. The committee is closely monitoring the trends of technology transfer in this pandemic and are seeking ways to maintain the growth experienced in eLearning in the post pandemic era.
4. Reference Manual update is in progress and submitted to the committee for review
5. The combined total of all course registrants is 435 for the 2022 Winter Meeting.

Respectfully submitted,
Keith Reihl, Training and Education Committee Chair
January 31, 2022

INSTRUCTOR QUALIFICATIONS

Instruction Qualifications

1. Solid grasp of engineering fundamentals.
2. Practical experience to answer questions for students and to be able to distinguish between theory and practice in day to day engineering.
3. Skill and ability to teach and present well in a compelling and engaging manner. This means preparing ahead of time and not just reading the slides.
4. Motivation and interest in teaching. We're not looking for reluctant instructors who will turn over regularly.

Search Criteria

1. ASHRAE DL Series: Sort by high ratings and participation. DL's with these criteria have already expressed and interested in teaching and presenting and have the skills do so.
2. Regular Chapter Speakers: Most local chapters have their go to speakers. Many of those speakers are motivated to give back and/or to develop their careers and speaking abilities. Chapters are not going to recommend unskilled speakers who aren't capable of presenting.
3. Sole (Sr.) Practicing Engineers: There are a quite a few consultants working on sunset or second careers that have a tremendous depth of practical experience that would be applicable to teaching. Need to carefully screen for the speaking / teaching ability.
4. Academia: There are many great teachers produced by academia. The challenge is screening out those who do not have the practical experience needed or who are mostly focused on research and less interested in teaching but may agree to build a resume.

ATTACHMENT B

Professional Development Committee

MBOs for Society Year 2019-2020

Chair: Charlie Henck Date: June 24, 2019

Objective	SP	Complete by	Fiscal Impact	Responsible Party	Comment/ Status
1. Review new strategic plan for items that apply to PDC and develop a plan to implement.		Jun-20	None	Planning Subcommittee	
2. Develop topics and RFPs for an additional (3) practical applications courses to 'fill the gaps' in our current offerings for developing young engineers.		Jun-20	None	Planning Subcommittee	In progress
3. Review all SDLs and issue RFPs for the ones that need updating.		Jun-20	None	Operations Subcommittee	Review by Jan complete Issue RFP by June
4. Review all existing courses and sunset those that have not been used in 5 years or recommend updates		Jun-20	None	Operations Subcommittee	Continuous
5. Update of the Reference Manual		Jun-20	None	Operations Subcommittee	Update with approval of restructure
6. Every course reviewed by PDC Liaison prior to presentation— Quality check		Jun-20	None	Operations Subcommittee	Continuous
7. Improve marketing of courses/branding. Work with ASHRAE marketing for improvement		Jun-20	TBD	Planning Subcommittee	Continuous
Additional Recommendations for Strategic Planning: Not at this time					

Attachment K
 PEC Report to BOD
 January 2022 - Las Vegas Winter Conference

TEC MBOs for Society Year 2021-22
 Chair: Keith Reihl Date: July 16, 2021
 Planning Subcommittee Chair Jim Vallort
 Operations Subcommittee Chair Jesse Fisher

Objective	SP	Complete by	Fiscal Impact	Responsible Party	Comment/ Status
1. Review new strategic plan for items that apply to TEC and develop a plan to implement 2 ideas from the review. Implement 1 idea in the fall and 1 in the spring.			None	Planning Subcmte	List 2 ideas and implement timeline
2. Develop Dashboard for QUICK LOOK analytics for TEC		1-1-22	None	Reihl/Staff	In progress
3. Develop/Modify HVAC 101 courses to prepare for CHD exam. Look at BCxP, BEMP, BEAP.			TBD	Planning Subcommittee	Back to instructors. What topics does your course cover?
4. Develop Financial Model for course evaluation				Operations Subcommittee	Draft expected data needs. Per course needs

1. Develop topics and RFPs for an additional (3) practical applications courses			None	Planning Subcommittee	
2. Review SDLs and issue RFPs for the ones that need updating on prescribed schedule			None	Operations Subcommittee	
3. Review existing courses and sunset those that have not been used in 5 years or recommend updates			None	Operations Subcommittee	
4. Every course reviewed by TEC Liaison prior to presentation– Quality check			None	Planning Subcommittee	
5. Develop marketing plan for TEC courses/branding. Work with ASHRAE marketing to understand and improve			TBD	Operations Subcommittee	Continuous – 1 conf. call early fall and 1 conf. call early spring



Report to Fiscal Subcommittee of Publishing and Education Council (PEC)

****CONFIDENTIAL DUE TO COMPETITIVE ADVERTISING ENVIRONMENT****

Action Items for PEC

None.

Information Items

1. **ASHRAE Journal Print and Digital Editions.** Actual sales financial reports for ASHRAE Journal are shown in Attachment A. The Journal plus programs revenue is \$1,716,000 for the first six months of FY2021-22 with a budget of \$1,631,500 through December. Revenue is \$337,000 more than the prior year. Exclusive of all programs, Journal actual advertising sales is \$967,900 with a budget of \$1,007,800. Exclusive revenue is \$39,900 less than budget and \$120,700 more than the prior year through December.

ASHRAE Journal is advertisers' No. 1 choice for the past 14 years, as shown in Attachment B. Paid advertising share-of-market (SOM) ratio for the 2021 calendar year is 62.5% in a three-book marketplace with 478 advertising pages sold. While the Journal SOM was 68% in 2020, all three publications gained in pages sold during the past calendar year.


Both of ASHRAE Journal's primary competitors for HVACR advertising, Engineered Systems and HPAC Engineering, reduced its printed presence in the marketplace in 2020. Engineered Systems terminated all printed magazine distribution. HPAC Engineering reduced its publishing frequency by six issues printed per year.

To control expenses during the pandemic and its impact on printing and mailing issues, Journal staff cut controlled circulation of ASHRAE Journal and developed additional programs to reduce losses. For example, a Journal Podcast was launched with sponsored advertising. Also, the Info Center directory advertising has been extended throughout every issue, in the Journal Show Guide as well as the Journal newspaper for AHR Expo.

2. **Online Advertising.** ASHRAE.org advertising revenue has increased to \$501,400 in actual sales through December, which is \$138,900 more than sold at this time last year. Staff anticipates exceeding the \$950,000 budget amount for FY2021-22 due to demand and new offerings. Online advertising is increasingly important source of non-dues revenue to the Society, while ASHRAE Journal remains the core offering from ASHRAE Media sales.
3. **HPB Magazine.** Since print and digital publication of *High Performing Buildings* (HPB) magazine was discontinued and its content published on HPBmagazine.org and *ASHRAE Journal*, Revenue-earning offerings such as the HPB newsletter, website, and supplier webinars continued to be offered, resulting in \$101,900 sold in online revenue through December. Staff projects revenue will exceed the \$115,000 budget in FY2021-22.
4. **New/Enhanced Programs.** The HVACR Industry, including ASHRAE and its members, has endured significant disruption in marketing channels, industry events, supply chain and staffing. We adapted to maintain and grow ASHRAE's advertising revenue through expanding in-demand programs, as well as

launching new programs to fill advertisers' needs. Preference was given to projects that did not draw upon editor bandwidth or increased the value of the information published by ASHRAE Journal. New offerings are a result from input from ASHRAE Members, staff, current and potential advertising partners, as well as ASHRAE Media's independent publisher representatives located in six offices around the world. These offerings include Journal Podcast sponsorships, nonmember email rentals, outreach to AEDG downloaders who opted in for third-party messaging, sponsored products listings and announcements, expanded webinar offerings and collaboration with eLearning to provide discounted programs for current advertisers.

Respectfully Submitted,

A handwritten signature in blue ink, appearing to read "Greg Martin", with a stylized, cursive script.

Greg Martin
Manager of Advertising Sales

ASHRAE
JOURNAL 402
For the Six Months Ending Friday, December 31, 2021

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ASHRAE
Journal Publ Comm Exclusive of Pgms (2-402-000000-00)
For the Six Months Ending Friday, December 31, 2021

Month of Dec			Fiscal YTD Through Month of Dec				TWELVE MONTHS ENDING JUNE 30						DRAFT	DRAFT
Actual	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Actual	Budget	Actual	Forecast	Budget	Budget	Budget
FY 2021	FY 2022	FY 2022	FY 2021	FY 2021	FY 2022	FY 2022	FY 2019	FY 2020	FY 2021	FY 2021	FY 2022	FY 2022	FY 2023	FY 2024
				(\$0.4)		(\$0.1)								
3.8	2.2	3.2	18.5	21.2	13.2	19.5	32 Returns & Adjustments	(\$0.5)	(\$0.1)	(\$0.7)	(\$0.2)	(\$0.5)	(\$0.7)	(\$0.5)
0.9	1.8	1.2	3.1	4.9	6.6	5.8	32 Journals	48.0	40.4	41.0	30.9	26.4	40.0	30.0
182.2	240.2	210.1	847.2	1,100.0	987.9	1,001.9	32 Royalty Income	12.0	8.2	13.0	15.3	13.2	10.0	10.0
		3.0	2.1	7.1		5.9	34 Advertising Income - Print	2,702.4	2,307.8	2,500.0	1,877.4	2,120.0	2,080.0	2,230.0
							34 Advertising Income - Classified	10.9	12.1	12.0	2.1	2.0	10.0	10.0
							34 Sponsorships	(47.3)	(22.9)	(41.2)	(89.3)	(80.0)	(80.0)	(80.0)
0.0			0.1				46 Postage Income	0.1			0.1			
23.5		4.2	23.5	30.6	0.0	25.0	46 Miscellaneous Income	47.3	22.9	61.2	174.3	50.0	50.0	50.0
210.5	243.9	221.6	894.5	1,163.3	987.8	1,058.0	TOTAL REVENUES	2,770.8	2,368.5	2,585.3	1,810.6	2,131.1	2,109.3	2,249.5
116.9	113.4	82.7	538.8	547.6	517.0	520.3	EXPENSES:							
	1.6		1.3		5.3		51 Salaries	1,153.3	1,162.3	1,086.0	1,049.9	1,065.4	1,042.9	1,152.2
25.4	20.0	22.3	150.2	173.4	147.3	153.6	52 Temporary Agency & Free Lance Help	6.3	5.8	6.5	4.9	10.0	10.0	10.0
35.1	32.4	31.3	181.3	239.5	163.9	187.5	52 Payroll Taxes & Benefits	314.8	324.9	323.8	245.4	314.1	314.1	337.9
		0.2		1.0		1.0	61 Printing Costs	463.6	421.1	479.0	340.0	375.0	375.0	385.0
	3.2	1.2	7.2		7.2	6.2	61 Photography/Art Supplies			2.0		2.0	2.0	2.0
36.4	48.0	41.3	169.4	230.4	193.6	198.6	61 Reader Service Cards ABC	15.0	12.0	16.1	17.9	15.0	15.0	15.0
	6.0	5.3	17.1	60.1	22.1	30.0	62 Commissions	490.7	442.3	454.0	327.0	424.0	396.0	408.0
1.7	2.4	1.9	10.0	25.0	16.9	11.5	61 Promotion	85.5	44.2	103.0	30.3	50.0	50.0	50.0
		0.4				2.5	61 Shipping & Handling	40.9	27.9	50.0	25.1	34.0	23.0	24.0
						13.6	66 Travel Expenses (excl staff)	6.2	0.2	3.8		5.0	5.0	5.0
0.2		0.3	1.7	2.3	1.4	1.5	66 Travel Staff	18.7	9.1	41.0		10.0	20.0	20.0
				0.4			78 Rental Storage Space & Real Estate	2.9	4.0	4.3	3.1	3.0	3.0	3.0
38.7	37.9	20.5	191.1	187.6	200.4	197.9	82 Stationery/Broch/Forms/Other			0.7				
		0.1		1.4		0.7	82 Postage	458.6	442.4	470.0	402.1	420.0	420.0	430.0
8.0	9.7	18.3	30.1	42.5	36.1	36.7	82 Dues & Subscriptions	0.4		1.4		1.5	1.5	1.5
	0.3			1.4	1.7		84 Outside Services-Other Services	78.7	69.4	70.0	51.8	70.0	70.0	70.0
(23.9)	(13.5)	(0.9)	(17.9)	2.5	133.3	10.8	88 Miscellaneous Expense	0.3	1.9	2.8	0.7	2.0	2.0	2.0
0.1	10.0	0.3	0.6	2.6	19.9	1.1	88 Bad Debt Expense	79.4	(53.9)	5.0	(29.5)	5.0	5.0	5.0
							88 Credit Card Charges	1.4	1.7	4.5	1.6	2.0	2.0	20.0
							88 Income Tax Expense Tax	36.9	35.1	50.0	(21.9)	50.0	50.0	50.0
238.8	271.4	225.2	1,281.1	1,517.6	1,466.1	1,371.4	TOTAL EXPENSES BEFORE OH & BOD	3,253.6	2,950.2	3,173.6	2,448.6	2,858.0	2,806.5	2,970.5
(28.4)	(27.5)	(3.6)	(366.5)	(354.3)	(478.4)	(313.3)	SURPLUS (DEFICIT) before OH & BOD	(482.7)	(581.8)	(588.3)	(638.0)	(726.9)	(697.2)	(721.0)
121.9	119.0	144.6	614.9	777.8	655.5	975.5	91 Allocation of Overhead & BOD	1,844.3	1,552.1	1,579.9	1,190.6	1,700.3	1,700.3	1,720.5
360.7	390.4	369.6	1,895.9	2,295.5	2,121.7	2,346.9	TOTAL EXPENSES including OH & BOD	4,897.8	4,502.3	4,753.5	3,639.2	4,558.3	4,506.8	4,691.0
(150.2)	(146.5)	(148.2)	(1,001.4)	(1,132.2)	(1,133.9)	(1,288.9)	SURPLUS (DEFICIT) after OH & BOD	(2,127.0)	(2,133.9)	(2,168.2)	(1,828.6)	(2,427.2)	(2,397.5)	(2,441.5)

High Performing Buildings (2-402-402011)
For the Six Months Ending Friday, December 31, 2021

Month of Dec			Fiscal YTD Through Month of Dec			
Actual	Actual	Budget	Actual	Budget	Actual	Budget
FY 2021	FY 2022	FY 2022	FY 2021	FY 2021	FY 2022	FY 2022
				55.7		
12.9	8.0	9.6	60.1	55.0	101.9	57.5
12.9	8.0	9.6	60.1	110.7	101.9	57.5
			2.7	1.5	16.1	17.1
			0.7	0.6	5.0	4.7
					30.3	
				0.1	1.0	
				3.7	15.6	
2.6	1.6	3.7	12.0	21.9	20.4	13.7
				2.5		
	1.5				1.5	
			0.0			
			(1.1)	23.9		
4.8		1.2	5.2	17.6	4.8	6.4
7.4	3.1	8.3	22.1	133.9	26.7	41.9
5.4	4.9	1.3	38.0	(23.2)	75.2	15.6
		4.5	1.9	22.8		29.7
7.4	3.1	12.7	24.1	156.7	26.7	71.6
5.4	4.9	(3.1)	36.1	(46.0)	75.2	(14.1)

roll up
acct / Description
REVENUES:
32 Journals
34 Advertising Income - Print
34 Advertising Income - Non-Print
TOTAL REVENUES
EXPENSES:
51 Salaries
52 Temporary Agency & Free Lance Help
52 Payroll Taxes & Benefits
61 Printing Costs
61 Photography/Art Supplies
61 Reader Service Cards ABC
62 Commissions
61 Promotion
61 Shipping & Handling
66 Travel Staff
78 Rental Storage Space & Real Estate
82 Postage
84 Outside Services-Other Services
TOTAL EXPENSES BEFORE OH & BOD
SURPLUS (DEFICIT) before OH & BOD
91 Allocation of Overhead & BOD
TOTAL EXPENSES including OH & BOD
SURPLUS (DEFICIT) after OH & BOD

TWELVE MONTHS ENDING JUNE 30						DRAFT	DRAFT
Actual	Actual	Budget	Actual	Forecast	Budget	Budget	Budget
FY 2019	FY 2020	FY 2021	FY 2021	FY 2022	FY 2022	FY 2023	FY 2024
\$0.1	\$0.0						
109.2	86.5	105.0					
102.5	66.5	110.0	122.1	150.0	115.0	120.0	125.0
211.7	153.0	215.0	122.1	150.0	115.0	120.0	125.0
39.8	38.2	31.8	1.5	32.8	32.8	33.8	34.8
6.2	0.4						
10.8	10.7	9.5	0.6	9.2	9.2	9.4	9.4
63.2	59.6	64.0					
0.3	0.4	1.0	0.1				
39.2	38.0	32.0	3.7				
40.8	24.4	42.0	24.4	30.0	23.0	24.0	25.0
10.6	18.3	5.0					
2.2	0.2						
1.2	0.8						
0.4	0.2		0.0				
43.6	37.7	50.0	(1.1)				
20.3	19.9	24.0	5.2	10.0	24.0	7.0	7.0
278.6	248.8	259.3	34.5	82.0	89.0	74.2	76.2
(66.9)	(95.8)	(44.3)	87.6	68.0	26.0	45.8	48.8
56.6	51.3	46.2	1.9	49.9	49.9	50.4	50.4
335.1	300.1	305.5	36.4	131.9	138.9	124.6	126.6
(123.4)	(147.0)	(90.5)	85.7	18.1	(23.9)	(4.6)	(1.6)

ASHRAE

On Line Advertising (2-402-402027)
For the Six Months Ending Friday, December 31, 2021

Month of Dec			Fiscal YTD Through Month of Dec			
Actual	Actual	Budget	Actual	Budget	Actual	Budget
FY 2021	FY 2022	FY 2022	FY 2021	FY 2021	FY 2022	FY 2022
\$41.4	\$106.7	\$70.0	\$362.5	\$394.0	\$510.4	\$452.3
41.4	106.7	70.0	362.5	394.0	510.4	452.3
		0.3				1.7
8.3	21.3	13.5	72.5	74.9	103.4	90.1
0.4	2.0	0.5	21.6	25.1	9.1	28.2
8.7	23.4	14.2	94.1	100.0	112.4	119.9
32.7	83.3	55.8	268.4	294.0	397.9	332.4
8.7	23.4	14.2	94.1	100.0	112.4	119.9
32.7	83.3	55.8	268.4	294.0	397.9	332.4

roll up
acct / Description
REVENUES:
34 Advertising Income - Non-Print
TOTAL REVENUES
EXPENSES:
51 Salaries
52 Payroll Taxes & Benefits
62 Commissions
84 Outside Services-Other Services
TOTAL EXPENSES BEFORE OH & BOD
SURPLUS (DEFICIT) before OH & BOD
91 Allocation of Overhead & BOD
TOTAL EXPENSES including OH & BOD
SURPLUS (DEFICIT) after OH & BOD

TWELVE MONTHS ENDING JUNE 30						DRAFT	DRAFT
Actual	Actual	Budget	Actual	Forecast	Budget	Budget	Budget
FY 2019	FY 2020	FY 2021	FY 2021	FY 2022	FY 2022	FY 2023	FY 2024
\$766.1	\$591.2	\$850.0	\$925.4	\$985.0	\$950.0	\$930.0	\$960.0
766.1	591.2	850.0	925.4	985.0	950.0	930.0	960.0
11.6							
3.2				3.3	3.3	3.3	3.3
151.8	116.5	160.0	183.7	197.0	180.0	186.0	192.0
25.2	38.1	28.0	24.5	25.0	35.0	36.0	37.0
191.7	154.6	188.0	208.3	225.3	218.3	225.3	232.3
574.4	436.6	662.0	717.1	759.7	731.7	704.7	727.7
16.4						48.4	48.4
208.1	154.6	188.0	208.3	225.3	218.3	273.7	280.7
558.0	436.6	662.0	717.1	759.7	731.7	656.3	679.3

ASHRAE
Show Daily (2-402-402024)
For the Six Months Ending Friday, December 31, 2021

Month of Dec			Fiscal YTD Through Month of Dec			
Actual	Actual	Budget	Actual	Budget	Actual	Budget
FY 2021	FY 2022	FY 2022	FY 2021	FY 2021	FY 2022	FY 2022
	\$11.4			\$8.1	\$11.2	
	11.4			8.1	11.2	
1.4	0.7	1.0	6.0	6.1	4.4	6.0
0.3	0.1	0.2	1.7	1.9	1.3	1.6
		3.0		18.0	50.6	18.2
	2.5			2.2	2.5	
1.6	3.4	4.2	7.7	28.2	58.8	25.8
(1.6)	8.0	(4.2)	(7.7)	(20.1)	(47.6)	(25.8)
1.4	0.8	1.6	6.8	8.6	5.6	10.5
3.1	4.1	5.8	14.5	36.9	64.4	36.3
(3.1)	7.2	(5.8)	(14.5)	(28.8)	(53.2)	(36.3)

roll up
acct / Description
REVENUES:
34 Advertising Income - Print
TOTAL REVENUES
EXPENSES:
51 Salaries
52 Payroll Taxes & Benefits
61 Printing Costs
62 Commissions
TOTAL EXPENSES BEFORE OH & BOD
SURPLUS (DEFICIT) before OH & BOD
91 Allocation of Overhead & BOD
TOTAL EXPENSES including OH & BOD
SURPLUS (DEFICIT) after OH & BOD

TWELVE MONTHS ENDING JUNE 30						DRAFT	DRAFT
Actual	Actual	Budget	Actual	Forecast	Budget	Budget	Budget
FY 2019	FY 2020	FY 2021	FY 2021	FY 2022	FY 2022	FY 2023	FY 2024
\$173.8	\$91.3	\$125.0		\$98.0	\$130.0	\$135.0	\$135.0
173.8	91.3	125.0		98.0	130.0	135.0	135.0
10.8	11.3	12.1	11.8	12.5	12.5	12.8	13.2
2.9	3.2	3.6	2.8	3.5	3.5	3.6	3.6
43.6	36.0	36.0		36.5	36.5	37.0	37.0
29.7	20.9	25.0		19.6	26.0	27.0	27.0
87.0	71.3	76.7	14.6	72.1	78.5	80.3	80.7
86.8	20.0	48.3	(14.6)	25.9	51.5	54.7	54.3
15.4	15.1	17.5	13.4	18.9	18.9	19.1	19.1
102.4	86.4	94.2	28.0	91.0	97.4	99.5	99.9
71.4	5.0	30.8	(28.0)	7.0	32.6	35.5	35.1

ASHRAE
AHR Show Mexico (2-402-402018)
For the Six Months Ending Friday, December 31, 2021

Month of Dec			Fiscal YTD Through Month of Dec			
Actual	Actual	Budget	Actual	Budget	Actual	Budget
FY 2021	FY 2022	FY 2022	FY 2021	FY 2021	FY 2022	FY 2022
	\$1.3			\$15.0	\$25.6	\$7.5
	1.3			15.0	25.6	7.5
	0.1		2.2		0.5	
	0.5		3.3	5.6	3.3	
	0.3		2.5	1.3	1.5	
	0.0		0.6		0.3	
	0.9		8.5	6.9	5.5	
	0.3		6.5	18.6	2.0	
	0.9		8.5	6.9	5.5	
	0.3		6.5	18.6	2.0	

roll up
acct / Description
REVENUES:
34 Advertising Income - Print
TOTAL REVENUES
EXPENSES:
52 Temporary Agency & Free Lance Help
61 Printing Costs
62 Commissions
61 Shipping & Handling
TOTAL EXPENSES BEFORE OH & BOD
SURPLUS (DEFICIT) before OH & BOD
TOTAL EXPENSES including OH & BOD
SURPLUS (DEFICIT) after OH & BOD

TWELVE MONTHS ENDING JUNE 30						DRAFT	DRAFT
Actual	Actual	Budget	Actual	Forecast	Budget	Budget	Budget
FY 2019	FY 2020	FY 2021	FY 2021	FY 2022	FY 2022	FY 2023	FY 2024
\$12.7		\$15.0		\$25.6	\$15.0	\$16.0	\$17.0
12.7		15.0		25.6	15.0	16.0	17.0
0.6		2.2	0.1		1.0	1.0	1.0
6.1		6.5		5.6	6.5	6.5	6.5
2.5		2.5		1.3	3.0	3.2	3.4
		1.1			0.5	0.5	0.5
9.3		12.3	0.1	6.9	11.0	11.2	11.4
3.4		2.7	(0.1)	18.7	4.0	4.8	5.6
9.3		12.3	0.1	6.9	11.0	11.2	11.4
3.4		2.7	(0.1)	18.7	4.0	4.8	5.6

ASHRAE
HVAC Info Center (2-402-402034)
For the Six Months Ending Friday, December 31, 2021

Month of Dec			Fiscal YTD Through Month of Dec			
Actual FY 2021	Actual FY 2022	Budget FY 2022	Actual FY 2021	Budget FY 2021	Actual FY 2022	Budget FY 2022
\$1.6	\$3.3	(\$0.1)	\$25.7	\$26.1	\$21.3	\$23.4
1.6	3.3	(0.1)	25.7	26.1	21.3	23.4
0.4	0.8	0.0	6.1	5.7	4.9	4.8
0.4	0.8	0.0	6.1	5.7	4.9	4.8
1.2	2.5	0.0	19.6	20.4	16.3	18.6
0.4	0.8	0.0	6.1	5.7	4.9	4.8
1.2	2.5	0.0	19.6	20.4	16.3	18.6

roll up
acct / Description

REVENUES:

34 Advertising Income - Print

TOTAL REVENUES

EXPENSES:

62 Commissions

TOTAL EXPENSES BEFORE OH & BOD

SURPLUS (DEFICIT) before OH & BOD

TOTAL EXPENSES including OH & BOD

SURPLUS (DEFICIT) after OH & BOD

TWELVE MONTHS ENDING JUNE 30						DRAFT	DRAFT
Actual FY 2019	Actual FY 2020	Budget FY 2021	Actual FY 2021	Forecast FY 2022	Budget FY 2022	Budget FY 2023	Budget FY 2024
\$39.1	\$35.2	\$55.0	\$44.3	\$40.0	\$50.0	\$55.0	\$60.0
39.1	35.2	55.0	44.3	40.0	50.0	55.0	60.0
9.2	8.0	12.0	10.4	8.0	10.0	11.0	12.0
9.2	8.0	12.0	10.4	8.0	10.0	11.0	12.0
29.8	27.2	43.0	33.9	32.0	40.0	44.0	48.0
9.2	8.0	12.0	10.4	8.0	10.0	11.0	12.0
29.8	27.2	43.0	33.9	32.0	40.0	44.0	48.0

ASHRAE
AMCA Supplement (2-402-402035)
For the Six Months Ending Friday, December 31, 2021

Month of Dec			Fiscal YTD Through Month of Dec			
Actual FY 2021	Actual FY 2022	Budget FY 2022	Actual FY 2021	Budget FY 2021	Actual FY 2022	Budget FY 2022
	(\$0.2)		\$80.7	\$76.0	\$77.8	\$83.0
	(0.2)		80.7	76.0	77.8	83.0
			7.0			7.6
			24.6	25.0	20.1	25.0
			16.2	15.0	19.4	17.1
			3.1	1.0	0.5	3.1
		1.3	13.8	11.1	16.6	7.5
		1.3	64.7	52.1	56.6	60.3
	(0.2)	(1.3)	16.0	23.9	21.2	22.7
		1.3	64.7	52.1	56.6	60.3
	(0.2)	(1.3)	16.0	23.9	21.2	22.7

roll up
acct / Description

REVENUES:

34 Advertising Income - Print

TOTAL REVENUES

EXPENSES:

52 Temporary Agency & Free Lance Help

61 Printing Costs

62 Commissions

61 Shipping & Handling

82 Postage

TOTAL EXPENSES BEFORE OH & BOD

SURPLUS (DEFICIT) before OH & BOD

TOTAL EXPENSES including OH & BOD

SURPLUS (DEFICIT) after OH & BOD

TWELVE MONTHS ENDING JUNE 30						DRAFT	DRAFT
Actual FY 2019	Actual FY 2020	Budget FY 2021	Actual FY 2021	Forecast FY 2022	Budget FY 2022	Budget FY 2023	Budget FY 2024
\$88.9	\$74.3	\$76.0	\$88.9	\$77.8	\$83.0	\$87.0	\$91.0
88.9	74.3	76.0	88.9	77.8	83.0	87.0	91.0
7.0	7.0	7.4	7.0		7.6	7.6	7.6
26.1	23.3	25.0	24.6	20.1	25.0	25.0	25.0
17.8	14.4	15.0	17.8	19.4	16.6	17.4	18.2
0.7	0.6	1.0	3.1	0.5	3.1	3.1	3.1
20.6	17.0	22.3	13.8	16.6	15.0	15.5	16.0
72.2	62.3	70.6	66.3	56.6	67.3	68.6	69.9
16.7	12.0	5.4	22.5	21.2	15.7	18.4	21.1
72.2	62.3	70.6	66.3	56.6	67.3	68.6	69.9
16.7	12.0	5.4	22.5	21.2	15.7	18.4	21.1

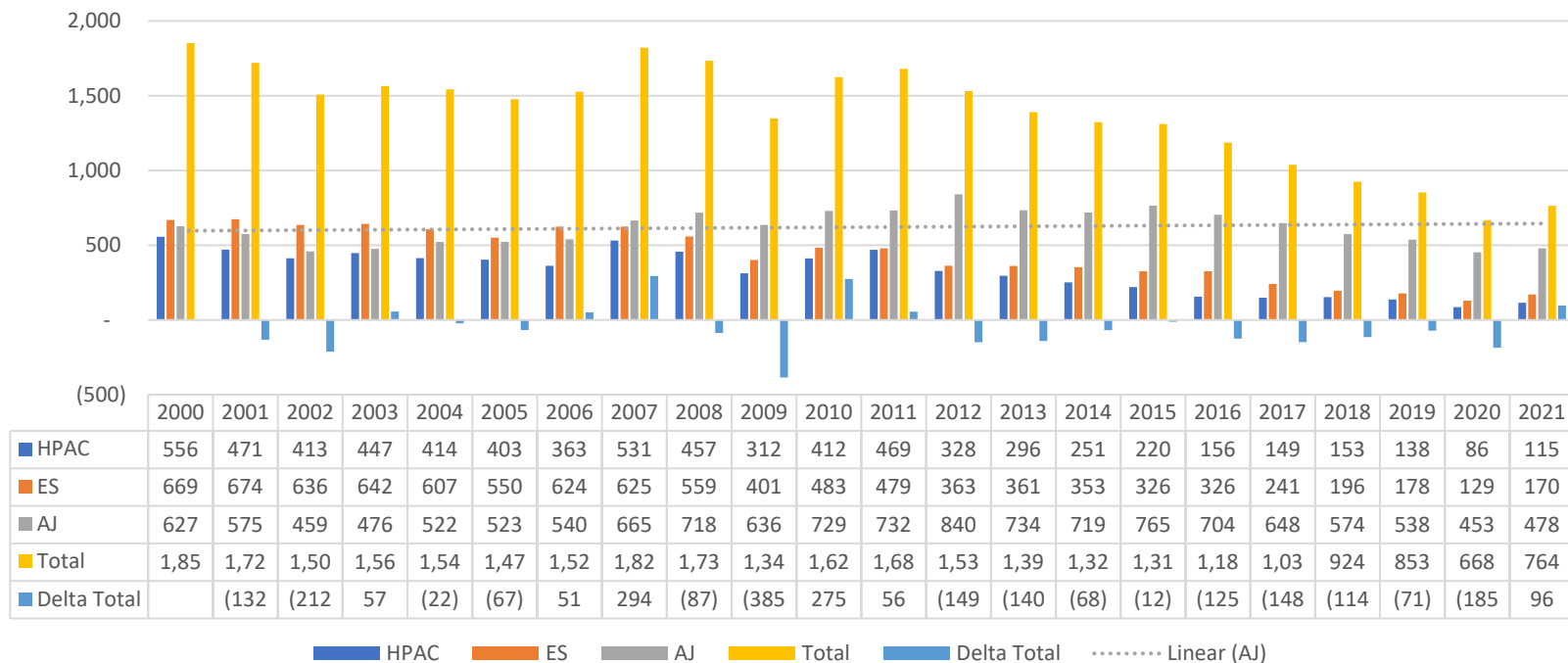
Attachment B

SELECTED PERIOD(S) Jul 2021 - Jan 2022 ▾ (7 months)	REPORTED By Net Advertiser ▾	SALES TERRITORY All Territories ▾
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[Choose & Display Publication/Event \(3/3\)](#)
[Group All](#)
[Export to Excel](#)

Publication	January						Selected Period						Variance					
	Pages		SOM		# of Advertisers		Pages		SOM		# of Advertisers		January			Selected Period		
	2022	2021	2022	2021	2022	2021	Jul 21 Jan 22	Jul 20 Jan 21	Jul 21 Jan 22	Jul 20 Jan 21	Jul 21 Jan 22	Jul 20 Jan 21	Pages	Share	Advertiser	Pages	Share	Advertiser
ASHRAE JOURNAL	78.92	59.50	86.09%	65.56%	82	39	347.08	289.13	66.33%	71.09%	124	80	+19.42	+20.53%	+43	+57.96	-4.76%	+44
ENGINEERED SYS	12.75	18.25	13.91%	20.11%	16	13	100.50	71.33	19.21%	17.54%	43	35	-5.50	-6.20%	+3	+29.17	+1.67%	+8
HPAC ENGINEERING	0.00	13.00	0.00%	14.33%		12	75.65	46.25	14.46%	11.37%	29	18	-13.00	-14.33%	-12	+29.40	+3.09%	+11
Totals: 3	92	91					523	407					1	+1.01%		117	+28.65%	

HVACR Engineering Advertising Pages Sold 2000-2021 by Calendar Year



ASHRAE Journal Advertising Revenue FY2020-2021 (including programs except online advertising, Show Daily)

Issue	Budget Pages	Budget Dollars	Monthly Budget Gross Sales Per Page	Monthly Actual Pages	Monthly Actual Gross Sales	Monthly Actual Gross Sales Per Page	Monthly FY21 Pages	Monthly FY21 Gross Sales	Monthly FY21 Gross Sales Per Page	Cumul Budget Pages	Cumul Budget Dollars	Cumul Actual Pages	Cumul Actual Net Sales	Cumul FY21 Gross Sales
July	31	\$164,000	\$5,290	36	\$201,595	\$5,600	29	\$ 149,544	\$5,157	31	164,000	36	\$ 201,595	\$149,544
August	29	\$154,000	\$5,310	33	\$132,241	\$3,977	25	\$ 112,691	\$4,463	60	318,000	69	\$ 333,836	\$262,235
September	29	\$154,000	\$5,310	23	\$112,097	\$4,821	30	\$ 163,415	\$5,539	89	472,000	93	\$ 445,933	\$425,650
October	29	\$154,000	\$5,310	31	\$183,715	\$5,926	44	\$ 243,774	\$5,572	118	626,000	124	\$ 629,648	\$669,424
November	44	\$237,000	\$5,386	40	\$196,274	\$4,969	22	\$ 96,488	\$4,306	162	863,000	163	\$ 825,922	\$765,912
December	29	\$154,000	\$5,310	44	\$245,140	\$5,571	31	\$ 170,441	\$5,543	191	1,017,000	207	\$ 1,071,062	\$936,353
January	86	\$451,000	\$5,244	77	\$516,418	\$6,736	40	\$ 220,722	\$5,518	277	1,468,000	284	\$ 1,587,479	\$1,157,074
February	24	\$129,000	\$5,375	21	\$97,000	\$4,565	25	\$ 124,088	\$4,914	301	1,597,000	305	\$ 1,684,479	\$1,281,162
March	27	\$154,000	\$5,704				30	\$ 159,501	\$5,407	328	1,751,000			\$1,440,663
April	29	\$159,000	\$5,483				22	\$ 105,265	\$4,731	357	1,910,000			\$1,545,928
May	30	\$159,000	\$5,300				27	\$ 121,156	\$4,487	387	2,069,000			\$1,667,084
June	29	\$159,000	\$5,483				26	\$ 135,000	\$5,192	416	2,228,000			\$1,802,084
Running TOTAL	416	\$2,228,000	\$ 5,356	305	\$1,684,479	5,525	351	\$ 1,802,084	\$5,139	416	\$2,228,000	69	\$333,836	\$1,802,084
July-June: Infocenter B\$50														
August: AHR Expo-Mexico B\$15				Actual: AHR Expo-Mexico \$19,648.50										
November: AMCA inmotion B\$83				Actual: AMCA inmotion \$86,177										
January: Show Daily newspaper B\$125				Actual: \$98,786.32										

Online Advertising with programs, including HPB, webinars, videos and email blasts. Highlight indicates open months for more orders.

All Online						
Month	Budget	Monthly Actual	Monthly FY21 Actual	Cum. Budget	Cum. Actual	Cum. FY21 Actual
July	\$ 65,000	\$ 64,363	\$ 48,230	\$ 65,000	\$ 64,363	\$ 48,230
August	\$ 80,000	\$ 87,000	\$ 71,601	\$ 145,000	\$ 151,363	\$ 119,831
September	\$ 80,000	\$ 115,000	\$ 76,741	\$ 225,000	\$ 266,363	\$ 196,572
October	\$ 115,000	\$ 138,758	\$ 108,333	\$ 340,000	\$ 405,121	\$ 304,904
November	\$ 70,000	\$ 87,507	\$ 68,063	\$ 410,000	\$ 492,628	\$ 372,968
December	\$ 60,000	\$ 62,431	\$ 56,065	\$ 470,000	\$ 555,059	\$ 429,032
January	\$ 130,000	\$ 123,000	\$ 65,201	\$ 600,000	\$ 678,059	\$ 494,233
February	\$ 74,000	\$ 78,000	\$ 114,192	\$ 674,000	\$ 756,059	\$ 608,425
March	\$ 110,000	\$ 46,725	\$ 109,526	\$ 784,000		\$ 717,951
April	\$ 95,000	\$ -	\$ 90,511	\$ 879,000		\$ 808,461
May	\$ 90,000	\$ 19,200	\$ 87,000	\$ 969,000		\$ 895,461
June	\$ 96,000	\$ 8,700	\$ 95,000	\$ 1,065,000		\$ 990,461
TOTAL	\$ 1,065,000	\$ 830,684	\$ 990,461	\$ 1,065,000	\$ 830,684	\$ 990,461

ASHRAE.org, jobs.ashrae.org, HVACR Industry, ASHRAE Insights, AJ newsletter, AJ supplier webinars						
Month	Budget	Monthly Actual	Monthly FY21 Actual	Cum. Budget	Cum. Actual	Cum. FY21 Actual
July	\$ 56,000	\$ 60,463	\$ 47,830	\$ 56,000	\$ 60,463	\$ 47,830
August	\$ 70,500	\$ 75,000	\$ 61,301	\$ 126,500	\$ 135,463	\$ 109,131
September	\$ 70,500	\$ 96,000	\$ 72,841	\$ 197,000	\$ 231,463	\$ 181,972
October	\$ 105,000	\$ 99,254	\$ 92,933	\$ 302,000	\$ 330,717	\$ 274,904
November	\$ 60,500	\$ 74,257	\$ 50,763	\$ 362,500	\$ 404,974	\$ 325,668
December	\$ 50,500	\$ 54,457	\$ 43,165	\$ 413,000	\$ 459,431	\$ 368,832
January	\$ 119,000	\$ 120,000	\$ 52,301	\$ 532,000	\$ 579,431	\$ 421,133
February	\$ 65,000	\$ 70,000	\$ 111,292	\$ 597,000	\$ 649,431	\$ 532,425
March	\$ 100,000	\$ 46,000	\$ 96,826	\$ 697,000	\$ 695,431	\$ 629,251
April	\$ 86,000	\$ -	\$ 84,411	\$ 783,000	\$ 695,431	\$ 713,661
May	\$ 80,000	\$ 10,500	\$ 69,000	\$ 863,000	\$ 705,931	\$ 782,661
June	\$ 87,000	\$ -	\$ 80,100	\$ 950,000	\$ 705,931	\$ 862,761
TOTAL	\$ 950,000	\$ 705,931	\$ 862,761	\$ 950,000	\$ 705,931	\$ 862,761

HPBmagazine.org, HPB newsletter, HPB supplier webinars

Month	Budget	Monthly Actual	Monthly FY21 Actual	Cum. Budget	Cum. Actual	Cum. FY21 Actual
July	\$ 9,000	\$ 3,900	\$ 400	\$ 9,000	\$ 3,900	\$ 400
August	\$ 9,500	\$ 12,000	\$ 10,300	\$ 18,500	\$ 15,900	\$ 10,700
September	\$ 9,500	\$ 19,000	\$ 3,900	\$ 28,000	\$ 34,900	\$ 14,600
October	\$ 10,000	\$ 39,504	\$ 15,400	\$ 38,000	\$ 74,404	\$ 30,000
November	\$ 9,500	\$ 13,250	\$ 17,300	\$ 47,500	\$ 87,654	\$ 47,300
December	\$ 9,500	\$ 7,974	\$ 12,900	\$ 57,000	\$ 95,628	\$ 60,200
January	\$ 11,000	\$ 3,000	\$ 12,900	\$ 68,000	\$ 98,628	\$ 73,100
February	\$ 9,000	\$ 8,000	\$ 2,900	\$ 77,000	\$ 106,628	\$ 76,000
March	\$ 10,000	\$ 725	\$ 12,700	\$ 87,000	\$ 107,353	\$ 88,700
April	\$ 9,000	\$ -	\$ 6,100	\$ 96,000	\$ 107,353	\$ 94,800
May	\$ 10,000	\$ 8,700	\$ 18,000	\$ 106,000	\$ 116,053	\$ 112,800
June	\$ 9,000	\$ 8,700	\$ 14,900	\$ 115,000	\$ 124,753	\$ 127,700
TOTAL	\$ 115,000	\$ 124,753	\$ 127,700	\$ 115,000	\$ 124,753	\$ 127,700

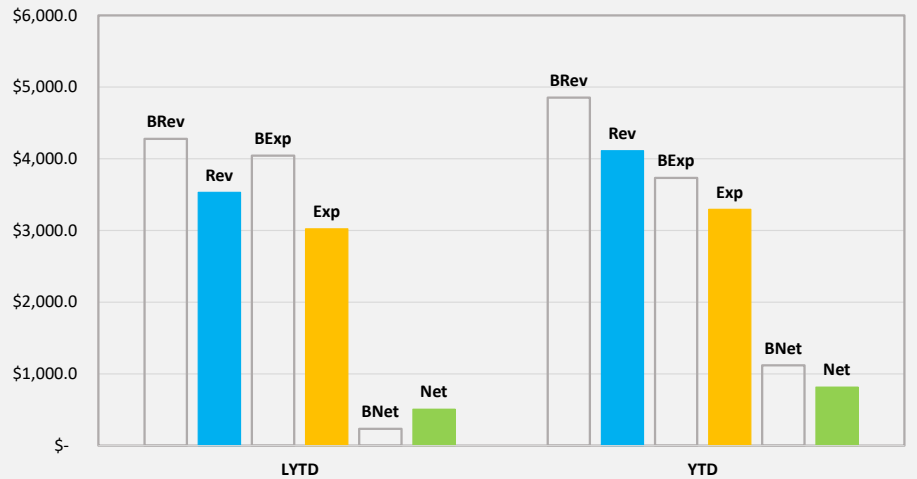


Pub/Ed DASHBOARD

end Dec 2021

Item	LYTD	YTD	Diff v LY
BRev	\$ 4,278.8	\$ 4,853.0	13%
Rev	\$ 3,532.5	\$ 4,112.2	16%
BExp	\$ 4,044.2	\$ 3,733.4	-8%
Exp	\$ 3,024.3	\$ 3,295.9	9%
BNet	\$ 234.6	\$ 1,119.6	\$ 885.0
Net	\$ 508.2	\$ 816.3	\$ 308.1
Margin	14.4%	19.9%	5.5%

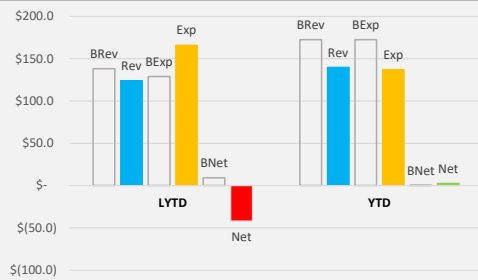
Pub/Ed Council TOTAL



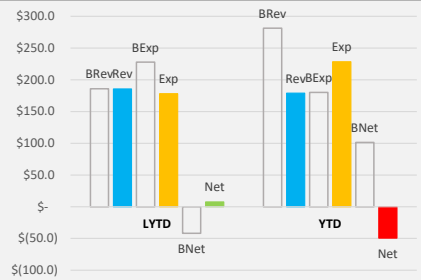
NOTES:

BRev = Budgeted revenue; **Rev** = Actual revenue; **BExp** = Budgeted expense before OH&BOD; **Exp** = Actual expense before OH&BOD; **BNet** = Budgeted net; **Net** = Actual net; **LYTD** = last fiscal year to date; **YTD** = current fiscal year to date; **Diff** = Difference between LYTD and YTD, either percentage or dollars. Data source = Financial statements (roll-ups for PEC, Certification, Handbook, Journal, Special Pubs, and Professional Development). Values = US\$ x1000.

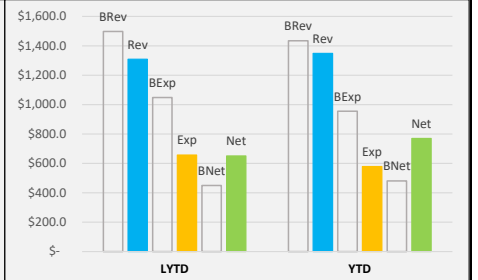
Certification



Handbook



Special Pubs

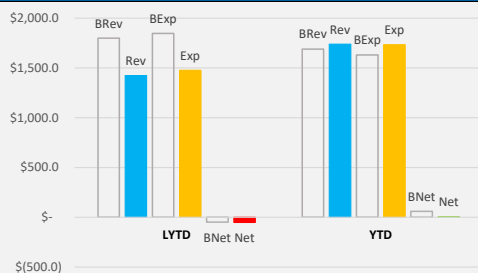


Item	LYTD	YTD	Diff v LY
BRev	\$ 138.1	\$ 172.5	25%
Rev	\$ 124.2	\$ 139.9	13%
BExp	\$ 128.9	\$ 172.4	34%
Exp	\$ 166.1	\$ 137.2	-17%
BNet	\$ 9.2	\$ 0.1	\$ (9.1)
Net	\$(41.9)	\$ 2.7	\$ 44.6
Margin	-33.7%	1.9%	35.7%

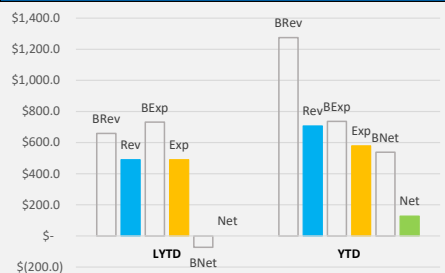
Item	LYTD	YTD	Diff v LY
BRev	\$ 185.8	\$ 281.4	51%
Rev	\$ 185.6	\$ 178.9	-4%
BExp	\$ 227.7	\$ 180.1	-21%
Exp	\$ 178.0	\$ 228.3	28%
BNet	\$ (41.9)	\$ 101.3	\$ 143.2
Net	\$ 7.6	\$(49.4)	\$ (57.0)
Margin	4.1%	-27.6%	-31.7%

Item	LYTD	YTD	Diff v LY
BRev	\$ 1,498.1	\$ 1,434.8	-4%
Rev	\$ 1,308.9	\$ 1,348.0	3%
BExp	\$ 1,047.8	\$ 954.6	-9%
Exp	\$ 657.5	\$ 578.3	-12%
BNet	\$ 450.3	\$ 480.2	\$ 29.9
Net	\$ 651.4	\$ 769.7	\$ 118.3
Margin	49.8%	57.1%	7.3%

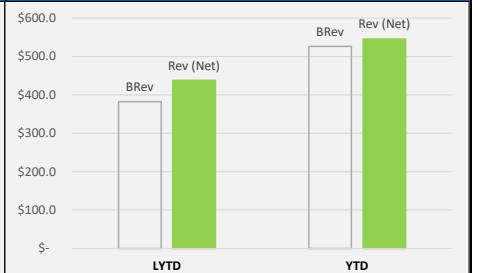
AJ-HPB/Advertising



ALI/eLearning



Royalties



Item	LYTD	YTD	Diff v LY
BRev	\$ 1,798.2	\$ 1,689.6	-6%
Rev	\$ 1,423.6	\$ 1,737.8	22%
BExp	\$ 1,846.1	\$ 1,629.6	-12%
Exp	\$ 1,475.7	\$ 1,732.6	17%
BNet	\$ (47.9)	\$ 60.0	\$ 107.9
Net	\$(52.1)	\$ 5.2	\$ 57.3
Margin	-3.7%	0.3%	4.0%

Item	LYTD	YTD	Diff v LY
BRev	\$ 658.9	\$ 1,274.9	93%
Rev	\$ 490.2	\$ 707.6	44%
BExp	\$ 731.4	\$ 736.5	1%
Exp	\$ 490.2	\$ 579.7	18%
BNet	\$ (72.5)	\$ 538.4	\$ 610.9
Net	\$ -	\$ 127.9	\$ 127.9
Margin	0.0%	18.1%	18.1%

Item	LYTD	YTD	Diff v LY
BRev	\$ 382.4	\$ 526.5	38%
Rev (Net)	\$ 437.9	\$ 545.5	25%

(No direct expenses, no margin; Rev = Net.)

**Referrals to PEC from Members Council and Technology Council
Meeting of February 1, 2022
ASHRAE Winter Conference, Las Vegas, NV**

Please see PEC responses in blue below.

From Members Council:

Memphis Chapter – Motion 6A (11/4/2021): That Regional Historians be added to the Society Historical Committee as full voting members with all rights, and privileges, and responsibilities pertaining thereto.

Background: Currently, the Regional Historians are allowed and encouraged to attend the Historical Committee meetings as guests. They, in effect, have a voice but no vote. There is a vast divide between the work and objectives of the Historical Committee and the expectations of the Regional and Chapter Historians, to the point that replies to Regional and Chapter inquiries of the Historical Committee are delayed or go completely unanswered. Further, this disconnect between the Historical Committee and the grassroots (e.g. Regions and Chapters) is made publicly obvious by the resources on the Society Historical Committee's webpage being so old and out of date. In at least one case, the PowerPoint presentation is so outdated as to have the previous ASHRAE logo from nearly a decade ago still on it. Grassroots representation by, and voting authority of, Regional Historians would keep the Historical Committee much more in tune and in contact with the Grassroots and would likely result in a better historical archive and more participation in the Gold Ribbon and Lou Flagg awards programs. This would in turn incentivize Chapters to appoint active Chapter Historians.

Fiscal Impact: \$15,000.00 per year (15 Historians x 2 Conferences/yr. x \$500 Avg. Airfare)

PEC Response: Historical Committee has established an ad hoc subcommittee to study the issue and report in June 2022.

Kansas City Chapter – Motion 6B (11/4/2021):

That non-current ASHRAE Handbook editions be made available to dues-paying ASHRAE members (Full or Associate Member grade) in an electronic format, in lieu of the hardbound handbook.

Background: Many ASHRAE Members have kept older versions of ASHRAE Handbooks for reference in hard copy, however new Members do not have access to older versions of the Handbook and many people have been converting to utilize more digital content.

This could be offered as either a member benefit or an additional revenue stream.

Fiscal Impact: \$2,000-3,000.

PEC Response: PDFs of noncurrent Handbook chapters are already available for purchase from ASHRAE Customer Service for a nominal fee. PDFs of volumes starting with 2018 Refrigeration are posted for members on the Technology Portal. Both these options need to be publicized so members know they can obtain the desired chapters. Historically, demand for these chapters is low and would not justify spending the approximately \$10-15k per volume to post this content on the Technology Portal or carry them in the bookstore.

Louisville Chapter – Motion 20 (11/4/2021): That Marketing/Tech Council/Pub Ed develop a marketing program to regularly spotlight Technical Committees through marketing channels.

Background: Currently there are over 100 TC's. Less than 3,000 (out of 51,000+) members participate in both TC's and Society Committees. TC's are always looking to expand their committees. Many members and prospective members are unaware of the number of TC's and their subject matter. TC's need more formal exposure. TC's need more participants.

Fiscal Impact: Utilize existing staff and committees for development and implementation.

PEC Response (formulated in coordination with Marketing and Technology directors):

This would mostly be a collaborative effort between Tech Council and Marketing. TAC and the International Standards Interaction Task Force both have efforts under way to increase involvement in ASHRAE Technical Committees. In addition to what is already occurring, the following could also be done:

1. Content asking for participation in TCs could be placed in the ASHRAE Chapter Notes newsletter. This content would link back to information for applying for membership on TCs on the ASHRAE website.
2. Content can be created to highlight how to participate in the TCs for use in leadership presentations that are shared during the virtual or in-person CRCs.
3. On the ASHRAE main home page, TC involvement could be one of the main subject blocks that is included during the year for a specified period of time.
4. When content is created by the TCs (articles, books, etc.) we can better highlight the volunteer efforts and link it back to TCs as appropriate.

Hellenic Chapter – Motion 24 (11/4/2021):

ASHRAE to include, as per its policy, SI units in its online and instructor led training courses.

Background: ASHRAE's greatest assets are its technical expertise and training, and thus attracts and sustains members throughout the world. However, most of the training courses are in IP units and practically impossible to use in countries that use SI units. There is also a need to consider international regulations and practices when adapting the material for a global audience.

Fiscal Impact: TBD.

PEC Response: The council referred this motion to Training and Education Committee to consider and report in June at the Annual Conference.

From Technology Council:

Motion: That the budget and development of Standards Project Committee User's Manuals be permanently referred to Publication and Education Council.

Background: Historically, user's manuals development cost has ranged from \$35,000 to \$120,000 per manual. The range in costs is affected by the size of the standard, the number of changes since the last version, or if the effort is a first-time user's manual. The most recent user's manual development costs were roughly \$40K (for Standards 62.1-2019 and 62.2-2019) and \$85,000 (for Standard 90.1-2019). The costs for these three ASHRAE standards recur every three years. The development timeline is roughly one year from start to finish. Repeated

attempts to shorten the timeline have been unsuccessful. The steps required for development and publication are as follows:

1. The SSPC prepares a request for a user's manual detailing requested changes from previous version or justification for a brand-new user's manual.
2. The request and allocation of funds must be approved by SPLS, Standards Committee, Special Projects, and Tech Council
3. A Work Statement is created by the SSPC and reviewed by staff for consistency with ASHRAE procedures and policies and with publication requirements
4. The SSPC develops a list of potential bidders for the user's manual work
5. Staff assembles the full RFP (including work statement and all attachments). The RFP is sent to the list of potential bidders. An announcement about the RFP is sent out to the Standard's listserve, included in one of ASHRAE's eNewsletters, and posted on the ASHRAE website.
6. A Project Monitoring Subcommittee (PMS) is formed by the SSPC and approved by SPLS.
7. Proposals are received and assembled by staff. If not enough bids received, then additional solicitations may be needed.
8. The proposals are sent to the PMS along with an evaluation form to rate the proposals and bidders based on the criteria specified in the work statement.
9. The PMS reviews and rates the proposals and then meets to make a final selection and recommendation for the contractor. Representatives from SPLC on the PMS participate in the process to ensure that all procedures and policies are properly followed during the selection process.
10. The recommendation is sent to SPLS for review and approval. SPLS approves contractor (or if there are concerns about the process or procedures followed for the selection, either overrides the recommendation or sends the recommendation back to the PMS for reconsideration).
11. A contract for the work is developed by staff and sent to the selected Contractor for review and signature.
12. The Project begins as per the agreed upon start date.
13. The PMS and/or SSPC assess and comment on the progress of the user's manual through review of drafts at intervals as specified in the contract. Typically, these include an expanded outline, a preliminary draft, a second draft, and a final draft. In many cases, the second draft and final draft are combined into a single review.
14. After the review of the final draft, a final document is distributed to the PMS and then the SSPC for review and approval. The votes for approval are typically done by letter ballot. Negative votes by the SSPC result in a recirculation ballot where reasons for negative votes are distributed to all SSPC member for consideration during a second letter ballot.
15. Additional issues are often raised during the approval process and these are addressed on a case by case basis with the committee member and resolved as needed.
16. After all reviews and approvals, the final document is completed and submitted to ASHRAE with all other required deliverables as specified in the work statement and contract (i.e., graphics files, supplemental material, associated spreadsheets, and any required permissions.)
17. The final draft and all required deliverables are provided to Publications staff to begin the publication process (final editing and formatting).
18. Publications develops a set of galley proofs for with questions and queries that are reviewed and answered by select SSPC/PMS members.
19. The User Manual is Published.

The proposal to move development from Technology to Publications would allow for the shortening of the process by eliminating many of the currently required review and approval steps as detailed above. It is estimated that the development timeline would be cut in half which would allow the user's manual to publish closer to the publication of the associated standard. A shorter timeline with fewer steps is also expected to reduce the required cost for development.

This referral would include the recommendation that that subject matter experts (SME) from the relevant SSPC be engaged by Publications for involvement in the development process as appropriate. A successful example of this process was the development of the IgCC user's manual by ICC. The ICC contracted with several SMEs from SSPC 189.1 to develop the content and then selected others on the committee to review the drafts for accuracy. This greatly shortened the development time and the cost.

Projected Fiscal Impact: Development Savings of \$112,500 every 3 years

PEC response: The council voted unanimously to accept the referral.

REPORT TO THE BOARD OF DIRECTORS (BOD)
From the Publishing & Education Council (PEC)
As of PEC Meeting of February 1, 2022

Recommendations for Board Approval:

1. **Motion:** PEC recommends BOD approve funding the Task Force on Building Decarbonization for the rest of SY 21-22 with \$300K from the general budget for products that are being developed on the subject of decarbonization.

Background: The task force has not been funded since being formed in February of 2021. As they have developed content it has been put on hold. The immediate need is a PTAR on Smart grid – building interface, starting a decarbonization standard and adding addendum to Standards 90.1 and 90.2 (not necessarily in order of priority). The funding will be split between the Publishing and Education and Technology departments. The motion was discussed and reviewed by Professional Development Fiscal Subcommittees and then approved by the PEC. *(Approved 10-0-0 CNV)*

Fiscal Impact: \$300K from SY 21-22 Budget

2. **Motion:** PEC recommends BOD approve an addition to the Rules of the Board (ROB) as shown in **Attachment A**.

Background: Successful certifying bodies consistently recognize their own certification designations in their own electronic and print media. Examples of such certifying bodies are ASPE, IFMA and AEE.

Certification Committee has been aware of the uneven recognition of ASHRAE certification designations in ASHRAE print and electronic media. Certification staff have worked with the Marketing department to develop guidelines which appear in the *ASHRAE Marketing Content Guide*, which call for the consistent recognition of ASHRAE certification designations in ASHRAE print and electronic media wherever the P.E., P.Eng. and Ph.D. designations also appear.

Despite these and related efforts, the uneven recognition of ASHRAE certification designations persists. In its Dec. 7, 2021, meeting, the Certification Committee reviewed several examples of 2021-22 ASHRAE media which did not correctly cite ASHRAE certification designations. Not correctly recognizing ASHRAE certification designations in ASHRAE print and electronic media wherever the P.E., P.Eng. and Ph.D. designations also appear communicates to Members, certificants, prospects and the built environment at large that ASHRAE does not value its own certification programs.

ASHRAE Certification designations are ASHRAE certification marks, as defined by the United States Patent and Trademark Office, similar in stature to trademarks. As there are Rules of the Board which currently address the name “ASHRAE” and the ASHRAE logo as trademarks of ASHRAE, a Rule of the Board regarding ASHRAE certification marks likewise is needed to establish the importance of this ASHRAE property and establish rules describing their appropriate use in ASHRAE media. Such a Rule of the Board would provide firm guidance to volunteer leaders and staff for years to come.

Certification status may be confirmed by Members and staff in the online Certification directory. On an as-needed basis, ASHRAE IT could modify any reports listing members. *(Certification Committee Approved 9-0-0 CNV) (PEC Approved 10-0-0 CNV)*

Financial Impact: None.

3. **Motion:** PEC recommends BOD approve an addition to the Rules of the Board (ROB) as shown in **Attachment B**.

Background: Publication Committee recommended changes to the committee's Manual of Procedures (MOP), as well as the ROB to and reflect changes to ASHRAE Journal department products and add PTAR responsibilities. *(PEC approved 10-0-0 CNV)*

Financial Impact: None.

Information Items:

1. Historical Committee voted to approve establishing two-way liaisons with YEA, CTTC, Research Promotion and Membership Promotion Committees for collaboration and cross-marketing to inspire others to volunteer and contribute to Historical Committee.
2. Historical Committee will appoint an Ad Hoc committee to investigate a partnership between the United Engineering Foundation, and the AIAA, AIChE, ASCE, IEEE, SPE & SWE, and has approved supporting communication with the Life Members Club on possible future fundraising efforts for the purpose of engaging with the Engineering & Technology History Wiki (ETHW).
3. Training & Education Committee (TEC) reported the committee will work on co-ordination with the ASHRAE Task Force for Building Decarbonization to produce a suite of education courses is making great progress.
4. The committee is closely monitoring the trends of technology transfer in this pandemic and are seeking ways to maintain the growth experienced in eLearning in the post pandemic era.

Date

Chair

Publishing & Education Council (PEC)

Information Items Report

Meeting of February 2, 2022

PEC Responses to Referred Items

1. **Technology Council referred motion:** That the budget and development of Standards Project Committee User's Manuals be permanently referred to Publication and Education Council.

Background: Historically, user's manuals development cost has ranged from \$35,000 to \$120,000 per manual. The range in costs is affected by the size of the standard, the number of changes since the last version, or if the effort is a first-time user's manual. The most recent user's manual development costs were roughly \$40K (for Standards 62.1-2019 and 62.2-2019) and \$85,000 (for Standard 90.1-2019). The costs for these three ASHRAE standards recur every three years. The development timeline is roughly one year from start to finish. Repeated attempts to shorten the timeline have been unsuccessful. The steps required for development and publication are as follows:

- The SSPC prepares a request for a user's manual detailing requested changes from previous version or justification for a brand-new user's manual.
- The request and allocation of funds must be approved by SPLS, Standards Committee, Special Projects, and Tech Council
- A Work Statement is created by the SSPC and reviewed by staff for consistency with ASHRAE procedures and policies and with publication requirements
- The SSPC develops a list of potential bidders for the user's manual work
- Staff assembles the full RFP (including work statement and all attachments). The RFP is sent to the list of potential bidders. An announcement about the RFP is sent out to the Standard's listserve, included in one of ASHRAE's eNewsletters, and posted on the ASHRAE website.
- A Project Monitoring Subcommittee (PMS) is formed by the SSPC and approved by SPLS.
- Proposals are received and assembled by staff. If not enough bids received, then additional solicitations may be needed.
- The proposals are sent to the PMS along with an evaluation form to rate the proposals and bidders based on the criteria specified in the work statement.
- The PMS reviews and rates the proposals and then meets to make a final selection and recommendation for the contractor. Representatives from SPLC on the PMS participate in the process to ensure that all procedures and policies are properly followed during the selection process.
- The recommendation is sent to SPLS for review and approval. SPLS approves contractor (or if there are concerns about the process or procedures followed for the selection, either overrides the recommendation or sends the recommendation back to the PMS for reconsideration).
- A contract for the work is developed by staff and sent to the selected Contractor for review and signature.
- The Project begins as per the agreed upon start date.

- The PMS and/or SSPC assess and comment on the progress of the user's manual through review of drafts at intervals as specified in the contract. Typically, these include an expanded outline, a preliminary draft, a second draft, and a final draft. In many cases, the second draft and final draft are combined into a single review.
- After the review of the final draft, a final document is distributed to the PMS and then the SSPC for review and approval. The votes for approval are typically done by letter ballot. Negative votes by the SSPC result in a recirculation ballot where reasons for negative votes are distributed to all SSPC member for consideration during a second letter ballot.
- Additional issues are often raised during the approval process and these are addressed on a case by case basis with the committee member and resolved as needed.
- After all reviews and approvals, the final document is completed and submitted to ASHRAE with all other required deliverables as specified in the work statement and contract (i.e., graphics files, supplemental material, associated spreadsheets, and any required permissions.)
- The final draft and all required deliverables are provided to Publications staff to begin the publication process (final editing and formatting).
- Publications develops a set of galley proofs for with questions and queries that are reviewed and answered by select SSPC/PMS members.
- The User Manual is Published.

The proposal to move development from Technology to Publications would allow for the shortening of the process by eliminating many of the currently required review and approval steps as detailed above. It is estimated that the development timeline would be cut in half which would allow the user's manual to publish closer to the publication of the associated standard. A shorter timeline with fewer steps is also expected to reduce the required cost for development.

This referral would include the recommendation that that subject matter experts (SME) from the relevant SSPC be engaged by Publications for involvement in the development process as appropriate. A successful example of this process was the development of the IgCC user's manual by ICC. The ICC contracted with several SMEs from SSPC 189.1 to develop the content and then selected others on the committee to review the drafts for accuracy. This greatly shortened the development time and the cost.

Projected Fiscal Impact: Development Savings of \$112,500 every 3 years

PEC response: [The council voted unanimously to accept the referral.](#)

2. **Memphis Chapter – Motion 6A (11/4/2021):** That Regional Historians be added to the Society Historical Committee as full voting members with all rights, and privileges, and responsibilities pertaining thereto.

Background: Currently, the Regional Historians are allowed and encouraged to attend the Historical Committee meetings as guests. They, in effect, have a voice but no vote. There is a vast divide between the work and objectives of the Historical Committee and the expectations of the Regional and Chapter Historians, to the point that replies to Regional and Chapter

inquiries of the Historical, Committee are delayed or go completely unanswered. Further, this disconnect between the Historical Committee and the grassroots (e.g. Regions and Chapters) is made publicly obvious by the resources on the Society Historical Committee's webpage being so old and out of date. In at least one case, the PowerPoint presentation is so outdated as to have the previous ASHRAE logo from nearly a decade ago still on it. Grassroots representation by, and voting authority of, Regional Historians would keep the Historical Committee much more in tune and in contact with the Grassroots and would likely result in a better historical archive and more participation in the Gold Ribbon and Lou Flagg awards programs. This would in turn incentivize Chapters to appoint active Chapter Historians.

Fiscal Impact: \$15,000.00 per year (15 Historians x 2 Conferences/yr. x \$500 Avg. Airfare)

PEC Response: Historical Committee has established an ad hoc subcommittee to study the issue and report in June 2022.

3. **Kansas City Chapter – Motion 6B (11/4/2021):** That non-current ASHRAE Handbook editions be made available to dues-paying ASHRAE members (Full or Associate Member grade) in an electronic format, in lieu of the hardbound handbook.

Background: Many ASHRAE Members have kept older versions of ASHRAE Handbooks for reference in hard copy, however new Members do not have access to older versions of the Handbook and many people have been converting to utilize more digital content. This could be offered as either a member benefit or an additional revenue stream.

Fiscal Impact: \$2,000-3,000.

PEC Response: PDFs of noncurrent Handbook chapters are already available for purchase from ASHRAE Customer Service for a nominal fee. PDFs of volumes starting with 2018 Refrigeration are posted for members on the Technology Portal. Both these options need to be publicized so members know they can obtain the desired chapters. Historically, demand for these chapters is low and would not justify spending the approximately \$10-15k per volume to post this content on the Technology Portal or carry them in the bookstore.

4. **Louisville Chapter – Motion 20 (11/4/2021):** That Marketing/Tech Council/Pub Ed develop a marketing program to regularly spotlight Technical Committees through marketing channels.

Background: Currently there are over 100 TC's. Less than 3,000 (out of 51,000+) members participate in both TC's and Society Committees. TC's are always looking to expand their committees. Many members and prospective members are unaware of the number of TC's and their subject matter. TC's need more formal exposure. TC's need more participants.

Fiscal Impact: Utilize existing staff and committees for development and implementation.

PEC Response (formulated in coordination with Marketing and Technology directors): This would mostly be a collaborative effort between Tech Council and Marketing. TAC and the International Standards Interaction Task Force both have efforts under way to increase

involvement in ASHRAE Technical Committees. In addition to what is already occurring, the following could also be done:

- Content asking for participation in TCs could be placed in the ASHRAE Chapter Notes newsletter. This content would link back to information for applying for membership on TCs on the ASHRAE website.
- Content can be created to highlight how to participate in the TCs for use in leadership presentations that are shared during the virtual or in-person CRCs.
- On the ASHRAE main home page, TC involvement could be one of the main subject blocks that is included during the year for a specified period of time.
- When content is created by the TCs (articles, books, etc.) we can better highlight the volunteer efforts and link it back to TCs as appropriate.

5. **Hellenic Chapter – Motion 24 (11/4/2021):** ASHRAE to include, as per its policy, SI units in its online and instructor led training courses.

Background: ASHRAE's greatest assets are its technical expertise and training, and thus attracts and sustains members throughout the world. However, most of the training courses are in IP units and practically impossible to use in countries that use SI units. There is also a need to consider international regulations and practices when adapting the material for a global audience.

Fiscal Impact: TBD.

PEC Response: The council referred this motion to Training and Education Committee to consider and report in June at the Annual Conference.

6. PEC 2021-2022 MBOs updates are shown as [Attachment A](#).

Research Journal Subcommittee

7. Research Journal Subcommittee included the *STBE* Editor's Report from Dr. Jeff Spitler shown in [Attachment B](#).

Certification Committee

8. Certification Committee completed its annual Management System Review, with resulting decisions and actions related to the improvement of certification services. All seven ASHRAE certifications are ANSI-accredited.
9. Certification Committee and a Training and Education Committee (TEC) Task Force developed four ideas for products and services that PEC could develop, considering the large volume of valuable and timely information the Epidemic Task Force (ETF) recently has created. The Task Force also considered decarbonization and building resiliency in developing their ideas. Recommended new product/service ideas:
- Electrical Designer Membership (tie for 1st)

- Net-Zero Building Designer Certification (tie for 1st)
 - Sustainability and Resilience Infographic
 - Resilient Building Design Platform
10. Certification Committee will initiate an update of the HBDP certification scheme in SY 2022-23.
 11. Certification Committee reported through 12/31/2021, 161 certification applications have been received, versus 147 received during the same period in SY 2020-21, a 9.5% increase.
 12. Certification Committee reported since its launch in October 2021, the Certification Study Guide: Certified HVAC Designer (CHD) has sold over 300 copies.
 13. The *Certification Study Guide: Building Energy Modeling Professional* (BEMP) will be available for sale in February/March, 2022. Featuring a 100-question BEMP practice exam, it will be a must-have guide to study of ASHRAE building energy modeling resources and key exam job tasks.
 14. Certification Committee 2021-2022 MBOs updates are shown as [Attachment C](#).

Handbook Committee

15. Handbook Subcommittees Updates
 - Review/Training (Mages) reported more than 20 attendees at the online TC training. The Authoring Portal was reviewed by Heather Kennedy.
 - Electronic (Sheinman) continued to refine the committee Basecamp file system and reported on efforts to template the various users file systems.
 - Functional (Furman) submitted a written report. The ARG, MOP, ROB were reviewed, and some action items established.
 - Strategic Planning (Fisher) reported that he is reviewing aspects of committee activities
16. Handbook Committee Volume reports
 - Fisher (2022 Refrigeration) reported no problems in getting the submissions in.
 - Sheinman (2023 Applications) reported that his liaisons are sending the message to their TCs that it is crunch time for spring chapter deadlines. One TC is not responding, and Harris will take the initiative directly.
 - Kennedy for Furman (2024 Systems and Eq) Heather indicated that the Liaisons are having difficulty getting responses from their assigned TC sub chairs and even TC Chairs. A list of those unresponsive will be made for further engagement.
 - Mages (2025 Fundamentals) reported progress with Liaisons getting in contact with TC Chairs and Handbook Subcommittee chairs
17. General Handbook Committee Updates
 - Heather reported on the changes to procedures put in place to ensure all revisions are captured accurately and completely.
 - Heather reported that a new staff position has been authorized for Handbook

- There are reports of Handbook liaisons not being recorded on the TC rosters. Heather said that she was in contact with TAC to correct the situation.
- Chris Grey demonstrated for those assembled the path to get to a member's committee assignments and rosters. Liaisons were encouraged to compare their committee assignments with the rosters listed on the Member Profile.
- The 2022 refrigeration gally proofs need to be returned by the end of March to get them submitted to the printer in a timely manner.
- Voted to approve the new chapter from TC2.3, 2.4, 2.9 with input from the ETF for a Handbook chapter on in-room air cleaning equipment.
- A vote of members in attendance approved the chapter. (18-0-1-CNV).
- Liaisons were encouraged to poll their TCs about adding ETF and DTF content or referencing relevant documents developed by the TFs in chapter revisions.

18. Handbook Committee 2021-2022 MBOs updates are shown as [Attachment D](#).

Historical Committee

19. Historical Committee reviewed a PEC Referred Motion from Region VII Fall 2021 CRC, Memphis Chapter Memphis Chapter – Motion 6A (11/4/2021): “That Regional Historians be added to the Society Historical Committee as full voting members with all rights, and privileges, and responsibilities pertaining thereto.” The background stated the purpose of the motion was to encourage participation in historical programs. The fiscal impact was listed as \$15,000 per year. Historical Committee has appointed an Ad Hoc to review before voting as a committee in May and then bring it to PEC at the Annual Meeting in Toronto in June 2022.
20. Historical Committee voted to approve establishing two-way liaisons with YEA, CTTC, Research Promotion and Membership Promotion Committees for collaboration and cross-marketing to inspire others to volunteer and contribute to Historical Committee.
21. Historical Committee will appoint an Ad Hoc committee to investigate a partnership between the United Engineering Foundation, and the AIAA, AIChE, ASCE, IEEE, SPE & SWE, and has approved supporting communication with the Life Members Club on possible future fundraising efforts for the purpose of engaging with the Engineering & Technology History Wiki (ETHW).
22. Historical Committee will develop a document reporting on diversity in ASHRAE and the HVACR industry.
23. Historical Committee is planning to reinstitute the Historians Newsletter on a quarterly basis. There have been some changes to the committee's membership that has delayed the first issue.

24. Historical Committee discussed the Pilot Historical Plaque Project which was installed in Orange, Texas and the possibility of pursuing other similar projects in the future
25. Historical Committee is developing recommendations for Historical 2022-2023 PAOE points.
26. Historical Committee discussed the necessity of continuity of communication, to keep Regional and Chapter Historians involved in history at the Society level the ASHRAE email aliases.
27. Historical Committee have begun developing the policy parameters for the ASHRAE archive. There is no current guideline, and a comprehensive policy is still needed to ensure future material is not lost.
28. Historical Committee have chosen Shelia Hayter for the next Leadership Voices interview to be conducted virtually. The committee will also pursue posting a recorded interview with Steve Comstock.
29. Historical Committee 2021-2022 MBOs updates shown in [Attachment E](#).

Publications Committee

30. Publications Committee voted to select the winner for the 2022 Journal Paper Award, the title and authors of which *ASHRAE Journal* have been forwarded to the Honors and Awards Committee for award presentation at the 2022 ASHRAE Annual Conference.
31. Publications Committee voted to develop a peer review process for the *ASHRAE Journal* podcasts. A subcommittee will work on this in the coming months.
32. Publications Committee gave a report on feedback for PEC MBO 1 from SY 2020-2021 PEC Chair Bill Dean ("Create a Sales Business Plan for PEC by identifying 3 to 5 digital product strategies") is included in [Attachment F](#).
33. Publications Committee gave a report on feedback for PEC MBO 2 from SY 2020-2021 PEC Chair Bill Dean ("To develop a PEC Business Model that includes offering ASHRAE products and services to non-commercial entities") is included in [Attachment G](#).
34. Publications Committee gave suggestions for ways to incorporate ETF and TFBD data into PEC products and services are included in [Attachment H](#).
35. Publications Committee passed a motion presented by Presidential Member Tim Wentz that ASHRAE endorse the Mechanical Contractors Association of America (MCAA) publication *Change Orders, Productivity and Overtime: A Primer for the Construction* shown in [Attachment I](#). Publications Committee has since learned that the Technology

Council MOP covers ASHRAE endorsement of external documents via their Document Review Subcommittee (DRSC); therefore, the motion was also forwarded to the DRSC.

36. Publications Committee 2021-2022 MBOs updates shown in [Attachment J](#).

Training and Education Committee (TEC)

37. TEC reported discussions are underway with associate societies to co-market education course.
38. TEC is coordinating with the ASHRAE Task Force for Building Decarbonization to produce a suite of education courses is making great progress.
39. TEC is closely monitoring the trends of technology transfer in this pandemic and are seeking ways to maintain the growth experienced in eLearning in the post pandemic era.
40. TEC reported Reference Manual update is in progress.
41. TEC reported the combined total of all course registrants was 435 for the 2022 Winter Meeting.
42. TEC 2021-2022 MBOs updates shown in [Attachment K](#).

Attachment A
 PEC Report to BOD
 February 2, 2022 - Las Vegas Winter Conference

MBO Submission to Planning Council Publishing and Education Council

Committee:

Committee:							Strategic Plan Tally												
MBO #	Description	Metric (how do we determine success?)	Initiative #	Goal #	Completion Date	Financial Assist Req'd?	MBO Comments	Initiative #				Goal 1		Goal 2			Goal 3		
								1	2	3	4	a	b	a	b	c	a	b	c
1	Continue to create and identifying digital product strategies.	3 to 5 digital product strategies are developed	2	2c	6/30/2022	No			x							x			
2	Continue to develop ASHRAE products and services for governmental and other non-commercial entities.	An outward facing Business Plan is developed by the Council.	2	2b, 2c	6/30/2022	No			x						x	x			
3	Develop new products & services aligned with Strategic Plan initiatives 1 & 2 (ETF & TFBD).	The development of at least one new certification program based on member input.	1 & 2	1b, 2b, 2c	6/30/2022	Yes		x	x			x		x	x				
4	Expand our line of Educational products to include newer HVAC Systems in the F2F format, virtual learning and self-directed text.	Working with the current PEAC, PEC develops a series of training paths that result in certifications or program graduations for participants in the future.	1, 2 & 3	1b, 2b, 2c, 3a	6/30/2022	No		x	x	x		x		x	x	x			
5	Analyze Membership trends statistics with respect to industry classification, membership grades, regions, demographics etc. Review value proposition of ASHRAE membership and products and services. Based on the analysis recommend actions and a plan to reinvigorate membership growth.	Work with Membership Development Task Group to analyze data collected	1, 2, 3	2a, b, c	6/30/2022	No		x	x	x									
Publishing and Education Council Totals								3	5	2			2		3	4	1		

February 2, 2022 - Las Vegas Winter Conference

Science and Technology for the Built Environment

Jeffrey D. Spitler

January 12, 2022

Some revisions made to slides 5, 6, 13, 14

Journal metrics



Usage

- **105K** annual downloads/views



Citation

metrics

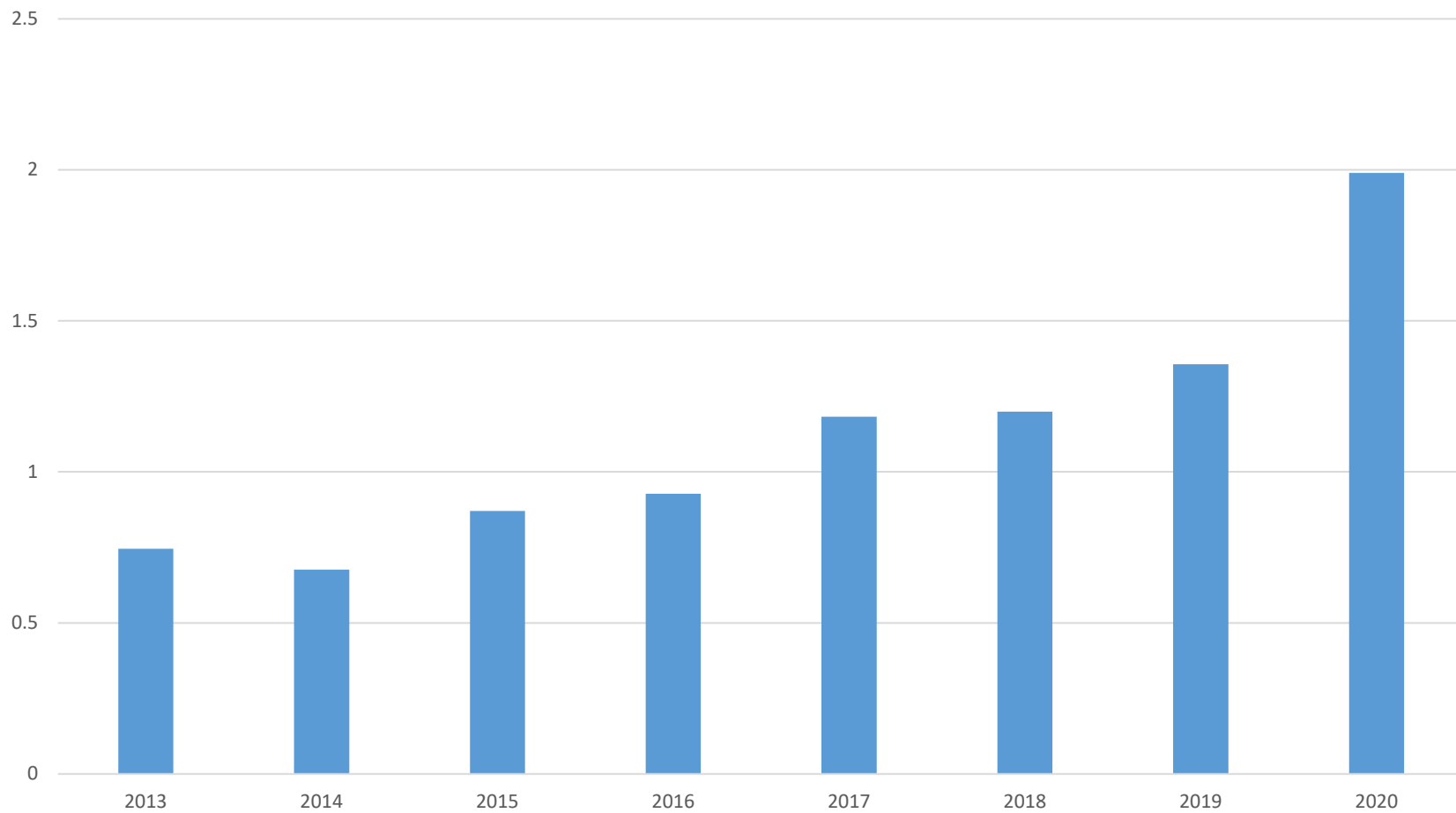
- **1.990 (2020)** Impact Factor
- **1.811 (2020)** 5 year IF
- **2.7 (2020)** CiteScore
- **Q2 (2020)** CiteScore Best Quartile
- **0.92 (2020)** SNIP
- **0.51 (2020)** SJR



Speed/acceptance

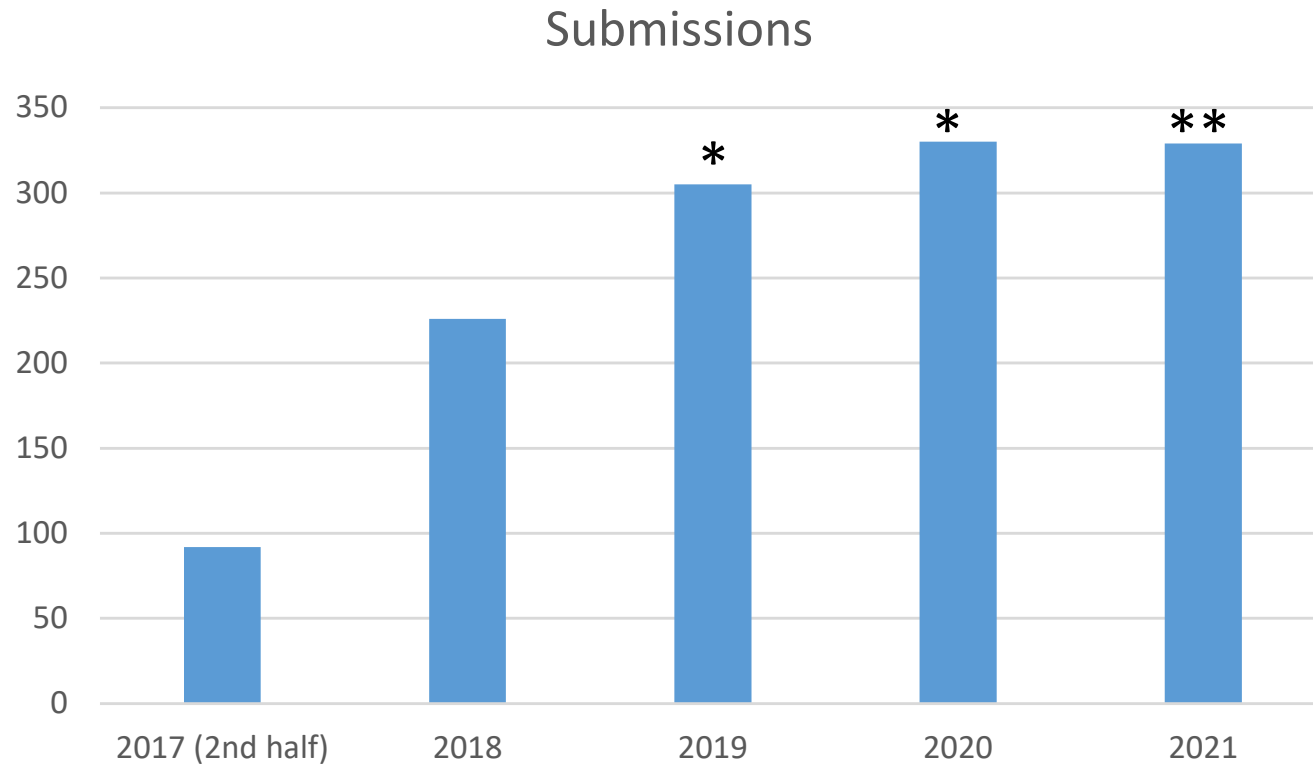
- **23** days avg. from acceptance to online publication

Impact Factor



Best paper award

- 10/29: Associate and Guest Editors requested to nominate best papers.
- 12 nominations received
- 12/8 Jury formed: Claridge, Owen, Lin, Zilio
- Jury members ranked the papers; all members independently ranked the same paper as best.
- 12/21 Jury met very briefly and reached a decision.
- 12/21 Recommendation sent to Rhiannon Masterson



2017 & 2018 come from T&F

* 2019-2020 count all submissions, even those “abandoned” without finishing the submission.

** 2021 excludes unfinished submissions.

2021

- 347 submissions started
- 329 submissions completed
- 70 papers still in review
- JDS rejected 105 papers without sending out to AE
 - Common reasons: case studies, out of scope, poor English, lack of technical rigor.
- 52 rejections by recommendation of AE, w/o sending out for review
- 56 rejections by recommendation of AE & reviewers
- 46 accepted

2021 Special Issues

- Thermal Science and Technology 2019 (Issue 1)
- Building Simulation 2019 (Issue 8)
- Clima 2019 (Issue 1 of 2022)

2021 Editorial Board Meetings

- As in 2020, held online meetings in July.
- Two meetings to accommodate both hemispheres.
- And a one-on-one meeting.
- 100% participation.

2021 Editorials

- Ray Cohen obituary
- Thermal Science and Technology 2019 (Issue 1)
- Building Simulation 2019 (Issue 8)
- From 2020:
 - Integrating IAQ control strategies to reduce the risk of asymptomatic SARS CoV-2 infections in classrooms and open plan offices (Zhang)
9683 views; 18 references, Altmetric score 391

Misconduct allegations

- None!

Associate Editors

- 5 Associate Editors with terms expiring this year +1 who might prefer to be replaced:
 - Michel Bernier(I will ask to stay on)
 - Zhang O'Neill (I will ask to stay on)
 - Jørn Toftum (I will ask to stay on)
 - Jensen Zhang (I will check to see if he wishes to stay on.)
 - Yongchan Kim (I will check to see if he wishes to stay on.)
 - Roberto Lamberts (Stayed on as a favor, but I think would prefer to be replaced.)

Associate Editors

- Given 75% increase in submissions since 2017, consider expanding Editorial Board
- Fiscal impact?
 - Few AEs attend in-person editorial board meetings (at summer meeting)
 - Continuing meeting online after pandemic?

Reviewer Board

- Concept:
 - Recruit members from junior and mid-level faculty, recent PhD graduates.
 - Commitment to review ~4 papers per year in a timely fashion (2 weeks or less).
- Current status:
 - 47 members
 - 39 were invited to review at least one paper.
 - On average, each reviewer board member was invited to review 2.4 papers
 - Of 92 invitations, 90 were accepted.

Distribution of review requests for 39 review board members that received one invitation.

Areas of Expertise	Invited	Agreed	Unavail- able <i>Revised</i>
Building simulation, indoor air quality, green building design, urban ventilation, c	9	9	
Variable-speed HVAC systems, model predictive control, grid-interactive efficien	6	6	
HVAC system fault detection and diagnosis, smart building, HVAC system optimal	6	6	
Building envelope, heat, air and moisture modeling and testing, durability, therm	5	5	
Data-driven modeling; Numerical optimization; Building thermal dynamics; Mode	5	5	
human thermal comfort	4	4	
Modeling and optimization of HVAC&R systems and components, machine learni	3	2	1
Heat and moisture transfer, thermal insulation, dehumidification	3	3	
Data analytics; Machine learning; Deep learning; Building energy predictions; Fau	3	3	
Phase change heat transfer, supercritical heat transfer, transcritical heat pumps,	3	3	
Demand response, advanced control, grid-interactive efficient buildings, district l	3	3	
Desiccant cooling, evaporative cooling, radiant cooling and heating, heat recovery	3	3	
Occupant behavior modelling, building simulation, building control systems, urba	3	3	
Fin-tube heat exchangers, unitary equipment testing methods, building internal l	2	2	
Building energy efficiency, ground source heat pump, uncertainty analysis in HVA	2	2	
Fault detection and diagnostics, Model-based predictive controls, Data-driven me	2	2	
Indoor environmental quality management and control, building environment an	2	2	
heat exchanger, heat and mass transfer	2	2	
Optimal design of zero/low energy buildings, uncertainty-based optimal design c	2	2	
Thermal energy storage and desiccant-based dehumidification	2	2	
Ground Source Heat Pumps, Building Energy Simulation, Surface Water Heat Pum	2	2	
Heat transfer, Fluid flow, CFD, Numerical methods, Application of thermal storag	2	2	
Indoor environmental quality, building energy consumption, building retrofits, n	2	2	
Enhanced heat transfer, Single and Two Phase Flow, Heat Exchangers	1	1	
Residential energy efficiency, indoor environmental quality (IEQ), human-buildir	1	1	
Ground source heat pump systems based on energy piles, measurement of therm	1	1	
Room air distribution, HVAC systems, demand-controlled ventilation, air cleaning	1		1
Compressors, heat exchangers, model development, refrigeration systems	1	1	
Model-based predictive control, virtual sensing, district energy	1	1	
Ground-source heat pump systems, Thermal energy storage, Heat pump systems	1	1	
Ground-source heat pump systems, solar energy systems, natural ventilation, nov	1	1	
Building energy simulation, occupant behavior, indoor climate, Big data analysis,	1	1	
Indoor air quality and comfort; energy system dynamics, controls, optimization ar	1	1	
Building simulation; Occupant behaviour	1	1	
Radiant heating and cooling systems, Indoor Environmental Quality (IEQ), Person	1	1	
Daylighting, Lighting, Visual comfort, Glare, Window view	1	1	
Building heat transfer, cooling and heating load calculation, fin and tube heat exc	1	1	
Thermal comfort, indoor air quality, buildings' energy performance, user			
behavior	1	1	
Building energy simulation, solar thermal energy system simulation, district ener	1	1	

Special Issues – 2022 and beyond

- AI and Smart Buildings – 7 papers submitted
- BPACS – 9 papers submitted; 2 accepted; 1 rejected
- IAQ 2020 – 9 papers submitted; 1 accepted; 3 rejected
- Field-measured performance: issued general call for papers, but unlikely to come to fruition (2 submitted, 1 rejected)
- Clima 2022 – Discussions in progress

The first 3 should publish as topical sections this year.

General Plans

- Arranging two Editorial Board meetings.
- Pandemic is going to delay or eliminate some opportunities for special issues based on conferences.
 - Will ask the Editorial Board to help identify non-conference-based topical issues.



Certification Committee MBOs Society Year: 2021-2022

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

Vision: A healthy and sustainable built environment for all.

Goal #1: Position ASHRAE as an Essential Knowledge Resource for a Sustainable, High-Performance Built Environment.

Goal #2: Maximize Member Value and Engagement.

Goal #3: Optimize ASHRAE's Organizational Structure to Maximize Performance.

Certification Committee Scope: The Certification Committee is responsible for developing, implementing, and monitoring ASHRAE certification programs.

Chair: Kurt Monteiro, P. Eng., HBDP, HFDP

Date: Jan. 24, 2024

Objective	SP 2019- 24 ¹	Completion Date	Fiscal Impact	Responsible Party	Status	Comment
1. Attain 80% recertification rate for the 2021 renewal class, exceeding the industry average of 76%.	2C	3/31/2022	Revenue growth.	Chair, Certification Committee, Staff	In progress.	- Hard copy reminders sent in Nov., with emails following up. Leveraging digital badging and "Value of Certification" survey data. 168 applications received in December.
2.1 Grow the number of certification applications by 10% over the 2020-21 total of 341, to a total of 375 applications.	3A	6/30/2022	Revenue growth.	Chair, Certification Committee, Staff	Through 12/31/2021, 161 applications rcvd, vs. 147 rcvd in 2020-21, a 9.5% increase.	Leverage CHD and BEMP Study Guides, remote online proctored examination, and digital badging.
2.2 Achieve 300 sales of CHD Study Guide.	3A	6/30/2022	Revenue growth.	Chair, Certification Committee, Staff	COMPLETED.	305 sold through 12/31/2021, since publication in October, 2020.
2.3 Achieve 200 sales of BEMP Study Guide.	3A	6/30/2022	Revenue growth.	Chair, Certification Committee, Staff	In progress	BEMP Study Guide to be published in February 2022.
2.4 Achieve 80% digital badge acceptance rate.	2C	6/30/2022	Revenue growth.	Chair, Certification Committee, Staff	In progress	- Through 1/20/2022, all-time acceptance rate is 78%, vs. Credly 67% average. A "reminder" appeal is planned.
3.1 Enhance relevancy of ASHRAE certification to ASHRAE members and the industry in general.	2C	6/30/2022	Revenue growth.	Chair, Certification Committee, HVAC Designer Exam Subcommittee, Staff	In progress	Consider leveraging 1. recognition of ASHRAE certification designations in ASHRAE media, 2. CHD and BEMP Study Guide sales, 3. remote online proctored examination, 4. digital badging, 5. podcasts, 6. marketing to Membership segments 7. "Value of Certification" survey data

3.2 Ensure consistent recognition of ASHRAE certificant designations in ASHRAE print and electronic media wherever the P.E., P.Eng. and Ph.D. designations also appear.	2A	6/30/2022	Revenue growth.	Chair, Certification Committee, Staff	<i>In progress</i>	- This is a 1/29/2022 agenda item; Discussion with Ex-O and Coordinating Officer to identify appropriate channel on 1/12/2022.
3.3 Leverage Chapter Technology Transfer Committee (CTTC) channels for enhanced communication.	2A, 3B	9/30/2022	Possible revenue growth.	Chair, Certification Committee, Member Services staff, Certification Staff	<i>In progress</i>	1. "Certification" presentation for delivery at Chapter meetings developed and posted to ashrae.org webpage with Chapter resources; 2. "Chapter Notes" monthly newsletter populated (e.g. Oct. & Nov. issues) with "Certification" items
3.4 Recommend Developing Economies Member Certification application fee structure.	2A	1/29/2022	Undetermined	Chair, Certification Committee, Staff	<i>- This is a 1/29/22 agenda item.</i>	- Consider maintaining the Member Recertification application fee at \$195.
3.5 Cross-promote certification and training for each certification program.	1A & B; 3A	6/30/2022	Revenue growth	Chair, Certification Committee, Staff	<i>In progress</i>	- Currently planned for select winter-spring ALI online, instructor-led training. - Measure efficacy
4.1 Manage certification programs against the ANSI/ISO/IEC 17024 accreditation standard.	2B	6/30/2022	Currently budgeted.	Chair, Certification Committee, Staff	<i>In progress</i>	- Year 2 Annual Surveillance application due March 2022. - Ensure execution of new P&Ps developed to fulfill reaccreditation application requirements.
4.2. Plan BEMP Job Task Analysis (JTA) to begin 7/1/2022.	3A	6/30/2022	Currently budgeted.	Chair, Certification Committee, Staff	<i>Applications for Foundation funding of BEMP & HBDP JTAs submitted for Winter Conference consideration.</i>	- Pursue Foundation funding - Identify vendor
4.3. Recruit 2022-25 class of Exam Subcommittee members.	2A	6/30/2022		Chair, Certification Committee, Nominations Task Force, Staff		Certification Committee to review and approve slate at 2022 Annual Conference meeting.
4.4. Pursue opportunities to strengthen the Security of Examination Materials (ANSI 7.4) procedure for Item Development.	3A	6/30/2022		Chair, Certification Committee, Staff		Consider expertise of PSI and ANSI-accredited peers.
5. Monitor the effectiveness of certification programs, and recommend and implement any steps to improve program effectiveness.	3A	6/30/2022	None.	Chair, Committee Task Force, Staff		- Task Force 6-month review of BEAP and HBDP held 1/19/2022. Follow-up to be scheduled for April, after recertification "grace period" ends March 31.
6. Finalize 2021-22 MBOs.	2:A, B, C; 3:A, B	9/30/2021	To be determined.	Chair, Certification Committee, Staff	COMPLETED	
7. A joint Certification Committee - Training and Education Committee (TEC) Task Force to develop ideas for products and services that PEC could develop, in light of the large volume of valuable and timely information the Epidemic Task Force (ETF) recently has created.	3A	12/31/2021	None.	Mr. Armstrong, Ms. Arroyo, Mr. Monteiro, Mr. Reihl, Ms. Weekly, and Mr. White, Staff	COMPLETED	Four (4) new product proposals generated for PEC consideration at Winter Conference. Follow-up PEC requests may be forthcoming.

8. Evaluate the certification and recertification application fee schedule and recommend any possible updates in the 2022 Winter Conference meeting.	3A	1/29/2022	None. Possible 2022-23 revenue increase.	Chair, Certification Committee, Staff		Any recommendations to be forwarded to the ASHRAE staff Director of Publications and Education for evaluation.
9. Conduct strategic planning session.	3A	6/30/2022	None	Chair, Certification Committee, Staff		- Completion date moved to June Annual Conference, in hopes of greater in-person participation. Pre-work may be needed in advance: - Consider strategic planning tools, such as PESTEL, Porter's Five Forces, VRIO, customer segmentation.

Recommendations for Strategic Planning:

'2019-24 Strategic Plan: Goals & Objectives

1. Position ASHRAE as an Essential Knowledge Resource for a Sustainable, High-Performance Built Environment

- A. Utilize a holistic approach to ASHRAE's offerings and activities to drive positive economic, environmental and social impact through innovation in building design and operations.
- B. Expand capabilities globally to create, aggregate and disseminate essential information and knowledge focusing on emerging market trends and transformative approaches

2. Maximize Member Value and Engagement

- A. Infuse enthusiasm, vitality and diversity throughout ASHRAE events and services
- B. Expand the impact of collaboration and partnerships with industry organizations, universities and government agencies
- C. Leverage technology to increase member engagement, awareness and value

3. Optimize ASHRAE's Organizational Structure to Maximize Performance

- A. Prototype and launch new approaches that will increase ASHRAE's relevance and speed to market for key offerings
- B. Optimize ASHRAE's organizational systems and structures to increase capacity, efficiency and effectiveness
- C. Cultivate industry and member philanthropy to extend ASHRAE's impact and reach

Handbook Committee
MBOs for Society Year 2019-2020
Chair: Suzanne LeVisuer Date: 23 June 2019

Attachment D
PEC Report to BOD
February 2, 2022 - Las Vegas Winter Conference

Updated 30 January 2022

Handbook Committee MBOs 2021-2022

Michael Patton Chair

	Objective	Completion Date	Fiscal Impact	Responsible Party	Status	Comment
1	Coordinate with Staff to review and improve Staff procedures to ensure all Volume edits are included	1-Feb-22	none to Positive	HB Excom	complete	A procedure was added to present galley proofs for sign off to TCs for ALL chapters regardless of edit/revision status.
2	Review single topic/multi TC Chapters responsibility to one TC	30-Jun-22	None	Vol Chairs/Review Sub Committee	On-going	Required to smooth rewrite/edit process
3	Encourage TCs to develop extra features (spreadsheets, sidebar discussions, video, etc.) for Handbook Online. Suggest using YEA members	30-Jun-22	None	HBC	Continuous	Continuing 2021 MBO
4	Develop a HBC Vision Statement	30-Jun-22	None	HBC	Yet to commence	Crafting a vision statement will provide continuity as Volume chairs rotate through the Chair position
5	Address volume imbalances through appointment of Ad-Hoc	30-Jun-22	Could reduce mailing costs	HBC ExCom	Ad-Hoc Assembled	Applications and Fundamental volumes are nearly twice the size of Refrigeration volume. Look at the possibility of shifting some material to a different volume.

Handbook Committee
MBOs for Society Year 2019-2020
Chair: Suzanne LeVisuer Date: 23 June 2019

6	Review ARG for clarity on material to be included in the HB volumes vs that set for other publications (deign Guides, Users manuals)	30-Jun-22	Could reduce page count	Functional	Assigned	Additiona guidance in the ARG (Author's and Reviewer's Guide) could move contenct to other publicaitons such as user and design guides.

Attachment E								
PEC Report to BOD								
January 2022 - Las Vegas Winter Conference								
MBO Submission to PEC Planning								
FINAL - July 30, 2021								
Revised with Committee Assignments - Oct 19, 2021								
Author:	Spencer Morasch - Chair, Historical Committee							
Council:	Publishing and Education Council							
Committee:	Historical Committee							
Reference Document	ASHRAE Strategic Plan 2019-2024							
Society Year:	2021-2022							
MBO #	Description	Metric	Historical Committee Assigned	Committee Members	Strategic Plan Initiative #	Strategic Plan Goal #	Completion Date	Financial Assist Req'd?
		(how do we determine success?)		Chair in RED colored font.	(can be more than 1)	(can be more than 1)		
example	Explore frequent use of digital live trainings for Grassroots, which will provide quick feedback and help from Grassroots.	Max 3-5 best practices			3 & 4	1b, 2a,b,c 3a,b	11/30/2020	No
1	Develop proposals to improve the opportunities for Regional Historians to participate in Society Historical Committee activities	Continue on-line participation of Regional Historian's at Society Historical Committee Meetings	Communications / Regional Historian Guidelines Committee	Niss Feiner / Wei Sun / Spencer Morasch (ExO)	3	2c, 3a	6/30/2022	No
2	Develop PAOE Recommended Changes to 2022-2023 Society Year PAOE	To get ahead of the PAOE Committee Cycle with proposal for the following year's (Society Year 2022-2023) PAOE Letter in Summer 2022, Historical PAOE subcommittee needs to work with the PAOE subcommittee of Members Council during the Fall 2021 to Submit recommendations.	Communications / Regional Historian Guidelines Committee	Niss Feiner / Wei Sun / Spencer Morasch (ExO)	4	2a	12/31/2022	No
3	Encourage younger members of ASHRAE to have interest in history-related activities of the Society	Proposing to keep the PAOE line item "For a local Chapter Historical activity performed by an actively engaged YEA member". Reference 2021-2022 PAOE Newsletter - Tag# YEA8 (under YEA)	Communications / Regional Historian Guidelines Committee	Niss Feiner / Wei Sun / Spencer Morasch (ExO)	4	2a	6/30/2022	No
4	Historical Category PAOE Update Summary Report at Annual & Winter Conferences to include copy similar to 2019-2020 Annual Meeting. Most recent report dated 1/11/2021 was included with Historical Comm. Meeting Minutes of June 3, 2021 (Attachment C).	To encourage Regional Historians to target the below PAR performing Chapters in their Region based on the previous year's Historical PAOE Summary.	Communications / Regional Historian Guidelines Committee	Niss Feiner / Wei Sun / Spencer Morasch (ExO)	4	2a	1/31/2022	Yes
5	Encourage Chapter Historians who don't Attend their Regional CRC to complete the Chapter Historians Training Power Point and promote on-line History Workshop participation at CRCs	Update the Chapter Historians Training PowerPoint. Add points for submittal of a completed MBO with phone discussion with Regional Historian prior to August 30 of current fiscal year. Promote on-line workshop participation at CRCs	Communications / Regional Historian Guidelines Committee	Niss Feiner / Wei Sun / Spencer Morasch (ExO)	4	2a	6/30/2022	No
6	Foster collaboration with other international societies to improve our historical research and support history-related activities of the Society	1. Continue work on collaboration. HC has links with similar groups in CIBSE and AiCARR - opportunity to pursue to work w/similar committees in CEN, International Institute of Ammonia Refrigeration (IIAR), International Institute of Refrigeration (IIR), & Global Cold Chain Alliance (GCCA). 2. Continue work to investigate ASHRAE membership in the IEEE History Center. Grow support in the Life Members Club to fundraise and create an endowment fund that would provide ongoing financial support to sustain membership in the IEEE History Center.	Morasch & Feiner	Spencer Morasch & Niss Feiner	4	2b	6/30/2022	No for some groups, but YES for IEEE History Center
7	Leadership Recall - Arrange for videos at Winter Conference - January 2022	Arrange two Presidential interviews. Review other potential interviewees	Awards / Leadership Recall Committee	Niss Feiner / Robert Pollard / Spencer Morasch (ExO)	4	1b, 2c	1/31/2022	Possibly
8	Leadership Recall - Arrange for videos at Annual Conference - June 2022	Arrange two Presidential interviews. Review other potential interviewees	Awards / Leadership Recall Committee	Niss Feiner / Robert Pollard / Spencer Morasch (ExO)	4	1b, 2c	6/30/2022	Possibly
9	Digitize Archived Journals + Transactions	Encourage digitalization of all Society Journals and Transactions	Administrative / Archives Committee	Glen Remington / Norman Grusnick / Atilla Biyikoglu / S. Morasch (ExO)	3	3b	6/30/2022	Yes
10	Historical Awards - Encourage submission of nominations for Chapter Historian Gold Ribbon Awards and the Society Lou Flagg Historical Award.	A min. of one Gold Ribbon Award Nominee in each Region, and at least two nominations submitted for the Lou Flagg Historical Award	Administrative / Archives Committee	Glen Remington / Norman Grusnick / Atilla Biyikoglu / S. Morasch (ExO)	4	2a	12/31/21 for Lou Flagg Award, 6/30/22 for Gold Ribbon Award Nominations.	No
11	Historical Committee Newsletter - Resume publishing a newsletter for the target audience of Regional & Chapter Historians.	4 Newsletters published during the Society year.	Communications / Regional Historian Guidelines Committee	Niss Feiner / Wei Sun / Spencer Morasch (ExO)	4	1b, 2a, 2c	4 Editions: Target publish dates of July, Oct., Jan. & April.	No

Publications Committee Feedback for PEC MBO 1 from SY 2020-2021

In response to PEC MBO 1, "Create a Sales Business Plan for PEC by identifying 3 to 5 digital product strategies," the Publications Committee submits the following suggestions.

Preliminary suggestions reported to the Products Subcommittee at the 2021 ASHRAE Annual Conference:

- Explore virtual reality for products
- Explore packaging together publications for college courses or for certification or other types of continuing education
- Create apps that go with our publications

Additional suggestions generated by the 2021-2022 Publications Committee subcommittee created to focus on this MBO:

- Produce video content such as the following:
 - Technology Award winner videos (possibly free the day of first airing and watchable for a small fee later)
 - Informational videos
 - Hands-on training videos (possibly sponsored)
 - Offering the videos in different languages (transcripts possibly a lower cost option)
 - Virtual technical tours of factories

Publications Committee Feedback for PEC MBO 2 from SY 2020-2021

In response to PEC MBO 2, “To develop a PEC Business Model that includes offering ASHRAE products and services to non-commercial entities,” the Publications Committee submits the following suggestions.

Preliminary suggestions reported to the Products Subcommittee at the 2021 ASHRAE Annual Conference:

- Work with Government Affairs Committee
- Work with the academic sphere (including universities)
- Encourage government agencies to share our content/offerings when educating others about certain topics
- Engage the chapters
- Guide customers to other related publications after they have downloaded the AEDGs for free (publications that will help them meet their goals)

Additional suggestions generated by the 2021-2022 Publications Committee subcommittee (2022) created to focus on this MBO:

- Work with Government Affairs Committee (GAC) to:
 - Provide a means for continuous feedback from GAC on the changing needs of the global communities’ policy makers, code officials, and ASHRAE members: are ASHRAE’s products what is needed, or what modifications, additions, or new products are needed?
 - Provide HVAC education in the public sector (for example, for facility managers).
 - Support codes and standards development for developing countries.
 - Offer subscriptions to government entities that use our standards and other publications.
- Develop a targeted non-technical summary of standards for government officials, building owners, etc. in order to promote standards and guidelines and other applicable publications.
- Target the educational sector with publications similar to certifications—work with universities to determine which documents and what price points.
- Work with the Epidemic Task Force to promote our publications.
- Produce carbon-related products developed by the Task Force for Building Decarbonization.

Publications Committee Feedback Regarding PEC Using ETF Information

In response to the cross-council request before the 2021 Annual Conference that committees suggest ways to capitalize on the valuable and timely information generated by the Epidemic Task Force (ETF) and Task Force for Building Decarbonization (TFBD) and how to incorporate their gathered data into PEC products and services, the Publications Committee submits the following suggestions.

Preliminary suggestions reported to the Products Subcommittee at the 2021 ASHRAE Annual Conference:

- Solicit content from TCs
- Produce design guides
- Publish *ASHRAE Journal* articles on the information
- Include the content in Handbook chapters

Additional suggestions generated by the 2021-2022 Publications Committee subcommittee created to focus on this task:

- Collect all ETF one-page guidance into a single PDF and post it on the ASHRAE website for free download.
- Make the longer ETF guidance PDFs separate downloads available for sale in the bookstore or keep them posted for free.
- Work with Alice Yates to promote ETF and TFBD publications and training to groups she's worked with before, such as General Services Administration (GSA) and NYSERDA.
- Promote and produce publications to assist governments making goals for decarbonization.

Additional suggestions shared with a member of Publications Committee by a member of the TFBD (which means these ideas are likely also being shared with other committees and councils):

- Develop a Carbon Audit Guidebook
- Embodied Carbon of Various Materials Metrics (possibly on a regional basis world-wide)
- Operational Carbon Metrics
- Carbon Definitions (for analysis, design and performance verification purposes)
- Optimization of Embodied versus Operational Carbon
- Carbon Analysis Tools for Designers
- Carbon Tools for Code Officials – Residential and Commercial Buildings (initially)
- Educational Carbon-based Tools Development & Outreach – Designers, Policy Makers and General Public
- Subscription Service for Government Officials and Policy Makers – Non-technical summaries developed by Standards Committees and Technical Committees/Task Groups of new ASHRAE Standards, Design Guides, technical publications, etc... Provide options for sought summaries to subscribers and the languages these summaries would be provided in.
- Provide a means for continuous feed-back from GAC (and its RVCs) on the changing needs of the global communities' policy makers, code officials and the ASHRAE members who are striving to meet the carbon-reduction challenges they are under—are ASHRAE's products what is needed or what modifications, additions or new products are needed?

Motion to Endorse MCAA Publication

MOTION

Pub/ED Council Date 12-2-21
Publication Committee Day Sa Su M Tu W Th F
MOVED BY: Megan Tosh
SECONDED BY: Abdel Darwich

MOTION: That ASHRAE endorse the Mechanical Contractors Association of America's (MCAA) publication, Change Orders, Productivity and Overtime: A Primer for the Construction Industry.

BACKGROUND:

1. As of May 31, 2021, our membership included 17,892 consulting engineers, 4,478 contractors and 2,788 design/build contractors, approximately 50% of ASHRAE's total membership. All these professions grapple daily with issues revolving around change orders, productivity, and overtime. It would benefit our members to have a consistent, quantifiable methodology for addressing this long-term and contentious problem. The MCAA manual has been successfully used in court and arbitration decisions for many years and thus would give our members confidence in resolving disputes equitably.
2. The American Society of Civil Engineers (ASCE) recently published Standard 71-21, 'Identifying, Quantifying, and Proving Loss of Productivity. As this publication has already made it to market, it is not likely that another similar Standard could be supported by the industry. Thus, ASHRAE would not be in a good position to develop its own Standard on the topic.
3. The National Electrical Contractors Association (NECA), the Sheet Metal and Air Conditioning Contractors National Association (SMACNA) and the American Subcontractors Association (ASA) have all endorsed the MCAA publication. MCAA is requesting that ASHRAE similarly endorse the publication to provide a uniform basis across the mechanical industry to address change orders, productivity, and overtime issues amongst all parties.
4. MCAA and ASHRAE have enjoyed a long and collaborative relationship beginning in 1894 when ASHRAE's predecessor, the American Society of Heating and Air-Conditioning Engineers (ASHAE) formed out of the MCAA. Endorsing MCAA's publication on Change Orders, Productivity, and Overtime would renew and strengthen this important relationship between the two organizations.
5. MCAA's Change Orders, Productivity and Overtime: A Primer for the Construction Industry, is under continuous maintenance, which results in a revised edition on approximately a two-year cycle. It the intent of this motion to endorse the publication, not the edition. The endorsement would then automatically apply to the current edition, thus avoiding the need to renew the endorsement every time a new edition was published. The 2020 edition is the current edition.

FISCAL IMPACT: None

Vote count: For 7 Against 0 Abstaining 0
Chairman voting? Yes _____ No X
Motion passed Y Motion failed _____
Referred to: Publishing and Education Council

Publications Committee MBOs for Society Year 2021-2022

Chair: Adeeba Mehboob Date: 30 January 2022

MBO #	Description	Metric	Initiative #	Goal #	Estim. Compl. Date	Financial Assist Req'd?
1	Identify and initiate a pilot Applications guide	Based on member survey results have Meetings with Handbook Committee, TEC, TCs. Contact and Identify Potential Authors. Initiate pilot guide.	3 & 4	1a, 1b, 3a	30-Jun-22	Maybe
2	Recommend to PEC at least two Digital Product Strategies, in response to PEC MBO 1 (2020-21)	Investigate and identify the business case of ASHRAE Apps, Report to Products Subcommittee	3 & 4	1a, 1b, 2c,	COMP	No
3	Recommend to PEC at least one ASHRAE Product or Service targeted to non-commercial entities, in response to PEC MBO 2 (2020-21)	Investigate and identify the business case of ASHRAE Apps, Report to Products Subcommittee	3 & 4	1a, 1b, 3a, 3c	COMP	No
4	Develop Publications Performance Metrics for the Publications Committee	PubC Dashboard, Information database	3	1b, 3b	Jan 22	No
5	Support Journal Editor in reviewing and enhancing the quality of the ASHRAE Journal	Provide Feedback and Recommendations for topics for Technical Feature Articles, review editorial calendar, solicit journal articles from international authors, coordinate with CTTC	4	1a, 1b, 2a, 2c, 3c	22-Jan	No
6	Support Editor in reviewing and enhancing the quality of the ASHRAE newsletter	Provide Feedback and Recommendations for Newsletter content and editorial quality	4	1a, 1b, 2a, 2b, 2c, 3c	22-Jan	No
7	Suggest at least two ideas on how ASHRAE can incorporate data gathered as part of the ETF or the Decarbonization TF into PEC products and services.	Report to Products Subcommittee	3 & 4	1a, 1b, 2b, 3c	COMP	No
8	Identify all unprofitable/unused publications and formulate an action plan.	database and Identification of publications, proposed action plan. Report to Products Subcommittee. Propose stagewise review, targeting books first likely instead of standards or transactions.	3	3a,	30-Jun-22	No
9	Increase International Outreach of ASHRAE Publications	Identify potential ASHRAE Publications of interest to international markets, engage regions and local chapters in awareness and marketing,	4	1a, 1b, 2a, 2b, 3a, 3b, 3c	30-Jun-22	No

Attachment K
 PEC Report to BOD
 February 2, 2022 - Las Vegas Winter Conference

TEC MBOs for Society Year 2021-22
 Chair: Keith Reihl Date: July 16, 2021
 Planning Subcommittee Chair Jim Vallort
 Operations Subcommittee Chair Jesse Fisher

Objective	SP	Complete by	Fiscal Impact	Responsible Party	Comment/ Status
1. Review new strategic plan for items that apply to TEC and develop a plan to implement 2 ideas from the review. Implement 1 idea in the fall and 1 in the spring.			None	Planning Subcmte	List 2 ideas and implement timeline
2. Develop Dashboard for QUICK LOOK analytics for TEC		1-1-22	None	Reihl/Staff	In progress
3. Develop/Modify HVAC 101 courses to prepare for CHD exam. Look at BCxP, BEMP, BEAP.			TBD	Planning Subcommittee	Back to instructors. What topics does your course cover?
4. Develop Financial Model for course evaluation				Operations Subcommittee	Draft expected data needs. Per course needs

1. Develop topics and RFPs for an additional (3) practical applications courses			None	Planning Subcommittee	
2. Review SDLs and issue RFPs for the ones that need updating on prescribed schedule			None	Operations Subcommittee	
3. Review existing courses and sunset those that have not been used in 5 years or recommend updates			None	Operations Subcommittee	
4. Every course reviewed by TEC Liaison prior to presentation– Quality check			None	Planning Subcommittee	
5. Develop marketing plan for TEC courses/branding. Work with ASHRAE marketing to understand and improve			TBD	Operations Subcommittee	Continuous – 1 conf. call early fall and 1 conf. call early spring