



**MINUTES**  
**EXECUTIVE COMMITTEE MEETING**

**June 21 and 25, 2021**

**Approved by the Executive Committee on November 18, 2021.**

**TABLE OF CONTENTS**  
Executive Committee Meeting  
June 21 and 25, 2021

<b>CALL TO ORDER</b> .....	<b>2</b>
<b>CODE OF ETHICS</b> .....	<b>2, 5</b>
<b>ROLL CALL/INTRODUCTIONS</b> .....	<b>2, 5</b>
<b>REVIEW OF MEETING AGENDA</b> .....	<b>2, 5</b>
<b>APPROVAL OF MINUTES</b> .....	<b>2</b>
<b>REVIEW OF ACTION ITEMS</b> .....	<b>2</b>
MARCH 25, 2021 .....	2
APRIL 12, 2021 .....	2
JUNE 3, 2021 .....	2
<b>TREASURER’S REPORT</b> .....	<b>2-3</b>
2020-21 FINANCIAL UPDATE .....	2
FINANCIAL STATEMENTS AND MAJOR VARIATIONS .....	3
FINANCE COMMITTEE REPORT - 2021-22 BUDGET .....	3
<b>TECHNOLOGY COUNCIL REPORT</b> .....	<b>4</b>
<b>APPROVAL OF PUBLIC POLICY PRIORITIES (PPPs)</b> .....	<b>5</b>
<b>EXECUTIVE SESSION</b> .....	<b>5, 14</b>
<b>IRON MOUNTAIN OFFSITE STORAGE</b> .....	<b>5-6</b>
<b>FUTURE HOTEL CONTRACTS</b> .....	<b>6</b>
<b>APPROVAL OF PUBLIC POLICY ISSUE BRIEFS (PPIBs)</b> .....	<b>6-7</b>
<b>REPORTS OF BODIES REPORTING TO EXCOM</b> .....	<b>8-9</b>
FOUNDATION TRUSTEES .....	8
JOINT EXPO POLICY COMMITTEE .....	8
COLLEGE OF FELLOWS .....	8
LIFE MEMBERS CLUB .....	8
AEDG STEERING COMMITTEE .....	8-9
AASA .....	9
INTERNATIONAL STANDARDS INTERACTION TASK FORCE .....	9
<b>REPORT OF THE PRESIDENT</b> .....	<b>9</b>
<b>REPORT OF OFFICERS’ CRC AND INTERSOCIETY VISITS</b> .....	<b>10</b>
<b>OLD BUSINESS</b> .....	<b>11-13</b>
AIA COMMUNIQUE .....	11
SRC SIMPLIFIED RULES OF ORDER UPDATE .....	12-13
<b>NEW BUSINESS</b> .....	<b>13-14</b>
STREAMLINING PLANS .....	13-14
<b>OUTGOING</b> .....	<b>14</b>
<b>UPCOMING MEETINGS</b> .....	<b>14-15</b>
2021-22 CRC SCHEDULES .....	14
FALL MEETING - LA CROSSE, WI .....	15
<b>ADJOURNMENT</b> .....	<b>15</b>

## PRINCIPAL APPROVED MOTIONS

Executive Committee Meeting

June 21 and 25, 2021

No. - Pg.	Motion
1 - 2	The minutes from the March 25, 2021, April 12, 2021, May 6, 2021, and June 3, 2021 ExCom meetings be approved.
2 - 4	Technology Council recommends the change to the Title, Purpose and Scope (TPS) of the ASHRAE Infectious Aerosols Position Document (PD), as shown in ATTACHMENT B.
3 - 4	Technology Council recommends the approval of an ASHRAE position document on "Building Decarbonization," as shown in ATTACHMENT C.
4 - 5	The Public Policy Priorities (PPPs) for Society Year 2021-22, as shown in ATTACHMENT D, be approved.
5 - 6	Technology Council recommends that the Board of Directors (BOD) ExCom approve the following Public Policy Issue Briefs (PPIBs): <ul style="list-style-type: none"><li>• <i>Climate Change and the Built Environment</i></li><li>• <i>Environmental Tobacco Smoke</i></li><li>• <i>Refrigerants and Their Responsible Use</i></li><li>• <i>Indoor Air Quality</i></li><li>• <i>Building Energy Benchmarking, Assessments, and Performance Targets</i></li></ul> The full PPIBs are included in ATTACHMENT E.
6 - 7	Technology Council recommends that the Board of Directors (BOD) ExCom approve the Public Policy Issue Brief (PPIB) on <i>STEM Education and Workforce</i> , as shown in ATTACHMENT F.
7 - 7	Technology Council recommends that the Board of Directors (BOD) ExCom approve the Public Policy Issue Brief (PPIB) on <i>Consensus Standards: Expert Solutions to Meet Global Needs</i> , as shown in ATTACHMENT G.
8 - 7	Technology Council recommends that the Board of Directors (BOD) ExCom approve the Public Issue Policy Brief (PPIB) on <i>Resiliency in the Built Environment</i> , as shown in ATTACHMENT H.

**ACTION ITEMS**

Executive Committee Meeting

June 21 and 25, 2021

<b>No. - Pg.</b>	<b>Responsibility</b>	<b>Summary of Action</b>	<b>Status</b>	<b>Goal Date</b>
1 -	Littleton	Work on a better MOU with CAR. (Carryover from June 22 and 30, 2020)	Ongoing	
2 -	Gulledge	NSF International; renew MOU that expired December 2016. (Carryover from June 22 and 30, 2020).	Ongoing	
3 -	Littleton and Brandt	Explore the possibility of an MOU with IEA. Work with Mr. Olesen to flush out recommendations and report back to ExCom. (Carryover from August 12, 2020).	Ongoing	
4 -	Littleton	Conduct a review of the Bylaws. (Carryover from June 22 and 30, 2020)	HOLD	
5 -	Macauley, Reiniche, Abrams	Investigate how TEAMS can be used as a central repository for ExCom's interactions with strategic partners. Recommendations will be presented to ExCom at the July 2 <sup>nd</sup> meeting. (Carryover from June 3, 2021).	Ongoing	
6 -	McQuade, Dean, Maston, Reiniche	Work with the Standards Committee to develop and present a plan for pathogen mitigation to ExCom by the July 2 <sup>nd</sup> meeting. (Carryover from June 3, 2021).	Ongoing	
7 - 6	Brandt	Ask CEC to consider adding DEI strategies and decarbonization to the future hotel contracts RFP.		July 2021
8 - 11	Scoggins	Refer the AIA Communique document to the Decarbonization Task Force for feedback and a final recommendation for ExCom.		July 2021
9 - 13	All Members	Review the draft simplified rules of order from SRC and send comments to Chandrias Jacobs.		July 2021



**MINUTES**  
**EXECUTIVE COMMITTEE MEETING**  
June 21 and 25, 2021

**MEMBERS PRESENT:**

Chuck Gulledge, President  
Mick Schwedler, President-Elect  
Farooq Mehboob, Treasurer\*  
Bill Dean, Vice President  
Don Brandt, Vice President  
Bill McQuade, Vice President  
Tim McGinn, Vice President  
Jeff Littleton, Secretary

\*Member was not present the entire meeting.

**GUESTS PRESENT:**

Ginger Scoggins  
Sarah Maston  
Dunstan Macauley  
Chad Smith  
David Underwood  
Tom Phoenix  
Drake Erbe  
Rick Hermans  
Trent Hunt

Steven Bushby  
Jim Fields  
Dennis Knight  
Doug Cochrane  
Don Colliver  
Ken Fulk  
Stephen Roth  
William Ryan

**STAFF PRESENT:**

Candace DeVaughn, Manager - Board Services  
Chandrias Jacobs, Coordinator - Board Services  
Joyce Abrams, Director - Member Services  
Vanita Gupta, Director - Marketing  
Kim Mitchell, Chief Development Officer  
Mark Owen, Director - Publications & Education  
Stephanie Reiniche, Director - Technology  
Alice Yates, Director - Government Affairs  
Annmarie Wilhoit, Interim Director of Finance

Tony Giometti, Sr. Mgr. - Conference Programs  
Dustin Mason, Development Manager  
Margaret Smith, Development Mgr. - Foundation  
Lilas Pratt, Manager - Special Projects  
Julia Mumford, Development Mgr. - RP  
Megan Gotzmer, Assistant Mgr. of Development - RP  
Ryan Shanley, Manager - International Standards

**CALL TO ORDER**

Mr. Gulledge called the meeting to order on Monday, June 21, 2021 at 8:00 am.

**CODE OF ETHICS**

Mr. Gulledge read the code of ethics commitment and encouraged all members to read the full code of ethics and core values on ashrae.org.

**ROLL CALL/INTRODUCTIONS**

Roll call was conducted. Members, guests, and staff in attendance as noted above.

**REVIEW OF MEETING AGENDA**

Mr. Gulledge reviewed the meeting agenda; there were no changes or additions.

**APPROVAL OF MINUTES**

Mr. Brandt moved and Mr. Dean seconded that

1. The minutes from the March 25, 2021, April 12, 2021, May 6, 2021, and June 3, 2021 ExCom meetings be approved.

**MOTION 1 PASSED (Unanimous Voice Vote, CNV).**

**REVIEW OF ACTION ITEMS****MARCH 25, 2021**

Action items 1, 4, and 5 were reported as ongoing. Action items 2, 3, 6, 7, and 9 through 16 were reported as complete. Action item 8 was reported as on hold.

**AI - 1-4****APRIL 12, 2021**

The action item was reported as complete.

**MAY 6, 2021**

The action item was reported as complete.

**JUNE 3, 2021**

Action items 1 and 2 were reported as ongoing. Action item 3 was reported as complete.

**AI - 5-6****TREASURER'S REPORT**

Mr. Mehboob reported. Full report included in ATTACHMENT A.

**2020-21 FINANCIAL UPDATE**

Mr. Mehboob reported that he is providing a preview for the committee. He reported that the Society has done well maintaining expenses in the face of declining revenues.

**FINANCIAL STATEMENTS AND MAJOR VARIATIONS**

Ms. Wilhoit reported that cash flow will be heavier primarily because of Research contributions. She reported that the forecast for membership dues has been increased by \$100,000 and it is anticipated that it will increase by another \$100,000 by the time the staff directors provide their forecasts at the end of the week.

Mr. Mehboob reported that the budget does not currently take the PPP loan forgiveness into account as income. He stated that Finance needs to discuss the loan forgiveness and make recommendations to the BOD.

He reported the following major variations to the committee - membership dues are trending higher; publication sales are trending higher. Mr. Mehboob reported that there has also been a reduction in advertising income; there has been downward pressure on print advertising both before and during the pandemic. He stated that the Society needs to continue looking at how to reverse this trend.

Mr. Mehboob reported that meetings and conferences are tending down and that this trend is related to not having an in-person Annual Conference, YEA Leadership Weekend, or topical conferences. Education registration is down as well due to the loss of in-person exams and the transition time to virtual.

He reported that the full reserve transfer was not used.

Mr. Mehboob reported that publishing costs, promotion costs, education and training expense, as well as meetings and conferences costs are down due to virtual meetings. Expenses are down because virtual meetings are less expensive, and transportation reimbursements have been drastically reduced. He added that office expenses are down as well.

He reported that the Society is doing better than forecasted.

**FINANCE COMMITTEE REPORT - 2021-22 BUDGET**

Mr. Mehboob reported that net assets are up. He encouraged the Society to think about the PPP loan forgiveness holistically.

He reported that the committee's MBOs were completed and a detailed report will be given to the BOD. The BOD will also receive the final budget for approval on Thursday.

The committee has begun the search for a new investment advisor.

Ms. Scoggins stated that she would like the details of both PPP loans made very clear for the BOD.

Mr. Littleton stated that there has not been a deep dive on how the loan forgiveness will impact the financials. He reported that forgiveness of the first loan will impact the current Society year and he is planning to meet with Ms. Wilhoit to determine how to reflect forgiveness in the current year's financials.

Ms. Wilhoit reported that PPP loan forgiveness will reduce liability and the amount of the loan will become miscellaneous, non-taxable income.

**TECHNOLOGY COUNCIL REPORT**

Mr. McQuade reported.

Mr. McQuade moved that

2. Technology Council recommends the change to the Title, Purpose and Scope (TPS) of the ASHRAE Infectious Aerosols Position Document (PD), as shown in ATTACHMENT B.

Mr. McQuade reported that recommendation passed 10-1-0, CNV; the one dissenting vote was from Mr. Hermans. Mr. Hermans voted no for the following reason - *My issue is that the PD should be broad enough to accommodate those aerosols that become re-entrained into the room air subsequent to their deposition on surfaces. Although the current infectious aerosol may not pose a significant hazard to respiration, there are several infectious aerosols that do pose a hazard even after they become re-aerosolized.*

Mr. Schwedler spoke in favor of the motion. He noted that the term 'systems' was removed from the purpose but is still referenced in the scope.

Mr. McQuade stated that he would bring this point before the council. Ms. Reiniche stated that the council will advise if removing this reference is editorial or not.

**MOTION 2 PASSED (Unanimous Voice Vote, CNV).**

Mr. McQuade moved that

3. Technology Council recommends the approval of an ASHRAE position document on "Building Decarbonization," as shown in ATTACHMENT C.

Mr. McQuade reported that this PD is coming out of the Task Force for Building Decarbonization and was approved unanimously by the council.

Mr. Schwedler spoke in favor of the motion. He asked if there is another word that can be used in place of 'Federal' in the third bullet point. He stated that perhaps there is a better word that can be used moving forward, as the Society is a global organization.

Mr. McQuade stated his belief that the intent of the PD is to be global and that the reference is meant to refer to country wide regulation. He stated that perhaps it should be written as 'federal' as opposed to 'Federal.'

Mr. Mehboob suggested using 'national' as opposed to 'federal.'

**MOTION 3 PASSED (Unanimous Voice Vote, CNV).**

Mr. Gulledge asked that ExCom's commentary on the new PD be communicated to the appropriate body so that the correct inclusive language is being used.

Mr. McQuade reviewed the Council's information items.



**APPROVAL OF PUBLIC POLICY PRIORITIES (PPPs)**

Mr. Mehboob reported that the current PPPs were updated in May to support building decarbonization and were approved unanimously by GAC in June.

Mr. Mehboob moved that

4. The Public Policy Priorities (PPPs) for Society Year 2021-22, as shown in ATTACHMENT D, be approved.

**MOTION 4 PASSED (Unanimous Voice Vote, CNV).**

Mr. Gulledge thanked Ms. Yates for her work and the work of GAC.

**EXECUTIVE SESSION**

Executive session was called at 9:04 am on June 21, 2021.

Open session reconvened at 9:30 am.

The meeting recessed at 9:31 am on June 21, 2021.

The meeting reconvened at 8:00 am on June 25, 2021.

**CODE OF ETHICS**

Mr. Gulledge reminded members of the code of ethics commitment.

**ROLL CALL/INTRODUCTION**

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

**REVIEW OF MEETING AGENDA**

Mr. Gulledge added 'Streamlining Plans' to *New Business*.

**IRON MOUNTAIN OFFSITE STORAGE**

Mr. Littleton reported that most of the items in offsite storage are very old. The process of extricating Society from this arrangement is going to be expensive; there is a cost to pull items from storage, ship them, and to dispose of items.

Ms. Wilhoit reported that the easiest path forward is for staff to review the storage list and indicate which items should be destroyed. She stated that old items have been requested in the past and they were yellowed and had paper mites so it may not be a good idea to have these items shipped to Headquarters.

She reported that there are about 4,000 boxes at Iron Mountain; the majority of which are likely old envelopes and stationery. She reported that there may be some permanent minutes that need to be brought back to Headquarters. She stated that staff will be asked to make this a priority.

Mr. Littleton reported that there is around a two year pay back on this effort and that upfront costs are required to get Society out from under these ongoing monthly costs.

### **FUTURE HOTEL CONTRACTS**

Mr. Littleton reported that it has been suggested that stock language be drafted to address IAQ issues in future contracts.

Mr. Brandt reported that the language refers to energy efficiency and sustainability. He stated that specific to Caesars, items 1A, 1C, and 1D should be included as they relate to IAQ only.

Mr. McGinn suggested that language on DEI practice should be added as well.

Ms. Maston stated that from a CEC standpoint, the Annual Conferences are the only time that Society has any real choice. She stated that it is great to compile a list of wants, but she questioned how many choices Society actually has, as there are often not many choices of venues that can meet our logistic requirements. She asked if Society would be willing to pay a premium to meet these requirements.

Mr. Giometti stated that Ms. Maston's point was well taken. He stated that some hotels will embrace this and others will not. He stated that it is accurate that there are generally only a handful of hotels in each city that are considered.

He reported that the first time this language would be put into practice would be for the 2026 Annual Conference.

Mr. Schwedler applauded the excellent work. He suggested changing the use of 'or' to 'and' when referencing a Standard or other benchmark.

Mr. Brandt will ask CEC to consider adding DEI strategies and decarbonization to the future hotel contracts RFP.

**AI - 7**

Mr. Gullledge stated that there was consensus that this new RFP language be reported to the BOD as an information item and that CEC be tasked with updating the language as needed and implementing it for future use.

### **APPROVAL OF PUBLIC POLICY ISSUE BRIEFS (PPIBs)**

Mr. McQuade reported.

Mr. McQuade moved that

5. Technology Council recommends that the Board of Directors (BOD) ExCom approve the following Public Policy Issue Briefs (PPIBs):

- *Climate Change and the Built Environment*
- *Environmental Tobacco Smoke*
- *Refrigerants and Their Responsible Use*
- *Indoor Air Quality*
- *Building Energy Benchmarking, Assessments, and Performance Targets*

The full PPIBs are included in ATTACHMENT E.

Mr. McQuade reported that these PPIBs were drafted and approved by GAC, reviewed by the Document Review Subcommittee and approved by Technology Council. The purpose of the PPIB is not for technical uses but to inform government officials of the issues in an easy to read format. PPIBs can be revised when necessary.

Mr. Brandt spoke in favor of the motion. He stated that GAC has done a great job providing information to our public officials.

**MOTION 5 PASSED (Unanimous Voice Vote, CNV).**

Mr. McQuade moved that

6. Technology Council recommends that the Board of Directors (BOD) ExCom approve the Public Policy Issue Brief (PPIB) on *STEM Education and Workforce*, as shown in ATTACHMENT F.

Mr. McQuade reported that there was one dissenting vote from Ms. Thomle. Ms. Thomle noted that the PPIB was drafted prior to the approval of the diversity commitment statement. He reported that the consensus was that it would be easier for ExCom to insert equity as opposed to the entire document going back to GAC for editing.

There was consensus that 'equity' be added as an editorial edit to the Society's commitment in the PPIB.

**MOTION 6 PASSED (Unanimous Voice Vote, CNV).**

Mr. McQuade moved that

7. Technology Council recommends that the Board of Directors (BOD) ExCom approve the Public Policy Issue Brief (PPIB) on *Consensus Standards: Expert Solutions to Meet Global Needs*, as shown in ATTACHMENT G.

Mr. McQuade reported that there was one dissenting vote from Ms. Thomle.

**MOTION 7 PASSED (Unanimous Voice Vote, CNV).**

Mr. McQuade moved that

8. Technology Council recommends that the Board of Directors (BOD) ExCom approve the Public Issue Policy Brief (PPIB) on *Resiliency in the Built Environment*, as shown in ATTACHMENT H.

**MOTION 8 PASSED (Unanimous Voice Vote, CNV).**

Mr. McQuade reviewed the council's action items.

There was discussion of the current PPIB approval process and suggestions for streamlining. It was stated that approvals should not go any higher than Tech Council. It was also stated that PPIBs come before ExCom to ensure alignment with strategic and long-term plans; and new PPIBs should be approved by ExCom while renewals should be approved by Tech Council.

Mr. Schwedler suggested that Tech Council bring forward a motion recommending changes to the ROB if they feel the process should be changed.

**REPORTS OF BODIES REPORTING TO EXCOM****PRESIDENT-ELECT ADVISORY COMMITTEE**

Mr. Schwedler reported. He thanked Julia Keen, his speech coach, and his wife.

**FOUNDATION TRUSTEES**

Mr. Fields reported. Full report included in ATTACHMENT I.

Mr. Fields appealed to members of ExCom to be champions of endowing scholarships; this is an activity that the Society needs to be supportive of and work together as a team.

He reported that Mr. Brady, who endowed a \$100,000 scholarship, recently passed away.

Ms. Scoggins asked if there is anything that Society can do to acknowledge his generosity at his service.

Mr. Fields responded that he would take care of that on behalf of Society. Ms. Mitchell added that messaging at the Annual Conference will also acknowledge his passing.

Mr. Littleton thanked Mr. Fields for his excellent leadership over the past three years.

**JOINT EXPO POLICY COMMITTEE**

Mr. Brandt reported that 460,000 out of 490,000 square feet exhibition space in Las Vegas had been sold. He reported that there is an additional 20,000 square feet available for sale if demand exceeds 490,000 square feet.

He reported that the income projected for the Vegas Expo is slightly low.

**COLLEGE OF FELLOWS**

Ms. Gotzmer reported. The College had no recommendations for consideration. Ms. Gotzmer reviewed the College's information items.

**LIFE MEMBERS CLUB**

Ms. Gotzmer reported. The LMC had no recommendations for consideration. Ms. Gotzmer reviewed the LMC's information items.

**AEDG STEERING COMMITTEE**

Mr. McQuade reported. The committee had no recommendations for consideration. Mr. McQuade reviewed the committee's information items.

Mr. Phoenix reported that the committee is composed of four partners and Society is one of those partners. He reported that Mr. McQuade served as Society's rep for four years and is rolling off at the end of the Society year. He expressed his thanks to Mr. McQuade for his outstanding service on the steering committee.

Mr. Dean stated his opinion that either the BOD or ExCom should pay close attention to DOE's search for more dynamic content. He added that Society is set up as a publishing company for revenue and needs

to pay attention to what threat that may pose in the future if our partners stop publishing books and PDFs.

Mr. McQuade stated that if Society works hand in hand with DOE to determine what the new delivery format is, there is a possibility that they will fund our transition to that new format. He agreed that this is something that should be followed up on and might be worth having a broader discussion on. Mr. McQuade stated that he would be happy to help in any way he can.

### **AASA**

Mr. Mehboob reported that AASA has not yet met and will be meeting tomorrow.

He provided an update on what has happened in the past six months. He stated that the AASA implemented a new structure comprised of four regions that report to a leadership council. He reported that leadership counselors have been appointed and task groups have been assigned specific tasks.

### **INTERNATIONAL STANDARDS INTERACTION TASK FORCE**

Mr. Bushby reported. The task force had no recommendations for consideration. Mr. Bushby reviewed the group's information items.

He reported that the group has established a monthly meeting schedule.

Mr. Erbe reported that the task force is an enthusiastic group and is willing to take on challenges. He stated that the task force is an exciting opportunity, and the group is just getting started.

### **REPORT OF THE PRESIDENT**

Mr. Gulledge reported that it has been a hard year. He reported that he tried to make himself available to the world despite travel restrictions, visiting 157 chapters, 6,000 members, and 3,000 people outside of Society. A number of DRCs assisted in making these visits possible.

He reported that he and Mr. Schwedler are focusing on visiting chapters that have not had a Presidential visit in a long time. In the virtual world, the possibilities are limitless, but he expressed his hope that Mr. Schwedler will have an opportunity to visit chapters face-to-face.

Mr. Gulledge used Region XIII of an example of the nuances of groups in the virtual world. He reported that Region XIII replicated what RAL did and had three to four chapters in a virtual meeting; each chapter would report on who they were and would present a video of their local culture. This format allowed him to be immersed in their cultures remotely.

Mr. Schwedler stated that chapters would report how good it was to "see" the President. He stated that the members felt connected to President Gulledge in the virtual environment.

Mr. Macauley stated that President Gulledge may hold the record for the most chapters and regions visited in the same day.

Ms. Maston stated that her biggest takeaway from the pandemic is that there is a middle ground; virtual is here to stay. If Society wants to continue to have an increased presence, virtual will need to be capitalized on and Society leadership should investigate ways to make it work even better in the future.

## **REPORTS OF OFFICERS' CRC AND INTERSOCIETY VISITS**

Mr. Schwedler reported that he attended three spring CRCs, all were well done and organized. He stated that our members are ready to get back together in-person; at the same time, we need to be sensitive to those who are not quite ready to return to face-to-face. We all experienced the pandemic differently and will come out of it differently.

Mr. Brandt reported that when one individual at a virtual meeting has all of the presentations the meeting goes so much smoother than trying to pass presentation rights to multiple members.

Mr. Mehboob reported that he attended two CRCs. He stated that he felt Society did very well in the virtual environment.

Mr. McQuade stated that there was a lot of effort involved for the chapters and regions to unwind what had been planned and come up with a virtual plan on late notice.

Mr. Dean reported that some of the regions experienced technology challenges. Some regions tried new devices and techniques to give a more immersive feel to remote viewers. He added that Society must continue to work to make remote participants feel engaged.

He suggested that the person controlling the presentation slides should not be the person running the meeting. He stated that over the last two years of attending CRCs he has seen them run out of time and not include the staff report. When this happens, staff has spent their time to prepare and travel and then are not engaged in the overall event. He added that he is not happy with the trend of limiting staff travel; staff are so important, and it needs to be ensured that they are engaged and feel welcome at member events.

Mr. Hermans expressed his agreement with Mr. Dean. He stated that it can be very distracting to have problematic issues with technology. He stated his belief that hybrid CRCs are possible but regions must heed the lessons learned and run the meetings tighter. Hybrid should remain an option for the CRCs and perhaps for all meetings. He added that hybrid meetings will present challenges for the Society.

Mr. McGinn stated that he was consistently disappointed in the chapter reports and RVC reports - the time allotted was so short that the reports were not helpful. He expressed that he would like to see twice as much time allotted for reports at the CRCs. If members are taking the time to travel and make reports, that time and effort is not done justice if inadequate time is allotted.

Mr. Gulledge reported that he attended nine CRCs. He reported that when he and Mr. Schwedler were planning throughout the year, their plans often had a shelf life of less than one-hour, as circumstances were changing so quickly. He thanked everyone for managing the speed at which things changed.

He reported that despite the challenges, ExCom was able to touch the regions and be a part of their experience.

He reported that one takeaway was that attendance at workshops was increased in the virtual environment. Members did not have to travel or pay to attend the virtual CRC workshops and as a result, there was much higher participation.

He expressed his thanks to all members for their flexibility.

**OLD BUSINESS****AIA COMMUNIQUE**

Ms. Scoggins reported that everyone on the AIA liaison committee felt this item needed to be reconsidered. The group did not feel that this was a political statement, it is simply presenting a united front with several of our partner organizations.

Mr. Gullledge stated that when this item was discussed previously, there was a voice that provided background information that did reinforce that this communique was political.

Mr. Littleton stated that Society has been spending a lot of time talking about decarbonization lately as a way to mitigate climate change. So, it does seem like a bit of a logic flaw to not sign this. He stated that some people have politicized the issue; but, if Society is going to be serious about decarbonization, we should strive to be influential with regards to the built environment and decarbonization. There is a conflict between that commitment and our unwillingness to sign this document.

Mr. Brandt stated his opinion that Society should sign the document. He stated that there will be people that politicize it, but leadership can work through that.

Mr. McQuade stated that Society has made a significant statement in regard to our decarbonization efforts. He expressed concern with supporting this document as an endorsement of specific targets, as our members are not climate scientists. The commitments that are listed in the document are nationally determined five-year targets for CO2 emissions; as those countries ratchet plans up for the next five-year cycle, they will focus on the 1.5-degree target. He added by contrast, the plans and targets of the Paris Agreement are voluntary, and the only commitment is to verification.

He stated that he did not see benefit in signing nor any harm in not signing.

Ms. Yates reported that the countries that have signed the document agreed to well below a two-degree decrease, but that 1.5 degrees is the minimum stated.

Ms. Scoggins stated that signing the document does not commit Society to the 1.5-degree target, but it is saying that we will take specific actions to help meet that goal. She stated that it provides good targets for what needs to be done and dates to do it by.

Mr. Macauley stated that he is almost convinced that Society should sign the document. He suggested that the Decarbonization Task Force, as Society's panel of experts, be asked to provide a recommendation on whether to sign the communiqué.

Ms. Scoggins will refer the AIA Communique document to the Decarbonization Task Force for feedback and a final recommendation for ExCom.

**SRC SIMPLIFIED RULES OF ORDER UPDATE**

Mr. Fulk reported that Roberts Rules of Order are often misunderstood, are very long and complex, and contains a lot of information that Society never uses. SRC received three examples of simplified rules from staff that were reviewed thoroughly by the committee.

SRC selected one of the three examples, then edited and modified it to fit the needs of Society. The draft document is approximately 40 pages long.

Mr. Fulk reported that there was consensus among the committee that whatever final option is selected, conducting trainings as part of the roll out would be beneficial.

The draft version was presented, and Mr. Fulk stated that SRC is looking for direction from ExCom on how to proceed. He suggested that members of ExCom could review the document and provide the committee with feedback.

Mr. Gulledge stated that he will ask Mr. Schwedler to address this in the new Society year. He commended Mr. Fulk and SRC for their good work.

Mr. Littleton stated that simplified rules of order are important as a significant amount of meeting time is often spent debating and trying to implement Roberts Rules of Order. He suggested that the draft document could be simplified even further, stating that Society's needs are relatively simple from a rules perspective.

He stated that this initiative could be transformative for the Society because it could really simplify things significantly. He agreed with Mr. Fulk that a dedicated training program that all Society level chairs would attend would be beneficial.

Mr. Littleton suggested that a possible path forward would be to do an even deeper dive into the draft document.

Ms. Maston expressed her appreciation to SRC for their work and stated that she looked forward to digging into the draft document even more. She stated that this was a great effort to reduce the stress and angst, particularly from our younger members who often feel that Roberts Rules of Order are outdated and cumbersome.

Mr. Dean stated that in past trainings the simplified version of Roberts Rules of Order was used so he was expecting a more concise document. He stated that the table of contents in the draft document appears to allow members to find answers quickly. He stated that the draft document is different from what he expected to see.

Ms. Scoggins stated that anything that can be done to simplify the current method is absolutely warranted. She agreed that training for members on the final path is warranted.

Mr. Macauley stated that the presented draft document is great. He stated that his vision would be that the draft document would be the official document and there would also be a "cheat sheet" that could be easily referenced. He stated that this is a great simplified version of what Society needs.

Mr. Brandt thanked SRC and staff for their work on this effort. He stated that his vision would be to ask ExCom to provide input on the draft document.

Mr. Schwedler stated that it would be best for each member of ExCom to send comments to Chandrias Jacobs. He stated that he sees this draft document being used in tandem with the condensed Roberts Rules of Order booklet that has been distributed in the past. He stated that maintaining the use of the condensed booklet makes sense because members are familiar with it.

Mr. Brandt reported that the draft document has a table that summarizes things much better than the condensed booklet. He stated that the key to this document is simplifying.



Mr. McQuade stated that he has participated on a number of different boards and would be happy to review and provide feedback, even after he rolls off of the committee.

All members will review the draft simplified rules of order from SRC and send comments to Chandrias Jacobs.

AI - 9

## **NEW BUSINESS**

### **STREAMLINING PLANS**

Mr. Schwedler reported that he would like to discuss how the BOD can move forward after the streamlining related decisions were made yesterday. He heard a significant majority of BOD members say that they were in support of the spirit of the motion.

He stated that the BOD does not need to wait to streamline; committees and councils can begin streamlining now.

Mr. Gulledge stated that the message heard by many was that the BOD liked the idea of streamlining and being the right size; the fear was that the proposed plan was top-down and it didn't define all of the downstream aspects.

He stated that future streamlining plans must address the grassroots representation, what that looks like regionally, and how we bring the voice of the members up to the BOD.

Mr. Underwood stated that simple motions have downstream implications. Members have been trying to make changes to the BOD structure since 2000. He stated that he believed Society was still on the right track.

Mr. Macauley stated that when Society went through a consolidation in the past it took two to three years. He stated that leadership should go out to the chapters with plans and get feedback from them to understand what any issues or concerns are. The BOD seems to keep getting stuck on certain aspects of streamlining based on how the regions will or should be structured.

He suggested that a parallel path could be to investigate or discuss how to structure a new organization, which could yield new ideas.

Mr. McQuade stated that the anxiety an organization experiences when they are forced to make a change can't be discounted. The ad hoc has put in a tremendous amount of work, but consideration has to be given to how to bring the rest of the organization along.

He stated that people will resist change if they don't see how they will fit in or how they will do the things they do now after the reorganization. He heard a lot of people say they don't understand what is being done or why it is being done.

Mr. Dean stated that there seemed to be parts of the plan that the majority of the BOD liked, but that the motions may have been a step ahead of some members' comfort zones. He stated that changes are part of the evolution of the organization. Parts of the organization are going to get cut that no longer work, and members need to get comfortable with that.

Mr. McGinn stated that ExCom's duty is to reaffirm the ad hoc. He suggested that they be allowed to have a cooling off period, time to reorganize their thoughts, and ExCom can assist them with a path forward.

Mr. Mehboob stated that President Schwedler should organize a new team to do this business. He stated that he is unsure if he and Mr. Wentz have the competence or skill set to get this going. He encouraged Mr. Schwedler to create a new team with fresh ideas and allow those members with passionate feedback an opportunity to contribute.

Ms. Maston stated that the hardest thing to hear from the BOD were the misconceptions and misunderstandings. She suggested that the streamlining group look at communication and how the group and leadership are communicated to individuals.

She suggested that streamlining be made a part of a BOD subcommittee and not an ad hoc. She stated that she learned a lot serving on the Streamlining Ad Hoc, but it was also very overwhelming. She stated that there appeared to be an appetite for change, but the way it is communicated and how change is approached needs to change.

Mr. Schwedler stated that he would like to add this item to the July 1<sup>st</sup> BOD agenda. He expressed that Society leadership should not be deterred.

He stated that at this point he is not willing to let anyone walk away from this work, but he will likely find another group to help move the efforts forward.

He stated that one concrete thing that can be done right away is to assemble a group to put together five to eight slides that senior officers can present at the fall CRCs and really reach out to our grassroots and share what Society leadership has been thinking about.

### **OUTGOING MEMBERS**

Outgoing members, Mr. Dean, Mr. McQuade, and Mr. Gullede were thanked for their service and shared comments on their service and experiences.

### **EXECUTIVE SESSION**

Executive session was called at 11:13 am on June 25, 2021.

Open session reconvened at 11:45 am.

### **UPCOMING MEETINGS**

#### **2021-22 CRC SCHEDULES**

Mr. Schwedler reported that he is working with the DRCs to make plans for him to spend at least one week in each Region. He encouraged all members to get to the CRCs and serve them well.

#### **FALL MEETING - LA CROSSE, WI**

Mr. Schwedler reported that he is working with staff to put together the itinerary for this meeting. Details will be shared with the committee soon.

### **ADJOURNMENT**

The meeting adjourned at 11:49 am on June 25, 2021.

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

Jeff H. Littleton, Secretary

**ATTACHMENTS:**

- A. Treasurer's Report
- B. Infectious Aerosols Position Document Edits
- C. Building Decarbonization Position Document
- D. Proposed Public Policy Priorities (PPPs) for SY 2021-22
- E. Proposed Public Policy Issue Briefs (PPIBs)
- F. Proposed Public Policy Issue Brief on *STEM Education and Workforce*
- G. Proposed Public Policy Issue Brief on *Consensus Standards: Expert Solutions to Meet Global Needs*
- H. Proposed Public Policy Issue Brief on *Resiliency in the Built Environment*
- I. Foundation Trustees Report

**Treasurers Report to Executive Committee**  
**From: Farooq Mehboob**  
**As of :June 21, 2021**

**Information Items:**

1. Brief Financial Update excluding forgiven PPP loan.

(in Thousands)	BOD Approved Forecast	Latest Forecast April 30,2021	SY 20-21 Budget
Revenues	\$20,230.9	\$18,216.8	\$24,908.4
Expenses	\$20,643.0	\$18,566.5	\$25,320.5
Surplus/(Deficit)	(\$412.1)	(\$349.7)	(\$412.1)

The Budget deficit is lower than budget 349.7K versus 412.1K in the Budget. With the income from the forgiven PPP Loan ( \$2.18 million) the surplus will be \$1,830,300 Budget figures have not been updated from the FC meeting of June 11. Changes will pertain to Salaries, insurance etc. when updated sheets are provided by staff.

2. Net Assets are up as compared to last December as of April 30, Net Assets were \$39,259,200. Details in the Presentation.
3. PPP Loan No 1 forgiven, we need to decide the utilization of funds. FC had recommended several options to the BOD including budget support, loan repayments and sweeping into reserves. Since the loan is forgiven and the second loan is likely to be forgiven FC needs to discuss holistically and bring forth recommendations for the BOD.
4. Finance Committee MBO's have been completed, a detailed report will be given to the BOD.
5. Financials as of April 30,2021 and Major variances are separately presented.
6. May 2021 Financials are not yet available.
7. For the search for a new investment advisor a Consultant has been appointed.
8. Motions for approval of the Budget at the BOD meeting on June 24, 2021 will be brought forward.

Respectfully Submitted

Farooq Mehboob

ASHRAE Treasurer SY 2020-2021

# Financial Status

## As of April 30, 2021



# General Fund

BOD Approved Forecast vs. Latest Forecast and Budget  
Society Year 2020-21 as of April 30,2021

(in Thousands)	BOD Approved Forecast	Latest Forecast April 30,2021	SY 20-21 Budget
Revenues	\$20,230.9	\$18,216.8	\$24,908.4
Expenses	20,643.0	\$18,566.5	\$25,320.5
Surplus/(Deficit)	(\$412.1)	(\$349.7)	(\$412.1)



# Consolidated(Excl Foundation)

BOD Approved Forecast vs. Latest Forecast and Budget  
Society Year 2020-21 as of April 30,2021

(in Thousands)			Latest Forecast April 30,2021	SY 20-21 Budget
Revenues			\$21,466.8	\$28,258.4
Expenses			\$21,816.5	\$28,670.6
Surplus/(Deficit)			(\$349.7)	(\$412.1)







## AGENDA

### FINANCE COMMITTEE

GoToMeeting

Friday, June 11, 2021  
8:00 AM – 12:00 PM EDT

Please join my meeting from your computer, tablet or smartphone.

<https://global.gotomeeting.com/join/578903413>

You can also dial in using your phone.

United States: [+1 \(224\) 501-3412](tel:+12245013412)

**Access Code:** 578-903-413

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1. CALL TO ORDER / INTRODUCTIONS – Mehboob
2. ASHRAE CODE OF ETHICS COMMITMENT – Mehboob  
*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>)
3. REVIEW OF AGENDA – Mehboob
4. ASSIGNMENT OF MEMBER TO TRACK NEW ACTION ITEMS - Mehboob
5. APPROVAL OF MINUTES – April 28, 2021 GoToMeeting - Mehboob (**Attachment 5**)
- 6.\* REVIEW OF ACTION ITEMS – January 25 & April 28, 2021 - Mehboob (**Attachment 6**)
- 7.\* REVIEW OF FINANCIAL STATEMENTS – Wilhoit
  - A.\* Financial reports (Statement of Financial Position, Statement of Revenues & Expenses) (**Attachment 7A**)
  - B.\* Major Variations (Forecast to Budget FY 21/22) (**Attachment 7B**)
  - C.\* Capital Expenditures FY 21/22 (**Attachment 7C**)
  - D.\* Cash Flow Activity Report (**Attachment 7D**)

- 8.\* REVIEW DRAFT 21/22 BUDGET– Wilhoit (**Attachment 8A - C**)
  - A.\* Recommendation and Motion to the Board for General Fund Budget for FY 2021-22
  - B.\* Recommendation and Motion to the Board for Research Fund Budget for FY 2021-22
  - C.\* Recommendation and Motion to the Board for Capital Budget for FY 2021-22
9. INVESTMENT SUBCOMMITTEE REPORT - Keen
10. PLANNING SUBCOMMITTEE REPORT – Knight
11. FY 20/21 MBOs REPORTS
  - A.\* Ad Hoc Group (MBO 1&2) - Underwood (**Attachment 11A**)
  - B.\* Group 2 (MBO 3&4) - Knight (**Attachment 11B**)
12. NEW BUSINESS
13. EXECUTIVE SESSION
14. ACKNOWLEDGEMENT OF OUTGOING COMMITTEE MEMBERS
15. NEXT MEETING – TBD
16. ADJOURNMENT

\*Indicates Attachment



MINUTES

**FINANCE COMMITTEE**

Virtual Meeting  
April 28, 2021

**MEMBERS PRESENT**

Farooq Mehboob, *Chair & liaison to Members Council*  
K. William Dean, *liaison to PubEd Council*  
William F. McQuade, *liaison to Tech Council*  
Malcolm D. Knight  
Julia A. Keen  
Doug Cochrane  
Michael Cooper  
Donald Brandt

**STAFF PRESENT**

Jeff Littleton, *Executive Vice President*  
Annmarie Wilhoit, *Interim Director of Finance*  
Linda Gdovin, *Staff*

**GUESTS PRESENT**

Mick Schwedler, *President-Elect*  
David T. Underwood, *former President*  
Ginger Scoggins, *Member FC Ad Hoc*  
Erich Binder, *Member FC Ad Hoc*  
Hugh Crowther, *Member FC Ad Hoc*  
Tim Wentz, *former President and ExOfficio Member FC Ad Hoc*  
Alice Yates, *Director - Government Affairs*  
Vanita Gupta, *Director - Marketing*  
Kim Mitchell, *Director - Development*  
Mark Owen, *Director - Pub/Ed*  
Stephanie Reiniche, *Director - Technology*  
Joyce Abrams, *Director - Member Services*

*Note: These draft minutes have not been approved and are not the official, approved record until approved by this committee.*

**Table of Contents**

Call To Order.....1

Review of Agenda .....1

Assignment to Track Action Items .....1

Approval of Minutes.....1

Review of Action Items .....1

FY 2021/22 Budget Options .....2

    Planning Subcommittee Draft FY2022 Budget Recommendations .....2

Subcommittee Reports

    Investment.....2

    Planning .....3

FY 20-21 MBOs Reports

    Ad Hoc Group.....3

    Group 2 .....5

Unfinished/Ongoing Business

    Update on 2<sup>nd</sup> PPP Loan & Utilization Plan.....5

New Business .....5

Next Meeting.....5

Adjournment.....5

**ACTION ITEMS**  
Finance Committee Meeting  
April 28, 2021

<b><u>No – Page</u></b>	<b><u>Responsibility</u></b>	<b><u>Summary of Action</u></b>	<b><u>Status</u></b>
1 – 2	Mark Owen	To send the Certification financial trends information to the Finance Committee Members.	_____
2 – 3	Jeff Littleton	To determine if the plan to hire John Langan with Clifton, Larson & Allen to facilitate the selection of a financial advisor for the Reserve and Research funds can be done in the current fiscal year or if it should wait until next FY.	_____
3 – 3	Annamarie Wilhoit & Dennis Knight	To confirm the impact on the FY 21/22 General Fund budget from the changes to the staffing levels proposed by the Senior Executive group and the EVP.	_____

## M I N U T E S

**FINANCE COMMITTEE**

Virtual Meeting  
April 28, 2021

**I. CALL TO ORDER/INTRODUCTIONS**

Chair Farooq Mehboob called the meeting to order at 1:00 PM EDT on Wednesday, April 28, 2021. Roll call was taken.

**II. ASHRAE CODE OF ETHICS COMMITMENT**

Chair Farooq Mehboob read this statement to the committee:

*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.*

**III. REVIEW OF AGENDA**

There were no additions to the agenda.

**IV. ASSIGNMENT OF MEMBER TO TRACK ACTION ITEMS**

Chair Farooq Mehboob asked Bill Dean to track the new action items.

**V. APPROVAL OF THE JANUARY 25, 2021 MINUTES**

It was moved by Julia Keen and seconded

(1) that the minutes from the January 25, 2021 Finance Committee meeting be approved.

**MOTION 1 PASSES 6-0-0-1, CNV****VI. REVIEW OF ACTION ITEMS FROM JANUARY 25, 2021:**

AI 1 – 2: Dennis Knight is to send out the “Benchmark Report on Organizational Expenses” from his MBO 3 & 4 activities. – is complete.

AI 2 - 2: Craig Wright is to add to future audited financial statements a year-over-year comparison and be prepared to explain variances. – this is complete for FY 2020/21; otherwise this is ongoing.

AI 3 - 2: Craig Wright is to investigate whether ASHRAE is comparable to other non-profit associations in Management/General Expenses as a percent of total expenses - is ongoing.

AI 4 - 2: Craig Wright is to set up a call with Farooq Mehboob and Jeff Littleton to discuss the format of the financial statements, to show budget forecast and actual for each month - is ongoing.

AI 5 - 3: Farooq Mehboob, Don Brandt and Bill Dean are to report the concern of the Finance Committee about diversification of revenue in general but of Advertising Revenue both print and virtual in particular - is complete.

AI 6 - 4: Investment subcommittee is to explore options for “active” management (vs. passive) of ASHRAE’s reserve funds with Oakbridge Partners and with other fund managers and will report their findings to Finance Committee in the April/May timeframe - is complete.

AI 7 - 6: Dennis Knight is to solicit written feedback from the Finance Committee members on the dashboards presented - is complete.

AI 8 - 7: Dennis Knight is to solicit feedback from the full Finance Committee on the lean assessment spreadsheet items via Google Docs - is complete.

AI 9 - 9: Dennis Knight is to schedule a workshop with ExCom to discuss the prioritized list - is ongoing.

## VII. FINANCIAL RESULTS & 2021/22 BUDGET OPTIONS

### Planning Subcommittee Draft FY 2022 Budget Recommendations

It was moved by the Planning Subcommittee and seconded

(2) that the Draft FY2022 Budget Recommendation as presented in the spreadsheet be approved and presented to the BOD and EXCOM.

The committee discussed the large changes that occurred in the FY2022 budget to the current budget for FY2021.

### **MOTION 2 PASSES 7-0-0, CNV**

**AI #1** Mark Owen is to send the Certification financial trends information to the Finance Committee members. (ACTION ITEM #1)

The FY2022 Forecast shows a surplus of \$101.1K.

## VIII. INVESTMENT SUBCOMMITTEE REPORT

It was moved by Julia Keen and seconded

(3) Investment Subcommittee recommends to the Finance Committee that they allocate a value not to exceed \$17,000 to hire John Langan with Clifton Larson Allen to facilitate the selection of a financial advisor for the Reserve and Research funds.

Background: This is the most prudent action considering John has both the expertise and experience in the area of investments for non-profit organizations and comes highly recommended. A 0.01% increase in return revenue would cover the costs associated with hiring him as a consultant. Given that our relationship with our current advisor has spanned 20 years, the upfront cost of a consultant could be annualized to be less than \$1000 per year. This is one of the most important decisions we make as an organization since it has the potential to result in generation of passive annual revenue.

The motion does not include a timeframe because this is a decision that needs to be made by Finance. The process typically takes 3 months, meaning that this will require action immediately to complete during the 2020-21 Society year. The other options are to delay the process to begin with the start of the 2021- 22 Society year or allow the process to proceed over the transition of Society years (and Finance Committee members). This timing decision is also likely dependent on the budget availability.

Fiscal impact: \$14,000 estimate included in the proposal. The motion includes a value not to exceed \$17,000. This additional \$3,000 is to cover any additional expenses that may be incurred as a result of additional meetings or minor adjustments in scope since services are charged on an hourly basis.

### **MOTION 3 PASSES 7-0-0, CNV**

- AI #2** Jeff Littleton is to determine if the plan to hire John Langan with Clifton, Larson & Allen to facilitate the selection of a financial advisor for the Reserve and Research funds can be done in the current fiscal year or if it should wait until next FY. (ACTION ITEM #2)

### IX. EXECUTIVE SESSION

The committee went into Executive Session.

- AI #3** Annmarie Wilhoit and Dennis Knight are to confirm the impact on the FY 21/22 General Fund budget from the changes to the staffing levels proposed by the Senior Executive group and the EVP. (ACTION ITEM #3)

### X. PLANNING SUBCOMMITTEE REPORT

The Planning subcommittee had nothing else to report.

### XI. FY 20/21 MBOs REPORTS

#### A) Ad Hoc (MBO 1 & 2)

David Underwood reported on the two MBOs the Ad Hoc is charged with completing:

1. To develop a single standardized analysis form to be used for financial decision making and approval of all ASHRAE products and services. This form to include gross margin dollars, gross margin %, payback and other suitable metrics. An authorization policy and approval procedure to be developed for all of ASHRAE. The standardized form and authorization policy are to be recommended to the BOD for implementation across all of ASHRAE. The analysis and approval process should be in an electronic format and capable of being tracked. A training module to be developed for the analysis form and authorization policy.
2. To study and propose reconfiguring/amending of the ASHRAE accounting system to automatically produce financial data (Reports and Graphs etc.), including gross margin in dollars and percentage and other metrics, for all products and services. The accounting system should be capable of data analysis of accounting, membership and other data in the system. The Ad hoc committee will identify the types of data analyses



required for ASHRAE and study, evaluate and recommend a suitable platform. A training module to be developed for users.

Methodology - The Ad Hoc has approached our mandated tasks as follows:

1. Form three groups to develop
  - a) A spread sheet tool through interviews with all Society directors as to items that may have any financial information required to be useful in a margin analysis of any or our current Councils and Standing committees. This work has been completed. The results of this will be reviewed by the Ad Hoc to look at a complicated and uncomplicated committee to receive estimated costs for determining cost and complexity of accessing our various data bases to allow algorithms to automate financial analysis of these programs to allow analytical information to make better financial decisions.
  - b) An analysis tool is being developed for use in proposing or sunsetting any ASHRAE activities. With training this will offer a better financial analysis of all our programs and activities when we need to understand the affects these decisions may have on the Society.
  - c) A final piece is developing an analytical tool to measure member benefits from ASHRAE committee and council activities.
2. Develop an education program to introduce the activities from item 1 above to provide training for those using these reports.
3. Determining span of financial control allocated to Councils, Standing Committees etc.,
4. We plan to develop power point training videos for the combination spread sheets for analyzing potential any new programs which includes financial analytics and an assessment of member benefits. A second power point education piece will be developed for existing analysis of existing programs which will also include member benefits.

#### Future Plans

1. Determine limits of authority in budget decisions for all committees.
2. Digital methods of following these monetary objectives
3. Free the board for strategic thinking by:
  - a. Remove waste and reduce cost
  - b. De-silo and speed up decisions
  - c. Be market focused
  - d. Push decisions lower in the organization
4. With the development of the financial requirements request a cost estimate to digitize the various requirements from our existing data basis and determine if changes to our programs or can we accomplish this through our existing programs and data bases significantly reducing manual inputs currently required.
5. Final report of this Ad Hoc to be available prior to Finance Committee June meeting.

#### B) Group 2 (MBO 3 & 4)

Dennis Knight reported his MBO is complete.

## XII. UNFINISHED/ONGOING BUSINESS

### A) Update on 2<sup>nd</sup> PPP Loan & Utilization Plan

Jeff Littleton reported the second PPP loan for \$2M is being applied towards payroll expense. We will apply for forgiveness after it is spent.

## XIII. NEW BUSINESS

There was no new business to discuss.

## XIV. NEXT MEETING

The virtual Annual Meeting is scheduled for June 11, 2021 from 8 AM - 12 PM EDT.

## XV. ADJOURNMENT:

Meeting adjourned at 5:00 PM EDT.



Farooq Mehboob, Chair  
April 28, 2021

**ACTION ITEMS**

Finance Committee Meeting  
January 25, 2021

<b><u>No – Page</u></b>	<b><u>Responsibility</u></b>	<b><u>Summary of Action</u></b>	<b><u>Status</u></b>
2 – 2	Annmarie Wilhoit	To add to future audited financial statements a year-over-year comparison and be prepared to explain variances.	_____
3 – 2	Annmarie Wilhoit	To investigate whether ASHRAE is comparable to other non-profit associations in Management/General Expenses as a percent of total expenses.	_____
4 – 2	Annmarie Wilhoit	To set up a call with Farooq Mehboob to discuss the format of the major variations report to show budget, current forecast and BOD approved forecast.	_____
9 - 9	Dennis Knight	To schedule a workshop with ExCom to discuss the prioritized list.	_____

**ACTION ITEMS**

Finance Committee Meeting  
April 28, 2021

<b><u>No – Page</u></b>	<b><u>Responsibility</u></b>	<b><u>Summary of Action</u></b>	<b><u>Status</u></b>
1 – 2	Mark Owen	To send the Certification financial trends information to the Finance Committee Members.	_____ C
2 – 3	Jeff Littleton	To determine if the plan to hire John Langan with Clifton, Larson & Allen to facilitate the selection of a financial advisor for the Reserve and Research funds can be done in the current fiscal year or if it should wait until next FY.	_____
3 – 3	Annmarie Wilhoit & Dennis Knight	To confirm the impact on the FY 21/22 General Fund budget from the changes to the staffing levels proposed by the Senior Executive group and the EVP.	_____

ASHRAE  
GENERAL, RESEARCH, COF AND LIFE MEMBERS FUNDS  
STATEMENT OF FINANCIAL POSITION - COMPARATIVE  
Friday, April 30, 2021

	4/30/2021	One Year Ago 4/30/2020	Two Years Ago 4/30/2019	Three Years Ago 4/30/2018	Four Years Ago 4/30/2017	Five Years Ago 4/30/2016	Six Years Ago 4/30/2015
Cash	\$6,314.8	\$3,091.1	\$2,846.1	\$3,121.7	\$3,437.6	\$3,173.1	\$3,194.7
Marketable Securities at Market Value	20,213.0	20,858.9	27,000.1	21,117.1	19,971.6	18,343.1	18,782.2
Accounts Receivable	1,123.7	988.6	1,181.5	924.8	1,220.4	1,377.6	1,091.5
Less: Allowance for Uncollectable Accounts	(204.0)	(132.5)	(136.9)	(223.0)	(132.7)	(259.2)	(144.1)
Contribution Pledge Receivables	4,492.0	35.2		0.5		8.7	
Miscellaneous Receivables & Deposits	11.0	10.6	10.5	11.4	10.8	12.9	13.6
Inventory	630.7	801.8	669.7	478.2	714.1	653.7	723.8
Prepaid Expense	819.2	12,682.8	5,524.4	562.9	587.8	340.8	335.7
Property and Equipment-Remaining Value	23,714.9	1,013.2	1,198.1	5,504.5	5,475.2	5,966.8	6,361.2
Due To (From) Other Funds		1.5					
<b>TOTAL ASSETS</b>	<b>57,115.3</b>	<b>39,351.2</b>	<b>38,293.5</b>	<b>31,498.1</b>	<b>31,284.8</b>	<b>29,617.5</b>	<b>30,358.6</b>
Accounts Payable & Accrued Expenses	5,028.6	6,919.2	6,435.7	5,044.8	4,792.2	5,161.4	4,884.6
Refundable Advances	17.0	21.3	5.3	10.3	11.2	8.6	6.1
Loans	8,191.4						
Deferred Income	4,619.1	4,776.5	5,346.2	5,408.7	5,190.8	5,397.5	5,146.0
<b>TOTAL LIABILITIES</b>	<b>17,856.1</b>	<b>11,717.0</b>	<b>11,787.2</b>	<b>10,463.8</b>	<b>9,994.2</b>	<b>10,567.5</b>	<b>10,036.7</b>
Net Assets Beginning of Year	35,580.5	25,241.1	19,098.1	19,299.9	17,828.2	18,454.9	18,367.6
Net Assets -Surplus/(Deficit) for Current Yr	3,678.7	2,393.1	7,408.2	1,734.4	3,462.4	595.1	1,954.3
<b>TOTAL LIABILITIES &amp; NET ASSETS</b>	<b>57,115.3</b>	<b>39,351.2</b>	<b>38,293.5</b>	<b>31,498.1</b>	<b>31,284.8</b>	<b>29,617.5</b>	<b>30,358.6</b>
<b>NET ASSETS TO DATE</b>	<b>39,259.2</b>	<b>27,634.2</b>	<b>26,506.3</b>	<b>21,034.3</b>	<b>21,290.6</b>	<b>19,050.0</b>	<b>20,321.9</b>

**ASHRAE**  
**ASHRAE Consolidated (Excl Foundation)**  
**For the Ten Months Ending Friday, April 30, 2021**

Fiscal YTD Through Month of Apr				TWELVE MONTHS ENDING JUNE 30							DRAFT
Actual	Budget	Actual	Budget	roll up	Actual	Actual	Budget	Actual	Forecast	Budget	Budget
FY 2020	FY 2020	FY 2021	FY 2021	acct / Description	FY 2018	FY 2019	FY 2020	FY 2020	FY 2021	FY 2021	FY 2022
<b>REVENUES</b>											
\$6,567.8	\$6,783.6	\$6,544.2	\$6,081.6	31 Membership Dues	\$7,772.8	\$7,779.9	\$8,151.3	\$7,884.8	\$7,787.9	\$7,307.9	\$7,760.9
3,092.8	3,042.9	2,796.8	3,112.6	32 Publication Sales	3,664.0	3,447.6	3,783.7	3,722.2	3,563.1	3,861.0	3,890.9
2,289.0	2,687.5	1,471.5	2,520.1	34 Advertising Income - Print	3,308.2	3,089.6	3,113.1	2,584.3	1,722.6	2,846.8	2,288.0
541.1	883.8	809.8	792.7	34 Advertising Income - Non-Print	899.2	868.6	1,070.0	657.6	1,011.0	960.0	1,065.0
1,501.7	1,680.9	359.0	1,729.1	35.1 Meetings/Conferences Registration	1,737.6	1,548.2	2,426.1	1,693.9	688.9	2,435.5	1,940.9
198.1	240.3	215.5	245.4	35.2 Certification Registration	213.2	218.7	280.0	219.7	260.0	286.0	280.0
1,452.3	1,417.4	973.5	1,504.3	35.3 Education Registration	1,700.6	1,642.7	1,960.0	1,498.2	1,223.6	2,110.0	2,558.5
51.6	81.7		20.4	37 Special Project Income	62.9	74.3	98.0	51.6	24.5	24.5	
1,001.8	1,258.6	895.6	759.2	38 Contribution Income	2,312.7	2,295.3	2,577.2	1,784.2	1,544.7	1,544.7	1,806.8
6,012.6	6,300.0		4,300.0	41.1 AHR Exposition Income	6,085.7	5,741.8	6,300.0	6,012.6		4,300.0	5,937.5
155.0	151.7	265.0	310.0	41.2 Contributions and Matching Gifts	74.5	109.5	171.3	165.0	371.5	321.5	137.1
				41.3 Exposition Income - Other Countries			234.0				170.0
	908.1	1,000.0	1,489.7	44 Reserve Transfers	1,199.3	890.0	1,278.7		2,655.8	1,860.4	525.0
381.4	344.9	315.3	290.0	46 Miscellaneous Income	364.7	805.2	554.7	622.9	613.2	400.1	389.7
<b>23,245.2</b>	<b>25,781.4</b>	<b>15,646.2</b>	<b>23,155.1</b>	<b>TOTAL REVENUES</b>	<b>29,395.4</b>	<b>28,745.4</b>	<b>31,764.1</b>	<b>26,897.0</b>	<b>21,466.8</b>	<b>28,258.4</b>	<b>28,750.3</b>
<b>EXPENSES:</b>											
8,007.9	8,130.6	7,329.8	7,544.8	51 Salaries	9,730.4	9,720.9	9,813.6	9,495.0	9,011.1	9,229.4	9,311.8
2,293.6	2,305.3	1,920.3	2,308.6	52 Payroll Taxes, Benefits, Personnel	2,875.3	2,636.9	2,772.7	2,843.4	2,145.7	2,726.7	2,816.6
955.4	1,355.8	623.3	1,247.6	61 Publishing	1,839.4	1,782.9	1,976.5	1,604.3	1,120.4	1,831.1	1,158.5
955.2	1,399.4	706.5	1,294.6	62 Promotion (All Depts)	1,572.4	1,455.7	1,683.9	1,105.7	905.3	1,561.7	1,426.0
1,250.4	1,533.8	72.8	(880.9)	64 Meetings/Conferences	2,184.3	1,782.3	2,428.4	1,274.2	257.7	2,277.5	2,367.1
460.3	568.8	164.8	572.0	64 Education Courses/Trainings	686.9	695.5	728.0	475.0	245.8	740.0	697.0
1,332.4	1,751.9	19.0	1,171.2	66 Travel	2,228.8	2,169.0	2,413.0	1,328.2	23.8	1,779.6	2,111.8
145.2	159.2	108.9	160.7	68 Awards, Certif, Logo Cost of Goods Sold	175.2	232.6	173.7	150.0	194.1	174.5	203.4
1,866.3	2,550.4	1,073.8	1,593.1	71 Research Projects & Grants	2,941.5	2,226.6	3,002.9	2,332.2	1,903.0	1,874.0	2,165.0
79.4	165.0	61.5	178.8	73 Special Projects	107.7	111.4	198.0	217.0	214.5	214.5	
51.9	53.0	17.0	53.9	76 Public Relations	58.1	70.5	74.6	54.2	19.8	75.9	75.2
665.1	768.9	585.1	583.9	78 Occupancy & Insurance	639.3	768.3	932.6	799.0	702.8	702.4	759.5
1,239.0	1,468.4	945.1	1,432.5	82 Office Expense and Organizational Dues	1,633.0	1,631.3	1,816.9	1,484.7	1,516.6	1,780.6	1,600.9
1,452.5	1,709.8	1,453.8	1,541.5	84 Outside Services	1,906.3	2,243.0	2,385.1	2,013.9	2,180.4	2,109.3	2,191.5
347.9	516.7	337.1	626.4	88 Other Expenses	786.7	770.9	763.5	521.9	579.0	808.4	843.0
(81.4)		13.5		88.1 Prepaid Expenses (contra acct)	(491.5)	(182.9)		(81.4)			
	50.0			89 Opportunity Fund	140.0	150.0	50.0				
271.9	297.7	519.6	626.7	90 Depreciation	556.9	379.1	360.0	324.4	796.5	785.0	921.9
	10.9		(17.2)	91 Allocation of Overhead & BOD			(0.1)		0.0	0.0	0.0
<b>21,293.0</b>	<b>24,795.6</b>	<b>15,951.9</b>	<b>20,038.2</b>	<b>TOTAL EXPENSES</b>	<b>29,570.7</b>	<b>28,644.0</b>	<b>31,573.3</b>	<b>25,941.7</b>	<b>21,816.5</b>	<b>28,670.6</b>	<b>28,649.2</b>
1,952.2	985.8	(305.7)	3,116.9	SURPLUS (DEFICIT) before reserve income	(175.3)	101.4	190.8	955.3	(349.7)	(412.2)	101.1
				91.2 Gain on Sale of HQ		6,174.5					
1,602.3		689.9	1.0	91.5 Contributions - HQ Building		361.0		9,757.8	700.0	700.0	700.0
		23.4		91.6 Interest Expense - HQ					50.0		90.0
	23.8			92 Non-Recurring Expenses	163.4	114.5	60.0				
Reserve Investment Income:											
(1,161.3)	640.8	4,317.9	470.5	95 Investmt Income - Reserves (net of exp)	1,402.9	742.7	895.6	(373.7)	3,169.0	913.5	959.2
	(1,525.7)	(1,000.0)	(517.0)	96 Transfer Reserves Portion Used Currentl	(1,244.3)	(1,122.2)	(1,260.2)		(2,743.8)	(920.4)	(525.0)
(1,161.3)	(884.9)	3,317.9	(46.5)	Remaining Reserve Investment Income	158.6	(379.5)	(364.6)	(373.7)	425.2	(6.9)	434.2
<b>2,393.2</b>	<b>77.1</b>	<b>3,702.1</b>	<b>3,071.4</b>	<b>OVERALL SURPLUS (DEFICIT) after reserve</b>	<b>(180.1)</b>	<b>6,142.9</b>	<b>(233.8)</b>	<b>10,339.4</b>	<b>775.5</b>	<b>280.9</b>	<b>1,235.3</b>

**ASHRAE  
General (Fund 2)  
For the Ten Months Ending Friday, April 30, 2021**

Fiscal YTD Through Month of Apr				TWELVE MONTHS ENDING JUNE 30							DRAFT
Actual	Budget	Actual	Budget	roll up	Actual	Actual	Budget	Actual	Forecast	Budget	Budget
FY 2020	FY 2020	FY 2021	FY 2021	acct / Description	FY 2018	FY 2019	FY 2020	FY 2020	FY 2021	FY 2021	FY 2022
				<b>REVENUES</b>							
\$6,436.7	\$6,646.3	\$6,413.0	\$5,956.8	31 Membership Dues	\$7,617.1	\$7,624.3	\$7,986.3	\$7,727.4	\$7,637.9	\$7,157.9	\$7,606.4
3,092.8	3,042.9	2,796.8	3,112.6	32 Publication Sales	3,664.0	3,447.6	3,783.7	3,722.2	3,563.1	3,861.0	3,890.9
2,289.0	2,687.5	1,471.5	2,520.1	34 Advertising Income - Print	3,308.2	3,089.6	3,113.1	2,584.3	1,722.6	2,846.8	2,288.0
541.1	883.8	809.8	792.7	34 Advertising Income - Non-Print	899.2	868.6	1,070.0	657.6	1,011.0	960.0	1,065.0
1,501.7	1,680.9	359.0	1,729.1	35.1 Meetings/Conferences Registration	1,737.6	1,548.2	2,426.1	1,693.9	688.9	2,435.5	1,940.9
198.1	240.3	215.5	245.4	35.2 Certification Registration	213.2	218.7	280.0	219.7	260.0	286.0	280.0
1,452.3	1,417.4	973.5	1,504.3	35.3 Education Registration	1,700.6	1,642.7	1,960.0	1,498.2	1,223.6	2,110.0	2,558.5
51.6	81.7		20.4	37 Special Project Income	62.9	74.3	98.0	51.6	24.5	24.5	
15.3	23.5	132.5	23.9	38 Contribution Income	35.1	32.3	43.8	29.0	44.7	44.7	46.8
6,012.6	6,300.0		4,300.0	41.1 AHR Exposition Income	6,085.7	5,741.8	6,300.0	6,012.6		4,300.0	5,937.5
(1,745.0)	(1,748.3)	265.0	110.0	41.2 Contributions and Matching Gifts	(1,488.5)	(1,390.5)	(1,728.7)	(1,735.0)	271.5	121.5	(1,362.9)
			239.7	41.3 Exposition Income - Other Countries			234.0				170.0
			290.0	44 Reserve Transfers	719.0	690.0	828.7		1,155.8	360.4	255.0
381.4	341.8	315.3		46 Miscellaneous Income	364.7	805.2	551.0	622.9	613.2	400.1	389.7
<b>20,227.6</b>	<b>21,597.8</b>	<b>13,751.9</b>	<b>20,845.0</b>	<b>TOTAL REVENUES</b>	<b>24,918.8</b>	<b>24,626.8</b>	<b>26,712.0</b>	<b>23,084.4</b>	<b>18,216.8</b>	<b>24,908.4</b>	<b>25,065.8</b>
				<b>EXPENSES:</b>							
7,586.1	7,690.1	6,866.7	7,168.7	51 Salaries	9,268.7	9,244.2	9,280.7	8,987.7	8,473.1	8,768.7	8,837.2
2,177.9	2,141.7	1,797.8	2,180.5	52 Payroll Taxes, Benefits, Personnel	2,702.5	2,545.9	2,577.7	2,698.5	2,022.0	2,574.1	2,683.4
949.9	1,336.2	619.3	1,227.7	61 Publishing	1,831.1	1,777.5	1,954.1	1,598.8	1,097.6	1,808.2	1,134.5
951.7	1,395.2	706.5	1,290.4	62 Promotion (All Depts)	1,567.2	1,428.3	1,674.4	1,102.1	895.6	1,552.0	1,415.8
1,226.0	1,517.3	72.8	(895.3)	64 Meetings/Conferences	2,153.1	1,754.8	2,409.4	1,249.8	238.3	2,258.1	2,346.7
460.3	568.8	164.8	572.0	64 Education Courses/Trainings	686.9	695.5	728.0	475.0	245.8	740.0	697.0
1,256.3	1,639.3	19.0	1,106.8	66 Travel	2,115.6	2,048.7	2,268.8	1,252.9	23.8	1,683.1	1,966.0
75.5	122.8	64.1	123.6	68 Awards, Certif, Logo Cost of Goods Sold	119.4	146.0	136.9	80.3	156.6	137.0	164.0
166.1	172.3	157.2	172.5	71 Research Projects & Grants	126.9	116.5	173.8	166.1	166.0	174.0	182.7
79.4	165.0	61.5	178.8	73 Special Projects	107.7	111.4	198.0	217.0	214.5	214.5	
51.9	52.8	17.0	53.7	76 Public Relations	57.9	70.5	74.4	54.2	19.5	75.6	74.9
665.1	768.9	585.1	583.9	78 Occupancy & Insurance	639.3	768.3	932.6	799.0	702.8	702.4	759.5
1,207.1	1,420.8	927.7	1,383.9	82 Office Expense and Organizational Dues	1,584.9	1,588.6	1,753.5	1,451.8	1,451.9	1,715.9	1,532.8
1,452.5	1,709.8	1,453.8	1,541.5	84 Outside Services	1,905.7	2,243.0	2,385.1	2,013.9	2,180.4	2,109.3	2,191.5
314.8	469.2	314.8	586.2	88 Other Expenses	738.3	715.8	691.2	473.9	517.9	747.3	765.5
(81.4)		13.5		88.1 Prepaid Expenses (contra acct)	(491.5)	(182.9)		(81.4)			
	50.0			89 Opportunity Fund	140.0	150.0	50.0				
271.9	297.7	519.6	626.7	90 Depreciation	556.9	379.1	360.0	324.4	796.5	785.0	921.9
(567.9)	(912.5)	(536.8)	(610.8)	91 Allocation of Overhead & BOD	(669.2)	(677.3)	(1,127.4)	(672.8)	(635.8)	(724.7)	(708.8)
<b>18,243.2</b>	<b>20,605.4</b>	<b>13,824.4</b>	<b>17,290.8</b>	<b>TOTAL EXPENSES</b>	<b>25,141.4</b>	<b>24,923.9</b>	<b>26,521.2</b>	<b>22,191.2</b>	<b>18,566.5</b>	<b>25,320.5</b>	<b>24,964.6</b>
1,984.4	992.4	(72.5)	3,554.2	SURPLUS (DEFICIT) before reserve income	(222.6)	(297.1)	190.8	893.2	(349.7)	(412.1)	101.2
				91.2 Gain on Sale of HQ		6,174.5					
1,602.3		689.9	1.0	91.5 Contributions - HQ Building		361.0		9,757.8	700.0	700.0	700.0
		23.4		91.6 Interest Expense - HQ					50.0		90.0
	23.8			92 Non-Recurring Expenses	163.4	114.5	60.0				
				Reserve Investment Income:							
(687.4)	540.9	2,921.6	368.6	95 Investmt Income - Reserves (net of exp)	970.9	543.3	653.1	(230.2)	2,921.6	666.1	699.4
	(617.7)		(300.3)	96 Transfer Reserves Portion Used Currently	(764.0)	(922.2)	(810.2)		(1,243.8)	(660.4)	(255.0)
(687.4)	(76.8)	2,921.6	68.3	Remaining Reserve Investment Income	206.9	(378.9)	(157.1)	(230.2)	1,677.8	5.7	444.4
<b>2,899.3</b>	<b>891.8</b>	<b>3,539.0</b>	<b>3,623.5</b>	<b>OVERALL SURPLUS (DEFICIT) after reserve income</b>	<b>(179.1)</b>	<b>5,745.0</b>	<b>(26.3)</b>	<b>10,420.8</b>	<b>2,028.1</b>	<b>293.6</b>	<b>1,245.6</b>

**ASHRAE  
Research (Funds 3 & 4)**

**For the Ten Months Ending Friday, April 30, 2021**

Fiscal YTD Through Month of Apr				TWELVE MONTHS ENDING JUNE 30							DRAFT
Actual	Budget	Actual	Budget	roll up	Actual	Actual	Budget	Actual	Forecast	Budget	Budget
FY 2020	FY 2020	FY 2021	FY 2021	acct / Description	FY 2018	FY 2019	FY 2020	FY 2020	FY 2021	FY 2021	FY 2022
				<b>REVENUES</b>							
\$131.1	\$137.3	\$131.2	\$124.8	31 Membership Dues	\$155.7	\$155.6	\$165.0	\$157.4	\$150.0	\$150.0	\$154.5
929.5	1,235.1	718.3	735.3	38 Contribution Income	2,212.1	2,199.4	2,533.4	1,696.0	1,500.0	1,500.0	1,760.1
1,900.0	1,900.0		200.0	41.2 Contributions and Matching Gifts	1,563.0	1,500.0	1,900.0	1,900.0	100.0	200.0	1,500.0
	908.1	1,000.0	1,250.0	44 Reserve Transfers	480.3	200.0	450.0		1,500.0	1,500.0	270.0
	3.1			46 Miscellaneous Income			3.7				
<b>2,960.6</b>	<b>4,183.6</b>	<b>1,849.5</b>	<b>2,310.1</b>	<b>TOTAL REVENUES</b>	<b>4,411.1</b>	<b>4,055.0</b>	<b>5,052.1</b>	<b>3,753.4</b>	<b>3,250.0</b>	<b>3,350.0</b>	<b>3,684.6</b>
				<b>EXPENSES:</b>							
421.8	440.5	463.1	376.1	51 Salaries	461.7	476.7	532.9	507.3	538.0	460.7	474.6
115.7	163.6	122.5	128.1	52 Payroll Taxes, Benefits, Personnel	172.8	90.9	194.9	145.0	123.7	152.6	133.3
5.5	19.5	4.0	19.9	61 Publishing	8.3	5.4	22.4	5.5	22.9	22.9	24.0
3.5	4.2		4.2	62 Promotion (All Depts)	5.1	27.5	9.5	3.5	9.7	9.7	10.2
24.0	16.5		14.3	64 Meetings/Conferences	30.3	27.5	19.0	24.0	19.4	19.4	20.3
73.1	112.6		64.3	66 Travel	111.1	115.5	144.1	72.4		96.5	145.9
29.8	36.4	29.8	37.1	68 Awards, Certif, Logo Cost of Goods Sold	44.1	41.6	36.8	29.8	37.5	37.5	39.4
1,700.2	2,378.1	916.6	1,420.6	71 Research Projects & Grants	2,814.6	2,110.1	2,829.1	2,166.0	1,737.0	1,700.0	1,982.3
	0.2		0.2	76 Public Relations	0.2		0.3		0.3	0.3	0.3
26.6	47.6	16.6	48.6	82 Office Expense and Organizational Dues	45.6	41.9	63.4	27.5	64.7	64.7	68.0
33.1	47.5	22.3	40.2	88 Other Expenses	48.1	55.1	72.3	48.0	61.1	61.1	77.5
567.9	923.4	536.8	593.5	91 Allocation of Overhead & BOD	669.2	677.3	1,127.3	672.8	635.7	724.7	708.8
<b>3,001.2</b>	<b>4,190.1</b>	<b>2,111.7</b>	<b>2,747.1</b>	<b>TOTAL EXPENSES</b>	<b>4,411.1</b>	<b>3,669.5</b>	<b>5,052.0</b>	<b>3,701.8</b>	<b>3,250.0</b>	<b>3,350.1</b>	<b>3,684.6</b>
(40.6)	(6.5)	(262.2)	(437.0)	SURPLUS (DEFICIT) before reserve income	0.0	385.5	0.1	51.6	0.0	(0.1)	0.0
				Reserve Investment Income:							
(468.3)	99.9	1,396.4	101.9	95 Investmt Income - Reserves (net of exp)	421.5	193.0	242.6	(147.2)	247.4	247.4	259.8
	(908.1)	(1,000.0)	(216.7)	96 Transfer Reserves Portion Used Current!	(480.3)	(200.0)	(450.0)		(1,500.0)	(260.0)	(270.0)
(468.3)	(808.2)	396.4	(114.8)	Remaining Reserve Investment Income	(58.8)	(7.0)	(207.4)	(147.2)	(1,252.6)	(12.6)	(10.2)
<b>(508.9)</b>	<b>(814.7)</b>	<b>134.2</b>	<b>(551.8)</b>	<b>OVERALL SURPLUS (DEFICIT) after reser</b>	<b>(58.8)</b>	<b>378.5</b>	<b>(207.3)</b>	<b>(95.6)</b>	<b>(1,252.6)</b>	<b>(12.7)</b>	<b>(10.2)</b>

**ASHRAE**  
**Board of Directors 2-5nn**  
**For the Ten Months Ending Friday,**

Fiscal YTD Through Month of Apr				TWELVE MONTHS ENDING JUNE 30							DRAFT
Actual	Budget	Actual	Budget	roll up	Actual	Actual	Budget	Actual	Forecast	Budget	Budget
FY 2020	FY 2020	FY 2021	FY 2021	acct / Description	FY 2018	FY 2019	FY 2020	FY 2020	FY 2021	FY 2021	FY 2022
	\$7.2	\$100.2	\$7.4	<b>REVENUES</b>							
				38 Contribution Income		\$0.1	\$8.7		\$8.8	\$8.8	\$9.3
				41.2 Contributions and Matching Gifts	(50.0)	(25.0)					
				44 Reserve Transfers		190.0	228.7		83.6	160.4	76.8
1.1	1.5	0.4	3.6	46 Miscellaneous Income	0.8	0.2	2.0	1.1	5.0	5.0	10.0
<b>1.1</b>	<b>8.7</b>	<b>100.6</b>	<b>11.0</b>	<b>TOTAL REVENUES</b>	<b>(49.2)</b>	<b>165.3</b>	<b>239.4</b>	<b>1.1</b>	<b>97.4</b>	<b>174.2</b>	<b>96.1</b>
				<b>EXPENSES:</b>							
959.0	909.7	863.5	931.1	51 Salaries	1,504.3	1,216.1	1,106.4	1,143.0	1,085.0	1,145.0	1,192.9
289.0	279.0	229.6	320.8	52 Payroll Taxes, Benefits, Personnel	431.2	338.0	335.0	356.1	249.5	338.1	333.6
2.2	12.8	2.0	14.7	61 Publishing	1.9	2.5	13.8	2.5	8.9	15.8	23.6
9.4	80.0	61.9	56.6	62 Promotion (All Depts)	59.9	55.5	179.3	13.3	95.0	120.0	144.5
59.8	99.6	0.1	83.7	64 Meetings/Conferences	147.4	82.7	106.6	57.4	72.2	105.2	79.3
558.2	722.6	14.6	417.2	66 Travel	948.6	911.8	964.3	559.8	23.2	650.8	727.8
18.8	3.5	1.8	3.7	68 Awards, Certif, Logo Cost of Goods Sold	13.5	23.1	4.0	19.9	3.7	4.2	4.4
	7.3		7.5	71 Research Projects & Grants	7.4		8.8		9.0	9.0	9.4
3.0	27.9	3.5	24.9	82 Office Expense and Organizational Dues	33.5	27.4	44.9	3.3	33.7	43.5	52.4
63.3	143.4	47.4	112.3	84 Outside Services	88.5	226.8	251.9	78.0	151.4	190.2	253.5
6.9	21.0		31.1	88 Other Expenses	0.0	2.5	25.0	6.9	3.0	25.0	16.1
				88.1 Prepaid Expenses (contra acct)	(511.0)	(136.6)					
	50.0			89 Opportunity Fund		50.0	50.0				
33.3	33.3	33.3	33.3	90 Depreciation	15.0	40.0	40.0	40.0	40.0	40.0	40.0
(2,003.0)	(2,342.5)	(1,257.8)	(1,953.4)	91 Allocation of Overhead & BOD	(2,740.3)	(2,839.8)	(3,036.2)	(2,280.3)	(1,954.3)	(2,531.8)	(2,750.2)
	<b>47.6</b>		<b>83.5</b>	<b>TOTAL EXPENSES</b>			<b>93.8</b>		<b>(179.7)</b>	<b>155.0</b>	<b>127.3</b>
1.1	(38.9)	100.6	(72.5)	SURPLUS (DEFICIT) before reserve income	(49.2)	165.3	145.6	1.1	277.1	19.2	(31.2)
1,602.3		689.9	1.0	91.5 Contributions - HQ Building		361.0		9,757.8	700.0	700.0	700.0
	(175.2)		(133.7)	Reserve Investment Income:							
				96 Transfer Reserves Portion Used Currently			(210.2)		(83.6)	(160.4)	(76.8)
	(175.2)		(133.7)	Remaining Reserve Investment Income			(210.2)		(83.6)	(160.4)	(76.8)
<b>1,603.4</b>	<b>(214.1)</b>	<b>790.5</b>	<b>(205.2)</b>	<b>OVERALL SURPLUS (DEFICIT) after reser</b>	<b>(49.2)</b>	<b>526.3</b>	<b>(64.6)</b>	<b>9,758.9</b>	<b>893.5</b>	<b>558.8</b>	<b>592.0</b>



**ASHRAE**  
**Overhead 2-9nn**  
**For the Ten Months Ending Friday,**

Fiscal YTD Through Month of Apr			
Actual	Budget	Actual	Budget
FY 2020	FY 2020	FY 2021	FY 2021
\$6,012.6	\$6,300.0		\$4,300.0
(1,900.0)	(1,900.0)	150.0	
			239.7
5.7	28.5	87.0	29.0
<b>4,118.3</b>	<b>4,428.5</b>	<b>237.0</b>	<b>4,568.7</b>
2,076.2	2,208.3	1,788.1	1,941.1
617.6	577.0	438.2	522.1
4.2	6.7	19.1	8.8
51.5	51.5	8.1	62.0
2.8	14.6	0.3	8.3
91.7	113.4	3.6	62.8
18.5	21.8	7.1	24.2
51.9	52.8	17.0	53.7
622.9	728.5	538.9	546.8
307.5	347.8	244.2	359.4
584.5	546.8	601.9	555.1
69.8	121.2	40.6	92.1
208.4	234.7	456.1	564.2
(4,707.7)	(5,148.1)	(4,162.7)	(4,931.1)
<b>(0.2)</b>	<b>(123.0)</b>	<b>0.5</b>	<b>(130.5)</b>
4,118.5	4,551.5	236.5	4,699.2
		23.4	
(687.4)	540.9	2,921.6	368.6
	(442.5)		(166.7)
(687.4)	98.4	2,921.6	201.9
<b>3,431.1</b>	<b>4,649.9</b>	<b>3,158.1</b>	<b>4,901.1</b>

roll up acct / Description	TWELVE MONTHS ENDING JUNE 30						DRAFT
	Actual	Actual	Budget	Actual	Forecast	Budget	Budget
	FY 2018	FY 2019	FY 2020	FY 2020	FY 2021	FY 2021	FY 2022
<b>REVENUES</b>							
41.1 AHR Exposition Income	\$6,085.7	\$5,741.8	\$6,300.0	\$6,012.6		\$4,300.0	\$5,937.5
41.2 Contributions and Matching Gifts	(1,563.0)	(1,500.0)	(1,900.0)	(1,900.0)	150.0		(1,500.0)
41.3 Exposition Income - Other Countries		234.0					170.0
44 Reserve Transfers	719.0	500.0	600.0		1,072.2	200.0	178.2
46 Miscellaneous Income	10.3	242.1	34.9	9.5	85.6	35.6	117.4
<b>TOTAL REVENUES</b>	<b>5,252.0</b>	<b>5,217.9</b>	<b>5,034.9</b>	<b>4,122.1</b>	<b>1,307.8</b>	<b>4,535.6</b>	<b>4,903.1</b>
<b>EXPENSES:</b>							
51 Salaries	2,335.7	2,579.1	2,667.3	2,458.6	2,157.6	2,347.6	2,328.7
52 Payroll Taxes, Benefits, Personnel	680.5	718.9	713.2	757.1	542.5	645.9	783.0
61 Publishing	7.6	7.8	8.1	4.8	10.6	10.6	6.9
62 Promotion (All Depts)	103.4	54.4	87.0	66.8	34.1	109.7	115.2
64 Meetings/Conferences	12.7	12.2	15.0	3.0	1.6	12.4	13.0
66 Travel	155.7	138.5	149.6	92.5		94.2	100.9
68 Awards, Certif, Logo Cost of Goods Sold	24.9	24.9	28.4	18.5	29.0	29.0	30.4
76 Public Relations	57.9	70.5	74.4	54.2	19.5	75.6	74.9
78 Occupancy & Insurance	595.8	702.2	880.2	748.0	643.9	653.9	701.0
82 Office Expense and Organizational Dues	343.7	330.0	396.9	347.2	409.0	416.6	448.8
84 Outside Services	635.7	529.6	612.1	703.7	675.9	634.9	844.7
88 Other Expenses	131.2	112.8	131.9	75.8	101.6	101.6	139.6
90 Depreciation	541.9	311.0	284.5	248.2	721.5	710.0	846.9
91 Allocation of Overhead & BOD	(5,626.5)	(5,591.8)	(6,098.5)	(5,575.8)	(5,391.2)	(5,841.4)	(6,227.3)
<b>TOTAL EXPENSES</b>			<b>(49.9)</b>	<b>2.6</b>	<b>(44.4)</b>	<b>0.6</b>	<b>206.7</b>
SURPLUS (DEFICIT) before reserve income	5,252.0	5,217.9	5,084.8	4,119.5	1,352.2	4,535.0	4,696.4
91.2 Gain on Sale of HQ		6,174.5					
91.6 Interest Expense - HQ					50.0		90.0
Reserve Investment Income:							
95 Investmt Income - Reserves (net of exp)	970.9	543.3	653.1	(230.2)	2,921.6	666.1	699.4
96 Transfer Reserves Portion Used Currentl	(764.0)	(922.2)	(600.0)		(1,160.2)	(500.0)	(178.2)
Remaining Reserve Investment Income	206.9	(378.9)	53.1	(230.2)	1,761.4	166.1	521.2
<b>OVERALL SURPLUS (DEFICIT) after reserve</b>	<b>5,458.9</b>	<b>11,013.5</b>	<b>5,137.9</b>	<b>3,889.3</b>	<b>3,113.6</b>	<b>4,701.1</b>	<b>5,217.6</b>

**ASHRAE**  
**Members Council (2-2nn & 2-8nn)**  
**For the Ten Months Ending Friday,**

Fiscal YTD Through Month of Apr				TWELVE MONTHS ENDING JUNE 30							DRAFT
Actual	Budget	Actual	Budget	roll up	Actual	Actual	Budget	Actual	Forecast	Budget	Budget
FY 2020	FY 2020	FY 2021	FY 2021	acct / Description	FY 2018	FY 2019	FY 2020	FY 2020	FY 2021	FY 2021	FY 2022
\$6,436.7	\$6,646.3	\$6,413.0	\$5,956.8	<b>REVENUES</b>							
1,501.7	1,680.9	359.0	1,729.1	31 Membership Dues	\$7,617.1	\$7,624.3	\$7,986.3	\$7,727.4	\$7,637.9	\$7,157.9	\$7,606.4
		25.4		35.1 Meetings/Conferences Registration	1,737.6	1,548.2	2,426.1	1,693.9	688.9	2,435.5	1,940.9
7.6	8.5	13.8	8.6	35.3 Education Registration	1.6				15.6		253.5
20.0	10.0	15.0	10.0	38 Contribution Income	22.4	17.5	19.6	18.9	20.0	20.0	21.0
104.7	115.0	107.0	126.3	41.2 Contributions and Matching Gifts	34.5	34.5	21.3	30.0	21.5	21.5	22.1
<b>8,070.7</b>	<b>8,460.7</b>	<b>6,933.2</b>	<b>7,830.8</b>	46 Miscellaneous Income	129.9	145.1	133.4	114.2	182.5	142.6	124.5
				<b>TOTAL REVENUES</b>	<b>9,543.1</b>	<b>9,369.6</b>	<b>10,586.7</b>	<b>9,584.4</b>	<b>8,566.4</b>	<b>9,777.5</b>	<b>9,968.4</b>
				<b>EXPENSES:</b>							
1,244.8	1,228.4	1,212.2	1,236.5	51 Salaries	1,420.0	1,443.3	1,481.0	1,479.2	1,534.7	1,514.7	1,587.6
348.5	338.6	321.9	377.1	52 Payroll Taxes, Benefits, Personnel	388.9	390.6	403.1	445.0	359.4	449.2	449.1
13.9	26.2	13.5	28.3	61 Publishing	28.5	20.0	27.6	14.6	26.2	30.2	31.6
155.0	267.6	99.1	274.0	62 Promotion (All Depts)	321.4	305.6	306.5	202.5	104.0	314.1	316.2
1,142.7	1,379.9	72.3	(993.7)	64 Meetings/Conferences	1,964.9	1,632.8	2,249.4	1,168.7	157.9	2,110.4	2,224.3
450.5	564.4	0.1	393.1	66 Travel	739.7	767.2	806.8	445.4		587.6	820.7
37.7	92.5	54.9	93.0	68 Awards, Certif, Logo Cost of Goods Sold	79.5	96.6	99.0	41.5	121.0	101.0	126.0
166.1	165.0	157.2	165.0	71 Research Projects & Grants	119.5	116.5	165.0	166.1	157.0	165.0	173.3
267.2	330.5	223.4	325.3	82 Office Expense and Organizational Dues	380.3	397.0	369.4	327.3	374.0	376.7	410.9
82.1	174.5	223.6	125.7	84 Outside Services	171.6	217.9	264.5	164.2	397.5	164.6	184.8
236.5	264.2	227.8	330.4	88 Other Expenses	334.7	346.3	307.7	268.3	259.0	408.2	381.4
(5.9)		13.5		88.1 Prepaid Expenses (contra acct)	19.5	(46.3)		(5.9)			
				89 Opportunity Fund	140.0	100.0					
1,675.3	1,652.0	1,404.7	1,801.9	91 Allocation of Overhead & BOD	2,049.9	2,051.5	2,011.7	1,963.7	1,924.0	2,193.2	2,371.5
<b>5,814.4</b>	<b>6,483.8</b>	<b>4,024.2</b>	<b>4,156.6</b>	<b>TOTAL EXPENSES</b>	<b>8,158.4</b>	<b>7,839.0</b>	<b>8,491.7</b>	<b>6,680.6</b>	<b>5,414.7</b>	<b>8,414.9</b>	<b>9,077.4</b>
2,256.3	1,976.9	2,909.0	3,674.2	SURPLUS (DEFICIT) before reserve income	1,384.7	1,530.6	2,095.0	2,903.8	3,151.7	1,362.6	891.0
<b>2,256.3</b>	<b>1,976.9</b>	<b>2,909.0</b>	<b>3,674.2</b>	<b>OVERALL SURPLUS (DEFICIT) after reser</b>	<b>1,384.7</b>	<b>1,530.6</b>	<b>2,095.0</b>	<b>2,903.8</b>	<b>3,151.7</b>	<b>1,362.6</b>	<b>891.0</b>

**ASHRAE  
Publishing & Education Council  
For the Ten Months Ending Friday,**

Fiscal YTD Through Month of Apr			
Actual	Budget	Actual	Budget
FY 2020	FY 2020	FY 2021	FY 2021
\$3,092.8	\$3,042.9	\$2,796.8	\$3,112.6
2,289.0	2,687.5	1,471.5	2,520.1
541.1	883.8	809.8	792.7
198.1	240.3	215.5	245.4
1,452.3	1,417.4	948.1	1,504.3
7.7	7.8	18.5	7.9
135.0	141.7	100.0	100.0
212.2	172.5	116.6	106.8
<b>7,928.2</b>	<b>8,593.9</b>	<b>6,476.8</b>	<b>8,389.8</b>
2,242.9	2,319.8	1,988.6	2,108.0
631.5	663.4	539.8	668.5
929.4	1,291.7	584.6	1,177.1
735.8	996.1	537.3	897.5
9.0	3.4		1.9
460.3	568.8	164.8	572.0
52.2	129.5	0.6	107.2
0.2	3.2	0.1	0.8
42.2	40.3	46.2	37.2
531.3	592.8	357.9	558.0
688.0	843.8	579.4	747.1
1.5	62.6	46.3	132.5
0.5		0.5	
3,032.0	3,418.9	2,303.5	3,080.8
<b>9,356.8</b>	<b>10,934.3</b>	<b>7,149.6</b>	<b>10,088.6</b>
(1,428.6)	(2,340.4)	(672.8)	(1,698.8)

roll up acct / Description	TWELVE MONTHS ENDING JUNE 30						DRAFT
	Actual	Actual	Budget	Actual	Forecast	Budget	Budget
	FY 2018	FY 2019	FY 2020	FY 2020	FY 2021	FY 2021	FY 2022
<b>REVENUES</b>							
32 Publication Sales	\$3,664.0	\$3,447.6	\$3,783.7	\$3,722.2	\$3,563.1	\$3,861.0	\$3,890.9
34 Advertising Income - Print	3,308.2	3,089.6	3,113.1	2,584.3	1,722.6	2,846.8	2,288.0
34 Advertising Income - Non-Print	899.2	868.6	1,070.0	657.6	1,011.0	960.0	1,065.0
35.2 Certification Registration	213.2	218.7	280.0	219.7	260.0	286.0	280.0
35.3 Education Registration	1,699.0	1,642.7	1,960.0	1,498.2	1,208.0	2,110.0	2,305.0
38 Contribution Income	12.8	14.8	15.5	10.1	15.8	15.8	16.5
41.2 Contributions and Matching Gifts	90.0	100.0	150.0	135.0	100.0	100.0	115.0
46 Miscellaneous Income	222.5	309.3	352.3	440.3	228.1	187.9	107.3
<b>TOTAL REVENUES</b>	<b>10,108.9</b>	<b>9,691.3</b>	<b>10,724.6</b>	<b>9,267.4</b>	<b>8,108.6</b>	<b>10,367.5</b>	<b>10,067.7</b>
<b>EXPENSES:</b>							
51 Salaries	2,807.4	2,730.2	2,783.7	2,665.2	2,519.1	2,584.7	2,591.2
52 Payroll Taxes, Benefits, Personnel	846.9	764.0	787.0	785.8	599.9	791.5	777.2
61 Publishing	1,792.6	1,747.0	1,902.1	1,576.7	1,049.3	1,749.1	1,069.8
62 Promotion (All Depts)	1,082.5	1,012.8	1,101.6	819.7	662.2	1,007.8	839.6
64 Meetings/Conferences	23.8	21.7	16.0	9.0		23.6	23.1
64 Education Courses/Trainings	686.9	695.5	728.0	475.0	245.8	740.0	697.0
66 Travel	169.5	108.5	173.9	51.7	0.6	160.8	124.7
68 Awards, Certif, Logo Cost of Goods Sold	1.0	1.1	3.8	0.2	1.1	1.0	1.2
78 Occupancy & Insurance	43.5	66.2	52.4	51.0	58.9	48.5	58.5
82 Office Expense and Organizational Dues	725.9	737.8	819.1	676.0	534.4	762.4	498.1
84 Outside Services	1,000.1	1,178.6	1,252.6	1,004.3	894.4	1,115.5	904.1
88 Other Expenses	272.4	254.2	226.5	122.9	154.1	212.4	228.4
90 Depreciation		0.0		0.6			
91 Allocation of Overhead & BOD	3,909.1	3,890.3	4,148.5	3,558.0	3,289.0	3,749.2	4,055.0
<b>TOTAL EXPENSES</b>	<b>13,361.6</b>	<b>13,207.9</b>	<b>13,995.2</b>	<b>11,796.1</b>	<b>10,008.8</b>	<b>12,946.5</b>	<b>11,867.9</b>
SURPLUS (DEFICIT) before reserve income	(3,252.7)	(3,516.6)	(3,270.6)	(2,528.7)	(1,900.2)	(2,579.0)	(1,800.2)

**(1,428.6) (2,340.4) (672.8) (1,698.8)**

**OVERALL SURPLUS (DEFICIT) after reser (3,252.7) (3,516.6) (3,270.6) (2,528.7) (1,900.2) (2,579.0) (1,800.2)**

**ASHRAE  
Technology Council  
For the Ten Months Ending Friday,**

Fiscal YTD Through Month of Apr				TWELVE MONTHS ENDING JUNE 30							DRAFT
Actual	Budget	Actual	Budget	roll up							
FY 2020	FY 2020	FY 2021	FY 2021	acct / Description	Actual	Actual	Budget	Actual	Forecast	Budget	Budget
					FY 2018	FY 2019	FY 2020	FY 2020	FY 2021	FY 2021	FY 2022
\$51.6	\$81.7		\$20.4	<b>REVENUES</b>							
57.8	24.3	4.2	24.2	37 Special Project Income	\$62.9	\$74.3	\$98.0	\$51.6	\$24.5	\$24.5	
<b>109.4</b>	<b>106.0</b>	<b>4.2</b>	<b>44.6</b>	46 Miscellaneous Income	1.2	108.6	28.4	57.8	112.0	29.0	30.4
				<b>TOTAL REVENUES</b>	<b>64.1</b>	<b>182.9</b>	<b>126.4</b>	<b>109.4</b>	<b>136.5</b>	<b>53.5</b>	<b>30.4</b>
				<b>EXPENSES:</b>							
1,063.1	1,024.1	1,014.3	952.1	51 Salaries	1,201.3	1,275.5	1,242.3	1,241.6	1,176.7	1,176.7	1,136.9
291.3	283.8	268.2	292.0	52 Payroll Taxes, Benefits, Personnel	355.1	334.5	339.4	354.4	270.6	349.5	340.4
0.2	(1.2)	0.0	(1.2)	61 Publishing	0.4	0.1	2.5	0.2	2.6	2.6	2.7
			0.3	62 Promotion (All Depts)					0.3	0.3	0.3
11.6	19.9		4.6	64 Meetings/Conferences	4.4	5.3	22.4	11.6	6.5	6.5	7.1
103.8	109.4		126.4	66 Travel	102.1	122.7	174.2	103.5		189.6	191.8
0.2	1.8	0.1	1.8	68 Awards, Certif, Logo Cost of Goods Sold	0.4	0.3	1.8	0.2	1.8	1.8	1.9
79.4	165.0	61.5	178.8	73 Special Projects	107.7	111.4	198.0	217.0	214.5	214.5	
98.1	121.8	98.6	116.3	82 Office Expense and Organizational Dues	101.5	96.4	123.3	98.1	100.8	116.8	122.6
34.5	1.3	1.4	1.3	84 Outside Services	9.9	90.1	4.1	63.6	61.1	4.1	4.3
	0.1		0.1	88 Other Expenses			0.1		0.2	0.2	0.2
(75.5)				88.1 Prepaid Expenses (contra acct)				(75.5)			
29.6	29.6	29.6	29.2	90 Depreciation		28.1	35.5	35.5	35.0	35.0	35.0
1,435.5	1,507.3	1,175.5	1,391.0	91 Allocation of Overhead & BOD	1,738.6	1,812.5	1,847.0	1,661.5	1,496.7	1,706.1	1,842.2
<b>3,071.8</b>	<b>3,262.9</b>	<b>2,649.2</b>	<b>3,092.7</b>	<b>TOTAL EXPENSES</b>	<b>3,621.4</b>	<b>3,876.9</b>	<b>3,990.6</b>	<b>3,711.7</b>	<b>3,366.8</b>	<b>3,803.7</b>	<b>3,685.4</b>
(2,962.4)	(3,156.9)	(2,645.0)	(3,048.1)	SURPLUS (DEFICIT) before reserve income	(3,557.3)	(3,694.0)	(3,864.2)	(3,602.3)	(3,230.3)	(3,750.2)	(3,655.0)
	23.8			92 Non-Recurring Expenses	163.4	114.5	60.0				
<b>(2,962.4)</b>	<b>(3,180.7)</b>	<b>(2,645.0)</b>	<b>(3,048.1)</b>	<b>OVERALL SURPLUS (DEFICIT) after reser</b>	<b>(3,720.7)</b>	<b>(3,808.5)</b>	<b>(3,924.2)</b>	<b>(3,602.3)</b>	<b>(3,230.3)</b>	<b>(3,750.2)</b>	<b>(3,655.0)</b>

## **CONSENT MOTIONS**

- A. That McGuire Woods be retained as ASHRAE legal counsel for fiscal year 2021-2022.
- B. That Oakbridge Partners, Ltd. be approved as ASHRAE investment advisor for fiscal year 2021-2022.

The Investment subcommittee has hired a consultant to review several financial advisors including the current advisor and will requests proposals from them.

- C. That Jones & Kolb be approved as ASHRAE Certified Public Accountant for fiscal year 2021-2022.
- D. That the appropriate and required bank resolutions for institutions in which ASHRAE funds are deposited as executed by officers for fiscal year 2021-2022 be approved.

**ASHRAE  
General Fund  
Major Variations - BOD Approved Forecast vs. Current Forecast FY20-21**

	<b>BOD Approved Forecast FY 2021</b>	<b>Current Forecast FY 2021</b>	<b>Original Budget FY 2021</b>	<b>BOD Approved FCST vs. Latest FY 2021</b>		<b>Explanations</b>
<b>REVENUES</b>						
31 Membership Dues	\$7,407.9	\$7,637.9	\$7,157.9	230.0		YTD Dues are trending higher than budgeted.
32 Publication Sales	3,533.0	3,563.1	3,861.0	30.1		
34 Advertising Income - Print	2,629.8	1,722.6	2,846.8	(907.2)	-34.5%	Continued downward pressure on print advertising before and during pandemic
34 Advertising Income - Non-Print	925.0	1,011.0	960.0	86.0		
35.1 Meetings/Conferences Registration	1,260.5	688.9	2,435.5	(571.6)	-45.3%	Primarily related to no in-person Annual Meeting, in-person YEA Leadership Conference and no in-person topical conferences
35.2 Certification Registration	286.0	260.0	286.0	(26.0)	-9.1%	Loss of in-person exams; Gap in time before virtual exams became operational
35.3 Education Registration	1,767.3	1,223.6	2,110.0	(543.7)	-30.8%	Loss of in-person trainings; Delays in availability of virtual HVAC trainings
37 Special Project Income	24.5	24.5	24.5	-		
38 Contribution Income	44.7	44.7	44.7	-		
41.1 AHR Exposition Income	0.0	0.0	4,300.0	-		
41.2 Contributions and Matching Gifts	271.5	271.5	121.5	-		
41.3 Exposition Income - Other Countries	0.0			-		
44 Reserve Transfers	1,657.6	1,155.8	360.4	(501.8)	-30.3%	Reserve transfer of up to an additional \$1.297 million approved by the BOD if needed
46 Miscellaneous Income	423.1	613.2	400.1	190.1	44.9%	Recently secured KFAS project (\$83K) & Meeting Sponsorships
<b>TOTAL REVENUES</b>	<b>20,230.9</b>	<b>18,216.8</b>	<b>24,908.4</b>	<b>(2,014.1)</b>		
<b>EXPENSES:</b>						
51 Salaries	8,518.7	8,473.1	8,768.7	(45.6)		
52 Payroll Taxes, Benefits, Personnel	1,966.8	2,022.0	2,574.1	55.2		
61 Publishing	1,308.2	1,097.6	1,808.2	(210.6)	-16.1%	No in-person Annual meeting related expenses; Lower than budgeted shipping/handling
62 Promotion (All Depts)	1,270.9	895.6	1,552.0	(375.3)	-29.5%	Primarily related to no in-person meetings/events
64 Meetings/Conferences	1,065.9	238.3	2,258.1	(827.6)	-77.6%	Primarily related to no in-person Annual Meeting, YEA Leadership Conference and no in-person topical conferences
64 Education Courses/Trainings	394.5	245.8	740.0	(148.7)	-37.7%	Virtual trainings much cheaper to administer; no facility costs
66 Travel	419.8	23.8	1,683.1	(396.0)	-94.3%	No Society in-person travel for FY20-21 (except discretionary Presidential)
68 Awards, Certif, Logo Cost of Goods Sold	137.0	156.6	137.0	19.6	14.3%	
71 Research Projects & Grants	174.0	166.0	174.0	(8.0)	-4.6%	
73 Special Projects	214.5	214.5	214.5	-	0.0%	
76 Public Relations	75.6	19.5	75.6	(56.1)	-74.2%	No in-person trade show expenses
78 Occupancy & Insurance	702.4	702.8	702.4	0.4	0.1%	
82 Office Expense and Organizational Dues	1,621.6	1,451.9	1,715.9	(169.7)	-10.5%	Postage - lower due to no HPB printing; No printed materials/supplies for trainings needed.
84 Outside Services	2,028.7	2,180.4	2,109.3	151.7	7.5%	Virtual Annual Mtg. host/provider; Recently secured KFAS project (\$60K)
88 Other Expenses	684.1	517.9	747.3	(166.2)	-24.3%	Primarily related to no Annual in-person meeting - no Sales Tax
90 Depreciation	785.0	796.5	785.0	11.5		
91 Allocation of Overhead & BOD	(724.7)	(635.8)	(724.7)	88.9		
<b>TOTAL EXPENSES</b>	<b>20,643.0</b>	<b>18,566.5</b>	<b>25,320.5</b>	<b>(2,076.5)</b>		
SURPLUS (DEFICIT) before reserve income	(412.1)	(349.7)	(412.1)			

**ASHRAE, INC.**  
**Capital Expenditures July 2020 - April 2021 Year to Date**

<u>Account Description</u>	<u>Amount</u>	<u>Budgeted</u>	<u>Vendor</u>	<u>Reference</u>
Technology & Equipment DC	\$ 18,086		NTT	Web Ex Capabilities DC
180 Technology Parkway	\$ 21,813,254		Various	New Building
Furniture & Fixtures	\$ 523,442		Dekalb Office	New Building
		\$ 100,000		
	<b>\$ 22,354,783</b>	<b>\$ 100,000</b>		

CASH FLOW ACTIVITY & PROJECTION





**ASHRAE**

**ASHRAE Consolidated (Excl Foundation)  
For the Nine Months Ending Wednesday, March 31, 2021**

Chicago Atlanta Orlando No Expo

roll up acct / Description	TWELVE MONTHS ENDING JUNE 30					DRAFT	FY 22 V 21 Forecast		Variance	
	Actual FY 2018	Actual FY 2019	Actual FY 2020	Forecast FY 2021	Budget FY 2021	Budget FY 2022				
<b>REVENUES</b>										
31 Membership Dues	\$7,772.8	\$7,779.9	\$7,884.8	\$7,787.9	\$7,307.9	\$7,760.9				Historically they have increased 2%. No increase except for Developing Economy. Mostly renewals should rebound in the coming year. Implementation of new benefit program with options may result in increased memberships.
32 Publication Sales	3,664.0	3,447.6	3,722.2	3,563.1	3,861.0	3,890.9	\$ 327.8	9.2%		
34 Advertising Income - Print	3,308.2	3,089.6	2,584.3	1,722.6	2,846.8	2,288.0	\$ 565.4	32.8%	Las Vegas Expo Journal and Show Daily.	
34 Advertising Income - Non-Print	899.2	868.6	657.6	1,011.0	960.0	1,065.0	\$ 54.0	5.3%		
35.1 Meetings/Conferences Registration	1,737.6	1,548.2	1,693.9	688.9	2,435.5	1,940.9	\$ 1,252.0	181.7%	Las Vegas meeting attendance shows 75% capacity. Expenses high due to location. Possibility of increasing expenses and revenues if attendance is higher.	
35.2 Certification Registration	213.2	218.7	219.7	260.0	286.0	280.0	\$ 20.0	7.7%		
35.3 Education Registration	1,700.6	1,642.7	1,498.2	1,223.6	2,110.0	2,558.5	\$ 1,334.9	109.1%	Las Vegas trainings plus F2F courses.	
37 Special Project Income	62.9	74.3	51.6	24.5	24.5		-\$ 24.5	-100.0%	No special projects in sight as of yet.	
38 Contribution Income	2,312.7	2,295.3	1,784.2	1,544.7	1,544.7	1,806.8	\$ 262.1	17.0%		
41.1 AHR Exposition Income	6,085.7	5,741.8	6,012.6		4,300.0	5,937.5	\$ 5,937.5		Expo participation is show at 90% of capacity.	
41.2 Contributions and Matching Gifts	74.5	109.5	165.0	371.5	321.5	137.1	-\$ 234.4	-63.1%	Waived the transfer of Funds during the pandemic.	
41.3 Exposition Income - Other Countries		234.0				170.0	\$ 170.0		Montery Expo in September of 2021 F2F	
44 Reserve Transfers	1,199.3	890.0		2,655.8	1,860.4	525.0		0.0%		
46 Miscellaneous Income	364.7	805.2	622.9	613.2	400.1	389.7	-\$ 223.5	-36.4%	UNEP Revenue work is planned for 2023 & 2024.	
<b>TOTAL REVENUES</b>	<b>29,395.4</b>	<b>28,745.4</b>	<b>26,897.0</b>	<b>21,466.8</b>	<b>28,258.4</b>	<b>28,750.3</b>				
<b>EXPENSES:</b>										
51 Salaries	9,730.4	9,720.9	9,495.0	9,011.1	9,229.4	9,311.8	\$ 300.7	3.3%	Four frozen positions added back for 2022. ER taxes for above positions. Increase in benefit cost for all.	
52 Payroll Taxes, Benefits, Personnel	2,875.3	2,636.9	2,843.4	2,145.7	2,726.7	2,816.6	\$ 670.9	31.3%	New benefits program will allow a selection of one member benefit HB Pdf, Standard Pdf or an eLearning Course.	
61 Publishing	1,839.4	1,782.9	1,604.3	1,120.4	1,831.1	1,158.5	\$ 38.1	3.4%	Primarily F2F meetings.	
62 Promotion (All Depts)	1,572.4	1,455.7	1,105.7	905.3	1,561.7	1,426.0	\$ 520.7	57.5%		
64 Meetings/Conferences	2,184.3	1,782.3	1,274.2	257.7	2,277.5	2,367.1	\$ 2,109.4	818.5%	Las Vegas meeting attendance shows 75% capacity. Expenses high due to location. Possibility of increasing expenses and revenues if attendance is higher.	
64 Education Courses/Trainings	686.9	695.5	475.0	245.8	740.0	697.0	\$ 451.2	183.6%	Las Vegas trainings plus F2F courses.	
66 Travel	2,228.8	2,169.0	1,328.2	23.2	1,779.6	2,111.8	\$ 2,088.6	9002.6%	Annual, Winter & training meetings post pandemic.	
68 Awards, Certif, Logo Cost of Goods Sold	175.2	232.6	150.0	194.1	174.5	203.4	\$ 9.3	4.8%		
71 Research Projects & Grants	2,941.5	2,226.6	2,332.2	1,903.0	1,874.0	2,165.0	\$ 262.0	13.8%	Student Grants	
73 Special Projects	107.7	111.4	217.0	214.5	214.5		-\$ 214.5	-100.0%	No special projects in sight as of yet.	
76 Public Relations	58.1	70.5	54.2	19.8	75.9	75.2	\$ 55.4	279.8%	Trade Shows & F2F meetings.	
78 Occupancy & Insurance	639.3	768.3	799.0	702.8	702.4	759.5	\$ 56.7	8.1%		
82 Office Expense and Organizational Dues	1,633.0	1,631.3	1,484.7	1,516.6	1,780.6	1,600.9	\$ 84.3	5.6%		
84 Outside Services	1,906.3	2,243.0	2,013.9	2,180.4	2,109.3	2,191.5	\$ 11.1	0.5%		
88 Other Expenses	786.7	770.9	521.9	579.0	808.4	843.0	\$ 264.0	45.6%	Sales Tax F2F meetings and increased Credit Card charge activity	
88.1 Prepaid Expenses (contra acct)	(491.5)	(182.9)	(81.4)				\$ 0.0			
89 Opportunity Fund	140.0	150.0					\$ 0.0			
90 Depreciation	556.9	379.1	324.4	796.5	785.0	921.9	\$ 125.4	15.7%	New Building & Equipent Full year.	
91 Allocation of Overhead & BOD				0.0	0.0	0.0	\$ 0.0			
<b>TOTAL EXPENSES</b>	<b>29,570.7</b>	<b>28,644.0</b>	<b>25,941.7</b>	<b>21,815.9</b>	<b>28,670.6</b>	<b>28,649.2</b>				
SURPLUS (DEFICIT) before reserve income	(175.3)	101.4	955.3	(349.1)	(412.2)	101.1				

**ASHRAE  
General (Fund 2)**

**For the Nine Months Ending Wednesday, March 31, 2021**

roll up acct / Description	TWELVE MONTHS ENDING JUNE 30					DRAFT	FY 22 V 21 Forecast		Variance	
	Actual FY 2018	Actual FY 2019	Actual FY 2020	Forecast FY 2021	Budget FY 2021	Budget FY 2022				
<b>REVENUES</b>										
31 Membership Dues	\$7,617.1	\$7,624.3	\$7,727.4	\$7,637.9	\$7,157.9	\$7,606.4	-\$ 31.5	-0.4%	Historically they have increased 2%. No increase except for Developing Economy. Mostly renewals should rebound in the coming year. Implementation of new benefit program with options may result in increased memberships.	
32 Publication Sales	3,664.0	3,447.6	3,722.2	3,563.1	3,861.0	3,890.9	\$ 327.8	9.2%		
34 Advertising Income - Print	3,308.2	3,089.6	2,584.3	1,722.6	2,846.8	2,288.0	\$ 565.4	32.8%	Las Vegas Expo Journal and Show Daily.	
34 Advertising Income - Non-Print	899.2	868.6	657.6	1,011.0	960.0	1,065.0	\$ 54.0	5.3%		
35.1 Meetings/Conferences Registration	1,737.6	1,548.2	1,693.9	688.9	2,435.5	1,940.9	\$ 1,252.0	181.7%	Las Vegas meeting attendance shows 75% capacity. Expenses high due to location. Possibility of increasing expenses and revenues if attendance is higher.	
35.2 Certification Registration	213.2	218.7	219.7	260.0	286.0	280.0	\$ 20.0	7.7%		
35.3 Education Registration	1,700.6	1,642.7	1,498.2	1,223.6	2,110.0	2,558.5	\$ 1,334.9	109.1%	Las Vegas trainings plus F2F courses.	
37 Special Project Income	62.9	74.3	51.6	24.5	24.5	-\$ 24.5	-100.0%	No special projects in sight as of yet.		
38 Contribution Income	35.1	32.3	29.0	44.7	44.7	46.8	\$ 2.1	4.7%		
41.1 AHR Exposition Income	6,085.7	5,741.8	6,012.6		4,300.0	5,937.5	\$ 5,937.5		Expo participation is show at 90% of capacity.	
41.2 Contributions and Matching Gifts	(1,488.5)	(1,390.5)	(1,735.0)	271.5	121.5	(1,362.9)	-\$ 1,634.4	-602.0%	Waived the transfer of Funds during the pandemic.	
41.3 Exposition Income - Other Countries		234.0				170.0	\$ 170.0		Monterry Expo in September of 2021 F2F	
44 Reserve Transfers	719.0	690.0		1,155.8	360.4	255.0	-\$ 900.8	-77.9%		
46 Miscellaneous Income	364.7	805.2	622.9	613.2	400.1	389.7	-\$ 223.5	-36.4%	UNEP Revenue work is planned for 2023 & 2024.	
<b>TOTAL REVENUES</b>	<b>24,918.8</b>	<b>24,626.8</b>	<b>23,084.4</b>	<b>18,216.8</b>	<b>24,908.4</b>	<b>25,065.8</b>				
<b>EXPENSES:</b>										
51 Salaries	9,268.7	9,244.2	8,987.7	8,473.1	8,768.7	8,837.2	\$ 364.1	4.3%	Four frozen positions added back for 2022. ER taxes for above positions. Increase in benefit cost for all.	
52 Payroll Taxes, Benefits, Personnel	2,702.5	2,545.9	2,698.5	2,022.0	2,574.1	2,683.4	\$ 661.4	32.7%	New benefits program will allow a selection of one member benefit HB Pdf, Standard Pdf or an eLearning Course.	
61 Publishing	1,831.1	1,777.5	1,598.8	1,097.6	1,808.2	1,134.5	\$ 36.9	3.4%	Primarily F2F meetings.	
62 Promotion (All Depts)	1,567.2	1,428.3	1,102.1	895.6	1,552.0	1,415.8	\$ 520.2	58.1%		
64 Meetings/Conferences	2,153.1	1,754.8	1,249.8	238.3	2,258.1	2,346.7	\$ 2,108.4	884.8%	Las Vegas meeting attendance shows 75% capacity. Expenses high due to location. Possibility of increasing expenses and revenues if attendance is higher.	
64 Education Courses/Trainings	686.9	695.5	475.0	245.8	740.0	697.0	\$ 451.2	183.6%	Las Vegas trainings plus F2F courses.	
66 Travel	2,115.6	2,048.7	1,252.9	23.2	1,683.1	1,966.0	\$ 1,942.8	8374.1%	Annual, Winter & training meetings post pandemic.	
68 Awards, Certif, Logo Cost of Goods Sold	119.4	146.0	80.3	156.6	137.0	164.0	\$ 7.4	4.7%		
71 Research Projects & Grants	126.9	116.5	166.1	166.0	174.0	182.7	\$ 16.7	10.1%	Student Grants	
73 Special Projects	107.7	111.4	217.0	214.5	214.5	-\$ 214.5	-100.0%	No special projects in sight as of yet.		
76 Public Relations	57.9	70.5	54.2	19.5	75.6	74.9	\$ 55.4	284.1%	Trade Shows & F2F meetings.	
78 Occupancy & Insurance	639.3	768.3	799.0	702.8	702.4	759.5	\$ 56.7	8.1%		
82 Office Expense and Organizational Dues	1,584.9	1,588.6	1,451.8	1,451.9	1,715.9	1,532.8	\$ 80.9	5.6%		
84 Outside Services	1,905.7	2,243.0	2,013.9	2,180.4	2,109.3	2,191.5	\$ 11.1	0.5%	Sales Tax F2F meetings and increased Credit Card charge activity	
88 Other Expenses	738.3	715.8	473.9	517.9	747.3	765.5	\$ 247.6	47.8%		
88.1 Prepaid Expenses (contra acct)	(491.5)	(182.9)	(81.4)				\$ 0.0			
89 Opportunity Fund	140.0	150.0					\$ 0.0			
90 Depreciation	556.9	379.1	324.4	796.5	785.0	921.9	\$ 125.4	15.7%	New Building & Equipent Full year.	
91 Allocation of Overhead & BOD	(669.2)	(677.3)	(672.8)	(635.8)	(724.7)	(708.8)				
<b>TOTAL EXPENSES</b>	<b>25,141.4</b>	<b>24,923.9</b>	<b>22,191.2</b>	<b>18,565.9</b>	<b>25,320.5</b>	<b>24,964.6</b>				
SURPLUS (DEFICIT) before reserve income	(222.6)	(297.1)	893.2	(349.1)	(412.1)	101.2				

ASHRAE

Research (Funds 3 & 4)

For the Nine Months Ending Wednesday, March 31, 2021

roll up acct / Description	TWELVE MONTHS ENDING JUNE 30						DRAFT
	Actual FY 2018	Actual FY 2019	Actual FY 2020	Forecast FY 2021	Budget FY 2021	Budget FY 2022	
<b>REVENUES</b>							
31 Membership Dues	\$155.7	\$155.6	\$157.4	\$150.0	\$150.0	\$154.5	
38 Contribution Income	2,212.1	2,199.4	1,696.0	1,500.0	1,500.0	1,760.1	
41.2 Contributions and Matching Gifts	1,563.0	1,500.0	1,900.0	100.0	200.0	1,500.0	
44 Reserve Transfers	480.3	200.0		1,500.0	1,500.0	270.0	
46 Miscellaneous Income							
<b>TOTAL REVENUES</b>	<b>4,411.1</b>	<b>4,055.0</b>	<b>3,753.4</b>	<b>3,250.0</b>	<b>3,350.0</b>	<b>3,684.6</b>	
<b>EXPENSES:</b>							
51 Salaries	461.7	476.7	507.3	538.0	460.7	474.6	
52 Payroll Taxes, Benefits, Personnel	172.8	90.9	145.0	123.7	152.6	133.3	
61 Publishing	8.3	5.4	5.5	22.9	22.9	24.0	
62 Promotion (All Depts)	5.1	27.5	3.5	9.7	9.7	10.2	
64 Meetings/Conferences	30.3	27.5	24.0	19.4	19.4	20.3	
66 Travel	111.1	115.5	72.4		96.5	145.9	
68 Awards, Certif, Logo Cost of Goods Sold	44.1	41.6	29.8	37.5	37.5	39.4	
71 Research Projects & Grants	2,814.6	2,110.1	2,166.0	1,737.0	1,700.0	1,982.3	
76 Public Relations	0.2			0.3	0.3	0.3	
82 Office Expense and Organizational Dues	45.6	41.9	27.5	64.7	64.7	68.0	
88 Other Expenses	48.1	55.1	48.0	61.1	61.1	77.5	
91 Allocation of Overhead & BOD	669.2	677.3	672.8	635.7	724.7	708.8	
<b>TOTAL EXPENSES</b>	<b>4,411.1</b>	<b>3,669.5</b>	<b>3,701.8</b>	<b>3,250.0</b>	<b>3,350.1</b>	<b>3,684.6</b>	
SURPLUS (DEFICIT) before reserve income	0.0	385.5	51.6	0.0	(0.1)	0.0	

## MOTIONS

- A. Finance Committee recommends that the fiscal year 2021-2022 General Fund draft budget showing total revenues of \$25,065,800.00 and expenses of \$24,964,600.00 be approved.
  
- B. Finance Committee recommends that the fiscal year 2021-2022 Research Fund draft budget showing total revenues of \$3,684,600.00 and expenses of \$3,684,600 be approved
  
- C. Finance Committee recommends that the capital assets budget of \$200,000.00 for the fiscal year 2021-2022 be approved. Employee laptop replacements possibly around \$150,000.00. May be extended to the following year.

## Finance Committee Ad Hoc Report

June 11, 2021

### **Executive Summary**

The Finance Committee Ad Hoc was assigned the task of developing a standardized analysis form to be used to automatically generate financial analytics for decision making including gross margin analysis of all ASHRAE products and services. To provide this information we were to study the effective use of our current accounting system and other ASHRAE data bases.

We were also requested to investigate the integration of activities with the information from action items 3 and 4 of the PEC reports from a year ago.

Our approach was to develop 3 tools to assist in reaching our assigned goals. The tools we developed include spreadsheets for gross margin analysis of all new and existing ASHRAE products and services, a spreadsheet to look at items to consider in all committees, councils and the Board, and finally a metrics spreadsheet to determine how to measure member benefits.

We were also asked to determine limits of authority for all committees and councils. We were unable to do this as we believe that the limits of authority often affect other bodies in ASHRAE and the determination of these are beyond our mandate and probably beyond the authority of the Finance Committee in some cases.

### **Background**

The mandate for this ad hoc is to provide information for the Finance Committee to improve effective digitizing of its procedures as follows:

1. To develop a single standardized analysis form to be used for financial decision making and approval of all ASHRAE products and services. This form is to include gross margin dollars, gross margin %, payback and other suitable metrics including member benefits. An authorization policy and approval procedure is to be developed for all of ASHRAE. The standardized form and authorization policy are to be recommended to the BOD for implementation across all of ASHRAE. The analysis and approval process should be in an electronic format and capable of being tracked. A training module is to be developed for the analysis form and authorization policy.
2. To study and propose reconfiguring/amending of the ASHRAE accounting system to automatically produce financial data (Reports and Graphs etc.), including gross margin in dollars and percentage, and other metrics, for all products and services.

The accounting system should be capable of data analysis of accounting, membership and other data in the system. The Ad Hoc committee will identify the types of data analyses required for ASHRAE and study, evaluate and recommend a suitable platform. A training module is to be developed for users.

## **Methodology**

The Ad Hoc has approached our mandated tasks as follows:

1. Form three groups to develop
  - a. A spreadsheet tool through interviews with all Society directors as to items that may have any financial information required to be useful in a margin analysis of any of our current Councils and Standing committees.
  - b. An analysis tool has been developed for use in proposing or sunsetting any ASHRAE activities. This spreadsheet will show a financial marginal analysis of the proposed or existing program.
  - c. A final piece is developing an analytical tool to measure member benefits from ASHRAE committee and council activities.
  - d. The financial tools will be investigated by the Finance Committee team in conjunction with a consultant to be sure our existing databases can be accessed to analyze each of these activities automatically without requiring any manual input by staff. We have received two proposals to automate these activities from our existing databases.
2. Develop an education program to introduce the activities from item one above to provide training for those using these reports.
3. Determining span of financial control allocated to Councils, Standing Committees, etc.
4. We plan to develop power point training videos for the combination spreadsheets for analyzing any potential new programs which includes financial analytics and an assessment of member benefits. A second power point education piece will be developed for existing analysis of existing programs which will also include member benefits.

## **Combining Action Items 1,2,3 and 4 from Pub/Ed streaming report**

Action Item #1 – Recommend that Finance Committee adopt the use of a single analysis form across all ASHRAE products and services to include gross margin dollars, gross margin %, payback and other suitable metrics. An example of such a form can be found in Appendix A.

Action Item #2 – Recommend that Finance Committee reconfigure their accounting system to automatically produce financial data, including gross margin in dollars and percentage, for all products and services.

Action Item #3 – Adopt a product/service planning process that is market-driven. The process should be developed by a cross-council team and include marketing. To leverage ASHRAE strengths, the process should include the appropriate path(s) within ASHRAE to optimize the development and marketing of the product/service identified by the process.

Action Item #4 - Align products and services across ASHRAE boundaries while simultaneously developing suites or portfolios of products to meet market needs. Alignment shall include addressing pricing and costs, along with coordinating regional and Society delivery of products and services.

### **Training**

Training will occur with active use of these three spreadsheets. To be useful Finance Committee will have to actively encourage their use. We recommend that Finance Committee select two or three committees of their choice to experiment with each of these tools and follow up and assist these committees with their use. The next phase would be to determine user satisfaction from both volunteers and staff before proceeding across Society.

### **Payback Tool:**

The financial viability of a product or service is important for ASHRAE. It is necessary to have a tool that can be used across the society.

Initially we were asked to come up with an authority matrix but it was agreed that this is outside the scope of this Ad Hoc. It will be up to higher authorities to come up with the appropriate authorization levels for financial approval.

This form was developed taking previously designed tools and adapting them to include the necessary financial matrixes including gross margin and gross margin percentage in order to make better financial decisions for the society. It is based on a 7-year projection.

In order to make things easier for users, a dollar value per hour was assigned for staff and volunteer time (\$85/hr. staff and \$125/hr. volunteer) so that all that has to be entered is number of hours. The tool was developed to try and make it simpler, and allows for notes and/or comments to be added. The calculations are done based on the inputs provided.

### **Analytic Tool for Existing ASHRAE Councils and Committees**

A spreadsheet is to be used to determine how easily it is to gather relevant financial data to provide information to make an informed decision on current and future programs that include gross margin dollars, gross margin %, payback and other suitable metrics.

This subcommittee, through the development of a Financial Matrix spreadsheet and interviewing numerous key ASHRAE staff members, have a better understanding of the existing systems and programs in place and the lack of high maintenance programs that are currently being used. This information will be used to propose reconfiguring/amending the ASHRAE accounting system to automatically produce financial data (Reports and Graphs etc.), including gross margin in dollars and percentage and other metrics, for all products and services.

The proposed revisions to the accounting systems should also allow better tracking of membership, program and product usage, diversity and social interaction data for better decision making.

Financial Matrix has been developed to track key comparators in each category and were matched to leading and lagging indicators. These were reviewed by the following areas of ASHRAE:

1. Publications
2. Education
3. Membership
4. Technology
5. Conferences
6. Development

The Ad Hoc committee has identified various concerns as follows:

1. There are several software programs that provide financial information.
2. Some are third-party, some inhouse and some are spreadsheets manually gathered by staff members.
3. Through these various programs and software, with a large portion of manual manipulation, we have been able to get more and more data. However, staff time is often wasted to gather this information.
4. There are opportunities to gather more information from our third-party partners and with upgrades to our internal software programs, including membership sales, marketing and sponsorship statistics.
5. Software and payback information could reduce manual data collection processes, development and maintenance of manual spreadsheets with development of integrated reporting.
6. Staff time is not tracked to the hour for each area or task, however, regular review of % of time spent is broken out for each employee.
7. Volunteer hours are not tracked & would be impossible except for small projects.
8. Staff & volunteer travel expenses have their own GEO code so are easily tracked.



9. Gross Margins can be provided for most categories while some areas are lacking and require multi programs and spreadsheets to gather data.
10. There is a great potential for more revenue if our financial software can help with data gathering and reporting.

### **Member Benefit Tool**

While it is critical that ASHRAE maintain its strong financial position, it should embark on many programs that do not generate financial gain for the society but instead add value to its membership and to society at large. For example, the very successful Epidemic Task Force has yielded great results for ASHRAE and provided critical knowledge for society. By every measure (other than financial) the program is a resounding success.

Hence, there needs to be a way to recognize that a proposed program can add member value so that this can be taken into consideration by those who must approve new programs. As a corollary to this point, it is critical that the selection process be transparent to all members that at the time a new product or service is being implemented, there is a clear understanding that it may not be “profit” generating.

Measuring intrinsic value is difficult as it is by nature an opinion of the user what the value is worth. The team agreed to use a set of eight ***Dimensions***, consistently applying them to all programs to ascertain where value is being added. This approach is commonly used when performing market surveys on products to gain an understanding of what the customer values and to be able to put two opportunities side by side and see which one creates more overall value.

How the questions are asked can greatly influence how the user will answer. If the user thinks they need to score everything a “5” to get their idea approved they will likely bias their score.

To minimize this effect, the questions have been phrased in a ***Semantic*** way rather than the more common ***Likert*** way. A Likert question would be like “on a scale of 1 to 5, does your program align with the ASHRAE strategic plan?”. A semantic way of asking the same question would be “With regards to the initiatives of the 2019-2024 Strategic Plan, this product/service is: Independent area of focus .... directly supporting”.

The dimensions are (currently) all weighted evenly. It is important that all programs using this tool to be considered for approval use an identical tool so they can be compared side by side. It is understood that some programs will score better in certain dimensions and worse in others. Changes to the tool (once it is piloted) should be limited and only occur annually (no changes within a budget cycle).

The 8 dimensions have been built into a ***Scorecard*** excel (ASHRAE Dimensions Workbook Rev 4.xls) workbook that can be quickly filled out by the user. The score

calculates automatically on a separate tab. There is an opportunity for the user to add comments for each dimension and to add overall comments independent of the dimensions.

### **Budgeting for Tool Development and Use**

ASHRAE currently uses Great Plains (GP) for our accounting system with reporting tools Report Manager and Jet Reports. These provide our current monthly Balance Sheet and Income and Expense statements on a monthly basis. This data can be accessed by Power BI reporting.

Net Forum (NF) is the program that manages our membership database.

GP and NF are written in the same language. Our outside consultant will be able to use the information from the Pub/Ed report to be automated this year. The cost is approximately \$42,000.00.

To develop similar programs for automation of the other Council reporting systems would be approximately \$120,000.00.

### **Recommendations**

1. Pilot all three tools during the next Society year and tweak as necessary with full implementation once they have been vetted.
2. Determine who should use the tools.
3. Develop training methods appropriate to tool users including CRC motions for Society as required.
4. The Payback and Member Benefit tools have greatest impact on our Society membership so these should be emphasized first.
5. The Analytics tool is more focused on staff functions and will be used more extensively by them.
6. The Analytics tool will provide objective automated data to assist in decisions about continuing or concluding some programs.

### **Appendixes**

**Appendix A – Payback Spread Sheet**

**Appendix B – Analytic Spread Sheet (Existing Programs etc.)**

**Appendix C – Member Benefit Tool**

**Appendix D – Software Systems Used**

## ASHRAE Product/Service Payback Analysis Form

NAME OF PRODUCT/SERVICE									
Year		TOTAL	1	2	3	4	5	6	7
<b>Cost to Develop</b>									
Direct staff labor (no of hours) based @	\$ 85.00	\$ 85.00	1.0						
Direct volunteer cost (no of hours) based @	\$ 125.00	\$ 250.00	2.0						
Promotion		\$ 50.00	\$ 50.00						
Materials		\$ 60.00	\$ 60.00						
Commissions		\$ 70.00	\$ 70.00						
Shipping/Postage		\$ 80.00	\$ 80.00						
Meeting/Training Costs		\$ 90.00	\$ 90.00						
Travel Staff		\$ 100.00	\$ 100.00						
Travel Volunteer		\$ 110.00	\$ 110.00						
Dev/Outside Services		\$ 120.00	\$ 120.00						
Other/Misc.		\$ 130.00	\$ 130.00						
<b>TOTAL COST TO DEVELOP</b>		<b>\$ 1,145.00</b>	<b>\$ 810.00</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Financial Metrics</b>									
Revenue									
Gross Margin from sales (\$)									
Gross Margin from sales (%)		#DIV/0!							
Target Gross Margin (%)									
<b>Potential Metrics</b>									
Depreciation \$ Amount									
Depreciation time (years)									
Pay Back (Years)		#DIV/0!							

just input no of hours

just input no of hours

marketing

for outside sales agencies

**FINANCIAL ANALYTICS - ASHRAE PROGRAMS & ACTIVITIES**

**Appendix B**

Education							
MATRIX KPI	ALI	Training--How different from ALI?	eLearning	Global Training Center	Certification	DL Program	Comments
Key Comparator	COURSE VS COURSE YEAR OVER YEAR REVENUE	COURSE VS COURSE YEAR OVER YEAR REVENUE	COURSE VS COURSE YEAR OVER YEAR REVENUE	COURSE VS COURSE YEAR OVER YEAR REVENUE	NUMBER OF EXAMS # of CERTIFICATIONS	# of Talks Per Travel Expense PreCOVID Post COVID	COMMITTEE's have a large budget and do not formally have tools to track funds, expenses and revenues
Leading or Lagging Indicators	Stephanie Reiniche / Mark Owen	Stephanie Reiniche / Mark Owen	Stephanie Reiniche / Mark Owen	Stephanie Reiniche / Mark Owen	Stephanie Reiniche / Mark Owen	Joyce Abrahams	
Total Annual Expenses	Exists Being capture in its own PNL		Exists	Exists	Exists	Medium	
Total Annual Revenues	Easy	Easy	Easy	Easy	Easy		
Staff Expenses	Very Easy	Difficult	Very Easy	Very Easy	Very Easy	Medium	
Over Head Staff Allocation	Very Easy	Difficult	Very Easy	Very Easy	Very Easy	Medium	Allocated based on how much labor is allocated to a program
ExCom BOD Expenses/ Overhead	Very Easy	Difficult	Very Easy	Very Easy	Very Easy	Medium	Allocated based on how much labor is allocated to a program
Development Time Staff (Fixed Cost)	Difficult to separate by course or event	Difficult to separate by course or event	Difficult to separate by course or event	Difficult to separate by course or event	Difficult to separate by certification	NA	Check with Craig on Fixed cost vs Variable costs
Development Volunteer (Fixed Cost)	Difficult	Difficult	Difficult	Difficult	Difficult	Difficult	Check with Craig on Fixed cost vs Variable costs
Maintain Time / Life Cycle Cost vs Revenue	Medium	Medium	Medium	Medium	Medium	Medium	
Demographics of attendees	Medium	Medium	Difficult	Medium	Medium	Difficult	Difficult but mostly obtainable via Net forum report. Depends on product and what is collected from customer data.
Instructors	Easy--tracked by staff.	Easy--tracked by staff.	Special third parties	Easy--tracked by staff.	badging. Set up as a member benefit. Currently not financially viable. There is a	Some DL's get Honoraiams	Pay instructor that presents contract
Gross Margin	Easy--in financials	Easy--in financials	Easy--in financials	Easy--in financials	Easy--in financials	NA	
Sales of each Product	Medium--staff tracks.	Medium--staff tracks.	Medium--from eLearning platform	Medium--staff tracks.	Medium--staff tracks.	NA	
Cost Revenue for each Product	Difficult because of cost part	Difficult because of cost part	Medium--mostly direct. Volunteer costs difficult.	Difficult because of cost part	Medium--mostly direct. Volunteer costs difficult.	NA	
3rd Party Expenses	Identifying line items difficult; must be tracked by staff.	Identifying line items difficult; must be tracked by staff.	Identifying line items difficult; must be tracked by staff.	Identifying line items difficult; must be tracked by staff.	Identifying line items difficult; must be tracked by staff.	NA	
Other Outside Expenses	Difficult--must consult with Publishing Services for cost for each product.	Difficult--must consult with Publishing Services for cost for each product.	Difficult--must consult with Publishing Services for cost for each product.	Difficult--must consult with Publishing Services for cost for each product.	Difficult--must consult with Publishing Services for cost for each product.	Paid by Chapter	
Staff Travel Expenses	Overall easy--on financials. Line items difficult.	Overall easy--on financials. Line items difficult.	Overall easy--on financials. Line items difficult.	Overall easy--on financials. Line items difficult.	Overall easy--on financials. Line items difficult.	Part of CTC program	
Volunteer Travel Expenses	Overall easy--on financials. Line items difficult.	Overall easy--on financials. Line items difficult.	Overall easy--on financials. Line items difficult.	Overall easy--on financials. Line items difficult.	Overall easy--on financials. Line items difficult.	Easy (CTTC)	eLearning is serviced by third party. eLearning, Global eLearning, Certification all registrants in net form so easy to gather revenue info and some
SOFTWARE							Can our software get this information?
Specialty Software	Great Plains & Microsoft Power VI	Great Plains & Microsoft Power VI	Great Plains & Microsoft Power VI	Great Plains & Microsoft Power VI	Great Plains & Microsoft Power VI	Great Plains & Microsoft Power VI	Our software get all this information?

**INTRODUCTION**

Not all new ASHRAE products and services need to be financially successful but they must add value for the members and society at large.  
 The ASHRAE score card is used to evaluate how and where a potential new product or service can add value that will not be measured financially.  
 This form should be filled out for all proposed programs.  
 The scorecard will be used to recognize how a program adds non financial value and to help prioritize ASHRAE activities.

**HOW TO USE THIS FORM**

The Scorecard has 8 dimensions. Pick the value that best indicates where the proposed product or services fits v  
 Additional notes can be added (but are not required) for each dimension  
 Additional notes can be added at the bottom of the form (but are not required) for details not covered by the dimensions.

**SCORECARD**

DIMENSION		ADDITIONAL COMMENTS
1	With regards to the initiatives of the 2019-2024 Strategic Plan, this product/service is: Independent area of focus <span style="float: right;">Directly Supporting</span> <div style="display: flex; justify-content: space-between; width: 100%;"> <span>1</span><span>2</span><span>3</span><span>4</span><span>5</span> </div> <div style="display: flex; justify-content: space-between; width: 100%;"> <input type="radio"/><input type="radio"/><input type="radio"/><input checked="" type="radio"/><input type="radio"/> </div>	
2	Non members of ASHRAE will view this project/service as: Valuable mainly to the owners and practitioners of HVAC&R <span style="float: right;">A significant contribution to Society, generally.</span> <div style="display: flex; justify-content: space-between; width: 100%;"> <span>1</span><span>2</span><span>3</span><span>4</span><span>5</span> </div> <div style="display: flex; justify-content: space-between; width: 100%;"> <input type="radio"/><input type="radio"/><input type="radio"/><input checked="" type="radio"/><input type="radio"/> </div>	
3	For ASHRAE Members, this product/service provides : Topic-specific guidance, technical tools, or information <span style="float: right;">Professional Growth Opportunity or career skill development</span> <div style="display: flex; justify-content: space-between; width: 100%;"> <span>1</span><span>2</span><span>3</span><span>4</span><span>5</span> </div> <div style="display: flex; justify-content: space-between; width: 100%;"> <input checked="" type="radio"/><input type="radio"/><input type="radio"/><input type="radio"/><input type="radio"/> </div>	
4	Professionals in our industry would find this product or service: A general benefit to the HVAC&R industry <span style="float: right;">A valuable and exclusive benefit of ASHRAE membership</span> <div style="display: flex; justify-content: space-between; width: 100%;"> <span>1</span><span>2</span><span>3</span><span>4</span><span>5</span> </div> <div style="display: flex; justify-content: space-between; width: 100%;"> <input type="radio"/><input checked="" type="radio"/><input type="radio"/><input type="radio"/><input type="radio"/> </div>	
5	This product or service would: Be used as a technical resource <span style="float: right;">Drive members to be more active in ASHRAE Activities/Committee</span> <div style="display: flex; justify-content: space-between; width: 100%;"> <span>1</span><span>2</span><span>3</span><span>4</span><span>5</span> </div> <div style="display: flex; justify-content: space-between; width: 100%;"> <input type="radio"/><input type="radio"/><input type="radio"/><input type="radio"/><input checked="" type="radio"/> </div>	
6	This focus of this product or service: Supports and area where ASHRAE is the accepted leader <span style="float: right;">Is of strong interest to organizations outside of ASHRAE</span> <div style="display: flex; justify-content: space-between; width: 100%;"> <span>1</span><span>2</span><span>3</span><span>4</span><span>5</span> </div> <div style="display: flex; justify-content: space-between; width: 100%;"> <input type="radio"/><input type="radio"/><input checked="" type="radio"/><input type="radio"/><input type="radio"/> </div>	

7 Development of this product or service  
Creates new offering in ASHRAE's portfolio of products/services. Builds upon or enhances existing ASHRAE products or services

1	2	3	4	5
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

8 This product or service serves  
Existing market where ASHRAE is a leader A new or underserved market

1	2	3	4	5
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**ADDITIONAL COMMENTS**

## Systems

- Accounting
  - Microsoft Dynamics GP (“GP”)
- Association Management System
  - Abila netFORUM (Community Brands)
- Financial Reporting
  - MS Dynamics Management Reporter
- External Systems/Websites/Reports
  - Banking
    - Interface Banking Activity with GP
  - Payroll
    - Interface Payroll with GP
  - Inventory
    - PBD Smart Reports

Tax – Prepared & Reviewed by Outside Auditors – Jones & Kolb  
Schedules prepared from GP, RM & Excel

## Month-End Closing

### Balance Sheet

- Assets
  - Cash
    - Bank Account Reconciliations Truist & United Community Bank – Online Access
  - Accounts Receivable
    - Reconcile NetForum Accounts Receivables subledgers to MS Dynamics GP General Ledger
    - Bad Debt Allowance-Excel-Calculate by Due Dates greater than 60 day
  - Inventory – PBD-Smart report to access inventory & receipts reports
  - Investments-Schwab & Oakbridge Management
    - Adjust to FMV monthly – Investment Advisor monthly performance (website)
  - Prepays – GP running totals
- Liabilities
  - Accounts Payable-GP- all checks & EFT's generated and uploaded to Truist
  - All other liability accounts are reconciled monthly -Net Forum – detail Deferred Revenue is an example of data reviewed.



## Month-End Closing

### Revenue

- netFORUM interface
  - Membership Dues, Courses, Advertising, Events, Certain Product Sales, Certifications, Donations, Special Projects, Merchandise, Sponsorships- performs Revenue Recognition for Current and Deferred – Summary Journal Entry into GP
- ASHRAE Website Bookstore transactions
  - Monthly spreadsheet of transactions; Journal Entry (TechStreet/Clarivate Analytics)
  - Subscriptions (Royalties); Journal Entry
- e-Learning – online course fees (Web Courseworks); Journal Entry
- Technology and Std. 90.1 Portal – Handbook PDFs, papers, articles, reports (iEngineering)
- Royalties – Publication/App sales through various resellers (Amazon, Apple iTunes, Elsevier, etc. – no sales product/customers data provided to Accounting), Handbook Online (iEngineering)
- Manual Revenue Recognition entries
- Revenue recognized/payment received in advance recognized in the month service is provided

## Month-End Closing

### Expenses

- Primarily recorded through payables-Staff completes an Electronic Disbursement Form and then they are entered into GP
- COGS/Inventory (PBD)
  - Order Fulfillment from ASHRAE Website Bookstore and netForum
  - Storage of Inventory (primarily Publications)
  - Report from Pub/Ed and Smart Reports (PBD) – inventory levels, sales info of shipped products
- Payroll Interface – Paycom – Summary Journal Entry
- Credit card charges (actuals from merchant statement, reconcile to bank statements and allocate based on actual revenue recognized)
- Accrue advertising commission expense (20%) – match to recognized (invoiced) revenue; end of fiscal year true-up
- Monthly Accruals and Prepaid Expense Amortizations
- Depreciation (fixed asset module in GP)
- Taxes/Benefits Allocation (based on labor dollars)
- Overhead/BOD expense allocation (based on labor dollars)



ASHRAE Finance Committee  
MBO 3 and MBO 4 Workgroup  
Report to Finance Committee

Date: January 20, 2021

Workgroup Members:

Dennis Knight

Julia Keen

Don Brandt

William (Bill) Dean

Michael Cooper

## **Executive Summary**

This workgroup was assigned by Treasurer Farooq Mehboob to review the issues raised and outcomes being sought by Finance Committee SY 2020-2021 MBO Numbers 3 and 4. We worked closely with Craig Wright, ASHRAE Director of Finance, to develop the recommendations for the changes and adjustments to current policies and procedures contained in this report. In addition, Presidential Member Tim Wentz served as a liaison between our Workgroup and the Finance Committee Ad Hoc working on MBO Numbers 1 & 2 and the Society Streamlining Ad Hoc to help us coordinate and harmonize our work with the work of others in ASHRAE.

The Workgroup initially gathered information and communicated via email. We held virtual meetings on December 4<sup>th</sup>, December 18<sup>th</sup> and on January 15<sup>th</sup>. During the first two calls we reviewed numerous Key Performance Indicators (KPIs) that may be of benefit to the Board of Directors and Finance Committee and empower them to make better decisions in the future. Between the December 18<sup>th</sup> and January 15<sup>th</sup> calls we subdivided the Workgroup into two teams of two people. Don Brandt and Bill Dean worked on MBO 3 and produced the draft dashboards attached to this report. Julia Keen and Michael Cooper worked on MBO 4 and consolidated the information we had received from Craig Wright during our first two calls and based on that information, produced the recommendations in the report on how we should consider modifying our time and cost accounting to better track overhead.

As with any endeavor in ASHRAE, it takes a team of passionate and committed volunteers and staff to accomplish the work of Society and keep us on the path toward continuous improvement. This effort has been no different. The heavy lifting required to get to the point of making the recommendations herein have been done by Julia, Michael, Don and Bill with many thoughtful and constructive comments from Craig and Tim. Many thanks to them for the many hours and creative thought they have donated to ASHRAE to produce this work product. The following is our report.

### **MBO-3:**

Update and revise format of the budget presentation to the BOD, making it clearer & more focused for the BOD. A 'Dashboard' to be created showing relevant data pertaining to ASHRAE Finances. Dashboard to be available on the 7th calendar day after the month closes.

#### **Discussion:**

The current Treasurer's presentation contains numerous charts and graphs displaying various key performance indicators (KPIs) and financial trends. The new dashboard proposed in this report includes some of the KPIs traditionally shown in the presentation and proposes some new KPIs that may benefit the BOD's work to manage the finances of ASHRAE. Once FC and the BOD agrees on the KPIs and dashboard content they would like to see – we will revise the Treasurer's presentation as needed to include any new KPIs or updated content.

ASHRAE's current accounting process relies on internal accounting software as well as reports from third party vendors that manage various aspects of our business such as payroll, the bookstore, etc. To gather this data and produce our Statement of Financial Position (equivalent to a balance sheet for a for-profit corporation), Statement of

Activities (equivalent to an income statement for a for-profit corporation), and the Cash Flow Statement requires our accounting staff to manually collect and aggregate the data from the multiple sources to produce the reports the BOD typically receives throughout the year. Due to the amount of data collection and time required to manually produce the reports, they are typically not closed on the same day. This makes it impossible for anyone doing typical financial management calculations to reconcile the three reports. Reconciled reports are often only produced once per year to prepare our tax returns and to produce the annual report that appears in the Insights publication well after the close of our fiscal year on June 30<sup>th</sup>.

**Recommendations:**

1. ASHRAE either invest in accounting software that can gather financial information and track and analyze our financial inputs and outputs (revenues and expenses) and assets in such a manner that our Statement of Financial Position, Statement of Activities, and the Cash Flow Statements can be all be run and reported in real time at any time of the year (at the same time); or, that we work with our outside vendors and internal IT department to use existing software tools such as Microsoft BI along with a highly structured set of data bases containing data from our internal software and external sources to produce the same results described herein.
2. Historical financial information and KPIs be published in the form of a graphical dashboard like the dashboard shown in Attachment “A” to this report. The dashboard should be updated and made available to the BOD at least monthly if our accounting system cannot provide the information in real time reports that can be accessed by Board members at will. Several departments and councils within ASHRAE have been publishing dashboards on a regular basis for some years now (Membership, Marketing and Publications and Education (PubEd)). The dashboard shown in Attachment “A” was modeled after the most recent dashboard produced by PubEd. Graphical dashboards allow financial information to be better and more quickly comprehended by busy executives and non-financial managers (technical professionals such as engineers) who may not be used to diving deep into financial reports. They also create a common language among Board members, encourage engagement of more people in the financial management of the organization which can lead to better financial decisions and better governance.

**MBO-4:** Study and review how overhead is allocated in ASHRAE financial documents. Recommendations to be prepared to allocate overhead to reflect the true performance of councils and committees. A policy be developed for cross committee / council charges, e.g., PEC publishes the journal, which is a member benefit, the production cost is entirely borne by PEC whereas it should be charged to Members Council where the member benefit resides.

**Discussion:**

As ASHRAE attempts to streamline for effectiveness, tracking program success is an area of focus. One measure of success for programs and initiatives is better tracking of

fiscal impact. There are many programs that are developed that are not intended to serve as revenue generators, but other programs must be revenue generators to supplement these budget expenditures. A challenge has presented itself as part of this process – ASHRAE cannot not clearly quantify the direct and indirect (OH) expenses associated with individual programs because many of the expenses are not recorded in a manner that allow for this level of accounting. Note: Accounting does track certain programs. Whether a program is tracked depends on if they are/were set up in our Accounting system. For example, within Pub/Ed Council, we track Education Programs and within Education, we track Self Directed Learning, Foundation Learning Center courses, etc.) Accounting does not routinely provide this information unless it's requested because, and historically it has never been requested by the BOD or Finance Committee. The recommended methodology and process for documenting the expenses related staff time and overhead are outlined below. These changes will result in minor adjustments of procedure for some departments while others will experience a greater cultural shift. This change is important in allowing ASHRAE to make more informed decisions since a significant portion of ASHRAE budget is allocated to staff salaries. The way this resource is expended is critical to understand. Below is the process for categorization of Expense (Cost of work) versus overhead. These rules are to be taken in conjunction with proper time keeping by category.

**Definitions:**

Expense – Employee time and other costs that is directly attributed to the department or program identified.

Overhead – Employee time and other costs that is incurred that is not directly attributed to a singular program.

**Process:**

All employees are set up initially in a “base” department depending on the Director they report. Any additional costs associated with the employee including burden or other forms of compensation follow the employee.

Expense departments are as listed below:

- Councils
  - Members
    - Administration (Labor, Travel, Other expenses for Society meetings)
    - Committees
      - Programs
  - Publishing and Education
    - Administration
    - Committees
      - Programs
  - Technology
    - Administration
    - Committees
      - Programs

- Executive Committee
  - College of Fellows
  - Development - Capital Campaigns
  - Foundation
  - Joint Expo
  - Life Members
  - PEAC
  - President/President Ad-Hoc
  - Scholarship
- BOD
  - Administration
  - Building EQ
  - Finance
  - Planning
  - Society Rules
  - Nominating
  - BOD Ad-Hoc

Overhead Departments are as listed below:

Administrative Services  
 Accounting  
 Human Resources  
 IT (network, desktop support, development for Association Management System (“AMS”) and in-house projects/reporting/maintenance)  
 Data Center/Systems Management (AMS maintenance/data entry)  
 Building/Facilities Operations (all building costs including depreciation)  
 Company Staff Support (administrative)  
 Member support at the Region/Chapter level for technical (IT) and/or compliance (taxes/government regulations – Accounting)  
 Marketing/Website support  
 Washington D.C. Office

**Recommendations:**

1. “Overhead” departments should charge to “Expense” departments to reflect work completed within those portions of the organization to provide a clear picture of expenses and resources allocated with individual programs. Note: Staff in Overhead/BOD departments can charge their time to whatever project/program they are working on outside of their base department
2. Additional categories or accounting codes may be generated to provide more areas for tracking costs for Overhead expenses not listed above.
3. As part of the monthly closing process, the Accounting Manager will generate a monthly report (spreadsheet) that shows labor dollars by department/program which is then interfaced into the ASHRAE accounting system.

4. As part of the monthly closing process, the last step is to run the Overhead allocation process. This process/procedure takes the monthly totals in the Overhead expense and allocates them to all non-Overhead cost centers as a percentage of costs. Accounting allocates the total overhead costs based on the percent of direct labor expense charged to the non-overhead cost center. This not only applies to the General Fund, but dollars are also allocated to the Research Fund department using the same basis of allocation (labor dollars Note: we recommend that OH be broken out for each council and committee on each Tab of the monthly financials and subtotaled so that a department, council, or committee's gross margin can be readily seen on the report. In addition, for the general and consolidated financial statements we recommend the direct labor (expense defined above) and overhead labor as well as direct and indirect non labor expenses be shown so that OH can be tracked and trended as a KPI directly from those two reports.

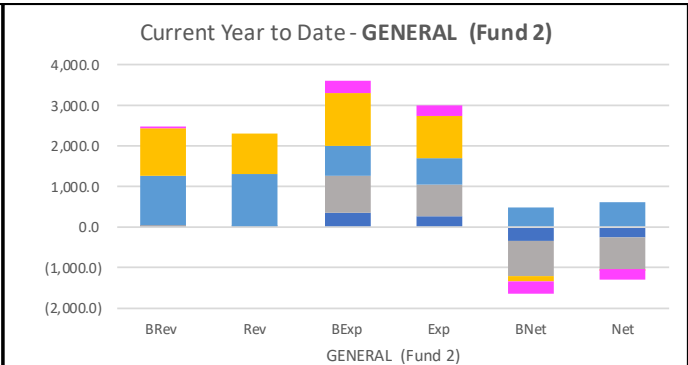
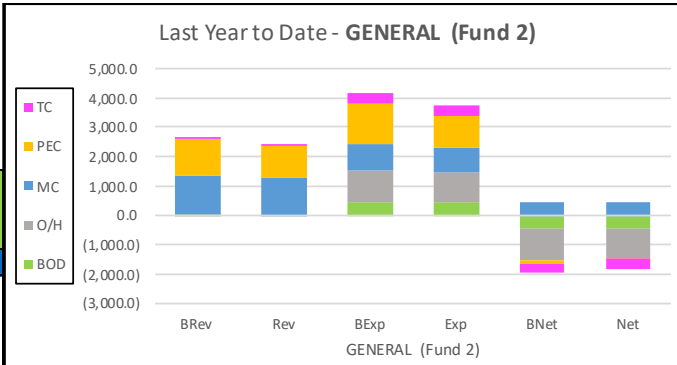




## General Fund Dashboard

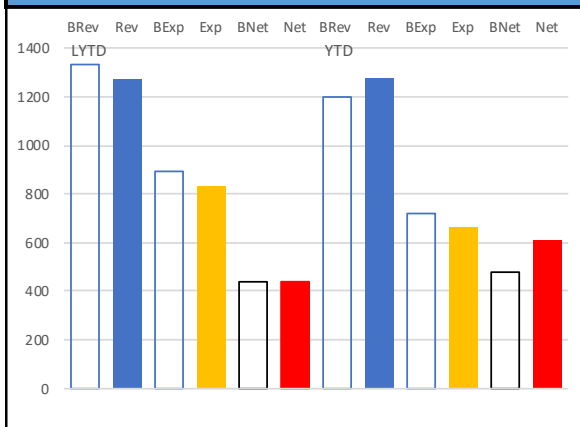
End of August 2020

**LEGEND:**  
**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 BOD, Overhead, MC, PEC, TC). Values = US\$ x1000.



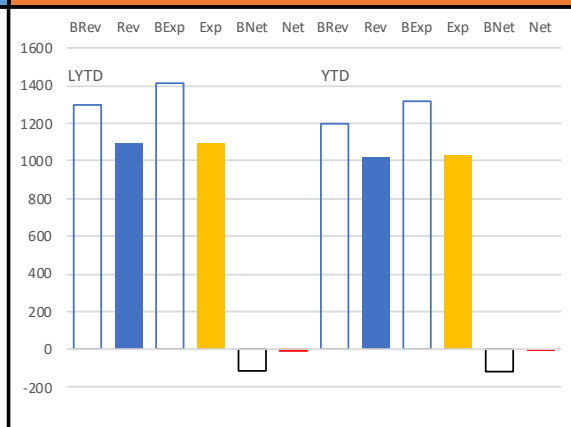
	Last Year to Date							Current Year to Date						
GENERAL (Fund 2)	BOD	O/H	MC	PEC	TC	Total	BOD	O/H	MC	PEC	TC	Total		
BRev	1.9	2.2	1,331.8	1,297.1	30.0	2,663.0	2.7	50.2	1,198.4	1,197.4	8.9	2,457.6		
Rev	0.0	2.1	1,272.5	1,091.9	22.8	2,389.3	0.0	13.4	1,274.0	1,019.5	0.0	2,306.9		
BExp	475.1	1,043.1	892.7	1,412.6	344.0	4,167.5	335.8	923.1	719.7	1,316.8	306.9	3,602.3		
Exp	442.6	1,044.6	833.0	1,094.2	333.1	3,747.5	250.2	783.7	663.7	1,028.9	282.3	3,008.8		
BNet	(473.2)	(1,040.9)	439.1	(115.5)	(314.0)	(1,504.5)	(333.1)	(872.9)	478.7	(119.4)	(298.0)	(1,144.7)		
Net	(442.6)	(1,042.5)	439.5	(2.3)	(310.3)	(1,358.2)	(250.2)	(770.3)	610.3	(9.4)	(282.3)	(701.9)		

### Members Council



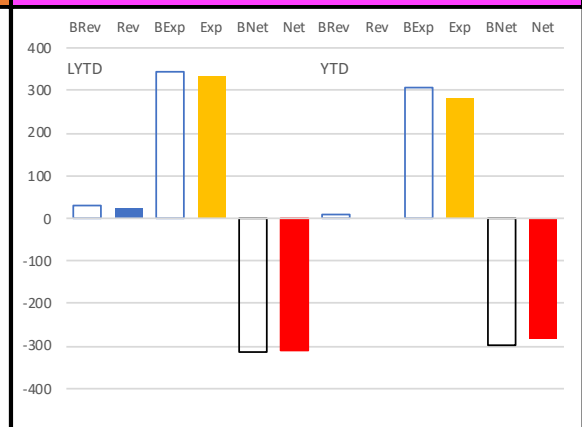
MC	LYTD	YTD	Diff. vs. LY
BRev	1,331.8	1,198.4	-10%
Rev	1,272.5	1,274.0	0%
BExp	892.7	719.7	-19%
Exp	833.0	663.7	-20%
BNet	439.1	478.7	9%
Net	439.5	610.3	39%
Margin	34.5%	47.9%	39%

### Publishing and Education Council



PEC	LYTD	YTD	Diff. vs. LY
BRev	1,297.1	1,197.4	-8%
Rev	1,091.9	1,019.5	-7%
BExp	1,412.6	1,316.8	-7%
Exp	1,094.2	1,028.9	-6%
BNet	(115.5)	(119.4)	3%
Net	(2.3)	(9.4)	309%
Margin	-0.2%	-0.9%	338%

### Technology Council



TC	LYTD	YTD	Diff. vs. LY
BRev	30.0	8.9	-70%
Rev	22.8	0.0	-100%
BExp	344.0	306.9	-11%
Exp	333.1	282.3	-15%
BNet	(314.0)	(298.0)	-5%
Net	(310.3)	(282.3)	-9%
Margin	-1361.0%	#DIV/0!	#DIV/0!

MEMBERS COUNCIL (2-2nn & 2-8nn)

PUBLISHING & EDUCATION COUNCIL (2-4nn & 5-5nn)

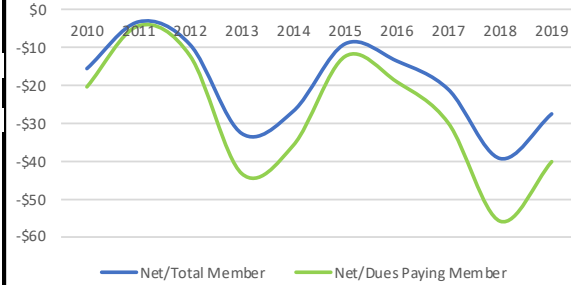
TECHNOLOGY COUNCIL



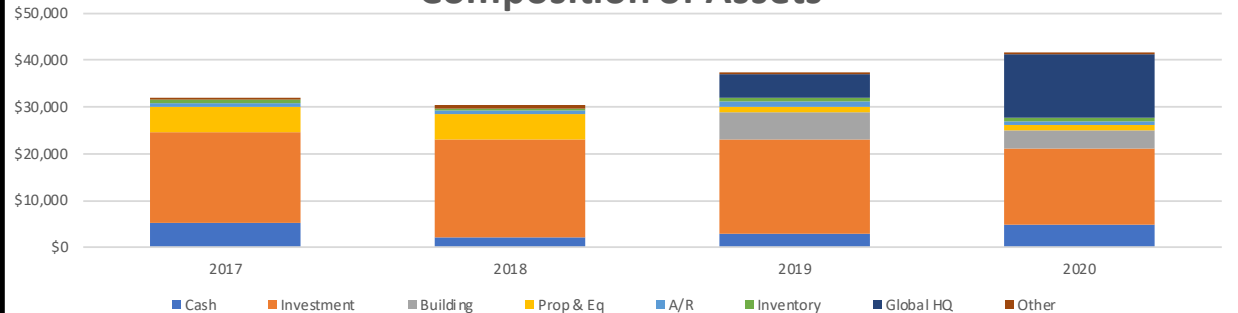
# Treasurer's Report

As of May 2020

### Net Cost Dollars per Member

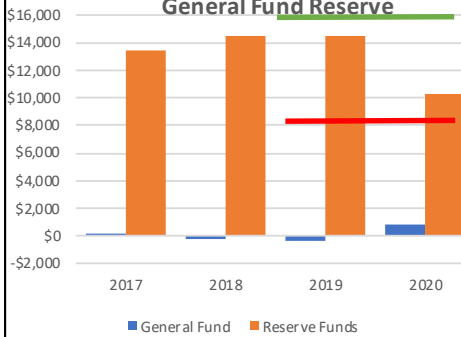


## Composition of Assets

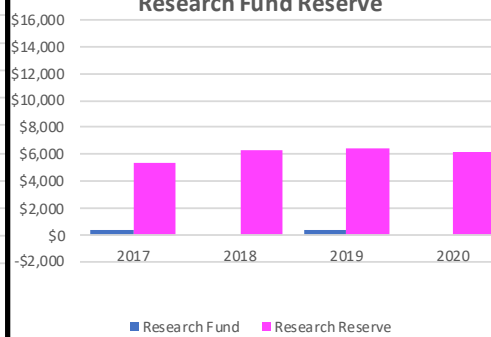


Assets	Cash	Investment	Building	Prop & Eq	A/R	Inventory	Global HQ	Other	Total
2017	\$5,293	\$19,282		\$5,498	\$829	\$642		\$619	\$32,163
2018	\$2,100	\$20,889		\$5,455	\$772	\$614		\$652	\$30,482
2019	\$2,891	\$20,290	\$5,779	\$1,176	\$1,009	\$649	\$5,078	\$553	\$37,425
2020	\$4,655	\$16,631	\$3,800	\$988	\$709	\$828	\$13,600	\$354	\$41,565

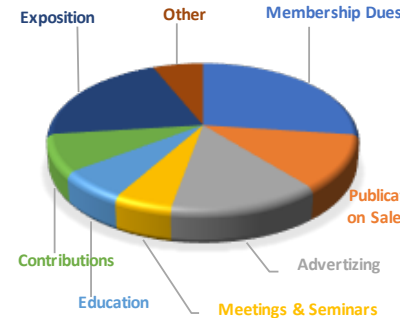
### General Fund Reserve



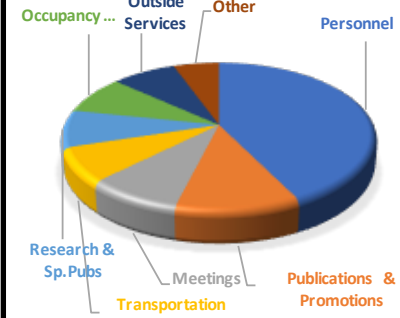
### Research Fund Reserve



### REVENUE FY 2019



### EXPENSES FY 2019



Reserve Fund	General Fund	Reserve Funds	General Fund Range Information	Research Reserve Fund	Research Fund	Research Reserve	Revenue		Expenses		
2017	\$29	\$13,489	Annual Exp.	\$24,000	2017	\$362	\$5,388	Membership Dues	\$7,780	Personnel	\$12,224
2018	-\$223	\$14,460	2/3	\$16,000	2018	\$0	\$6,244	Publication Sales	\$3,448	Publications & Promotions	\$3,239
2019	-\$351	\$14,485	1/3	\$8,000	2019	\$386	\$6,437	Advertizing	\$3,958	Meetings	\$2,478
2020	\$872	\$10,280			2020	\$0	\$6,188	Meetings & Seminars	\$1,548	Transportation	\$2,169
								Education	\$1,861	Research & Sp.Pubs	\$2,338
								Contributions	\$2,380	Occupancy & Office	\$2,397
								Exposition	\$5,976	Outside Services	\$2,243
								Other	\$1,770	Other	\$1,586

Notes: All funds in \$US x1000  
Additional Financial Notes  
Definitions:

**Title: ASHRAE Position Document on Infectious Aerosols**

**Purpose:** Inform the ASHRAE membership and the public of the impact of HVAC systems on the distribution of infectious-aerosols. These aerosols can subsequently be inhaled directly in the upper respiratory tract, deep into the lungs, ~~or may settle out on surfaces and become indirectly transmitted by resuspension or fomite contact.~~

**Scope:**

The document will address the impact of HVAC systems that are described in the Systems Handbook on the distribution of infectious aerosols that results in exposure.

The document will address a variety of built and transportation environments.

The document will be written with sufficient scientific rigor and references to be useful to specialists such as policy makers, researchers, architects, and engineers; and containing material that will be useful to the general public.

The document will provide the content from which a brief can be prepared for advocacy purposes.

Title: Building Decarbonization

Purpose for the Position Document: Jurisdictions across the world have introduced legislation and regulations requiring buildings to comply with a variety of low carbon and zero carbon goals over the next 10 to 30 years. These policies will affect architects, engineers, building owners, contractors and manufacturers, and others, requiring different design approaches, updated building codes and attention to the electrical grid-building interaction. ASHRAE grassroots members, especially those who communicate with government officials and policy makers, want ASHRAE to have a position statement on building decarbonization so that when asked where ASHRAE stands, they will have an answer. Further, ASHRAE members need to be better educated on the issue and understand how the HVACR industry will be impacted.

Scope proposed for the Position Document: Articulate ASHRAE's positions on decarbonization as it relates to the built environment, particularly the design and operation of buildings. The document should include positions on:

- Embodied carbon from cradle to grave and operational decarbonization
- The importance of decarbonization and how it may affect different sectors of the built environment.
- General policy goals at the local, Federal and international level.
- Whether building electrification is needed to decarbonize buildings, and if so at what pace, as well as the challenges and constraints of such policies.
- Resources available to meet decarbonization goals including ASHRAE standards.
- Provide ASHRAE commitments to action in guidance, research and technology development, public policy interactions, education and outreach.

ASHRAE Members, Committees with topic interest (if known): ASHRAE Executive Committee, GAC, CTTC, Tech Council, Standards Committee, EHC, TC 2.5, TC 2.8, TC 6.7, TC 7.6, SSPC 189.1, SPC 228P

Desired Time Frame: 12 months

Notes:

- The Title conveys a description of the proposed Position Document, differentiating it from any other Position Documents
- The Purpose includes notation of any anticipated or current government action, covered by the Position Document.
- The Scope includes as much specificity as possible, also broadly describing the Position Document coverage expected.
- ASHRAE Members and Committees should include those 1) technically knowledgeable, 2) who may have interest and 3) who may have direct knowledge of government actions, either current or anticipated.



## ASHRAE's Public Policy Priorities: SY 2021-2022

- Support Sustainable Building Practices to Mitigate Climate Change

Buildings and their heating, ventilation, air conditioning and refrigeration (HVAC&R) systems directly and indirectly contribute to GHG emissions. Buildings are responsible for more than 35% of global final energy use and nearly 40% of energy-related greenhouse gas emissions worldwide. ASHRAE supports energy efficient building design practices, including net zero energy buildings, and the use of sustainable technologies on a global basis to help reduce GHG emissions. In addition to government adoption of robust energy standards such as ASHRAE Standard 90.1-2019, 90.2-2018 and 90.4-2019 and the 2021 IgCC for new construction, ASHRAE supports policies and programs to improve the energy performance of existing buildings, including through adoption of ASHRAE Standard 100-2018 and building benchmarking and labeling requirements.

ASHRAE is advancing strategies to reduce carbon emissions (decarbonization) in the built environment and is committed to helping local, state, and federal government entities reach their climate goals. The targeted carbon emissions include not only those directly resulting from the operation of buildings, but also those embodied in the materials incorporated into buildings and those generated by the building construction process itself.

- Promote Healthy Buildings and Reduce Indoor Environmental Risks

Supporting the health and well-being of building occupants is the most important element of the indoor environment. The provision of acceptable indoor air quality is an essential building service, and should be achieved while also improving building energy efficiency, sustainability, and resiliency. ASHRAE Standards for Ventilation and Indoor Air Quality (62.1 for commercial buildings and 62.2 for residential) should be adopted in building codes and regulations.

Importantly, ASHRAE supports policies that minimize pathogen transmission through building systems, including HVAC and water systems. With the world still being challenged by the coronavirus pandemic, ASHRAE will continue to disseminate the extensive resources developed by its Epidemic Task Force, including guidance documents, webinars, and training sessions. ASHRAE is happy to provide technical expertise and serve as a resource for policymakers and elected officials to help fight this pandemic. ASHRAE recommends that policymakers cite ASHRAE standards and guidance in legislation and policies to reduce the risk of pathogen transmission in buildings including in school facilities.

- Ensure the Orderly and Safe Phasedown of High-GWP HFC Refrigerants

ASHRAE supports the global phasedown of the production and consumption of Hydrofluorocarbons (HFCs) refrigerants that have high-Global Warming Potential (GWP), including through legislation, regulations, and policy. Governments are mandating the near-term use of lower GWP refrigerants, which can have some flammability. ASHRAE Standard 15-2019, *Safety Standard for Refrigeration Systems*, and Standard 34-2019, *Designation and Classification of Refrigerants* should be adopted quickly to help ensure the safe use of these refrigerants. Additional ASHRAE resources include the [Update on New Refrigerants Designations and Safety Classifications factsheet](#), which was developed through a cooperative agreement with UNEP. ASHRAE is also working with UNEP to assist developing countries with the adoption of state-of-art technologies and deployment of lower-GWP refrigerants that will protect the food supply and medicines including vaccines, as well as provide increased comfort and productivity while meeting sustainability goals.



## ASHRAE's Public Policy Priorities: SY 2021-2022 (page 2)

- Advance Design and Construction of Resilient Buildings and Communities

Resiliency is an increasingly important societal, economic, and technical issue that will have major impact on how buildings are designed, renovated and operated. ASHRAE is committed to developing, publishing and maintaining a Resilient Building/Community Standard, accompanying Design Guide(s) and design tools, and educational programs.

As investments are made to improve infrastructure, buildings should be included, as they are vital for protecting the public when natural and human-induced events occur. A building's ability to recover and be available to occupants following such an event can have widespread economic and health implications. In particular, up-to-date building energy and indoor air quality (e.g., ventilation, filtration) standards are essential elements of providing resilient buildings. Unfortunately, most states have not adopted the most recent standards and codes that are based on the latest research and technological innovation, which could make building occupants more vulnerable to disasters. In addition, policies and regulations that require qualified HVACR engineering and technical professionals to be an integral part of building design, construction, and operation are encouraged as these can result in a more resilient and safe built environment.

- Support Adoption of the Latest Edition of ASHRAE's Energy Standards into Building Codes

Energy efficiency can be improved significantly through the adoption and effective implementation of the most recent version of Standard 90.1 Energy Standard for Buildings Except Low-Rise Residential Buildings, which has provided the minimum requirements for the energy-efficient design in the United States for over 40 years. Although its adoption in the U.S. by States is required by the Energy Conservation and Production Act (ECPA), most States are using dated versions of the standard, resulting in buildings with higher energy needs and costs. Residential buildings and data centers can also achieve improved performance, save energy costs, and reduce climate impacts when jurisdictions adopt ASHRAE Standard 90.2 (residential) and Standard 90.4 (data centers).

- Strengthen and Increase Diversity in the HVACR Workforce

Strong education in science, technology, engineering and mathematics (STEM) to develop the future supply of technicians, engineers and scientists is critical to our future well-being and standard of living. ASHRAE supports policies that strengthen STEM at all educational levels, including through use of ASHRAE's extensive educational offerings. Policy makers should also consider requiring quality certification programs including ASHRAE's which result in improved building performance.

ASHRAE's Board of Directors has committed to proactively pursuing and celebrating diverse and inclusive communities understanding that doing so fuels better, more creative and more thoughtful ideas, solutions and strategies for the Society and for the communities our Society serves. We respect and welcome all people regardless of age, gender, ethnicity, physical appearance, thought styles, religion, nationality, socio-economic status, belief systems, sexual orientation or education.



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## CLIMATE CHANGE AND THE BUILT ENVIRONMENT

### THE ISSUE

Worldwide concern for changes in the global climate has escalated as scientific evidence has become more definitive, linking increased concentrations of atmospheric greenhouse gases (GHGs) with global warming. As a result, ASHRAE's policy focus on global climate change has significantly increased.

When developing policy to combat climate change, it is important to consider that buildings and their heating, ventilating, air conditioning and refrigeration (HVAC&R) systems directly and indirectly contribute to GHG emissions. Buildings are responsible for more than 35% of global final energy use and nearly 40% of energy-related CO<sub>2</sub> emissions worldwide.<sup>1</sup> These emissions are associated with construction and the energy needed to operate buildings and building systems, and to a lesser extent indirectly through the release of refrigerants, if not properly contained. According to the United Nations Intergovernmental Panel on Climate Change (IPCC), "buildings offer immediately available, highly cost-effective opportunities to reduce energy demand, while contributing to meeting other key sustainable development goals including poverty alleviation, energy security and improved employment."<sup>2</sup> Improving the energy efficiency, and the ongoing efficient performance of building systems provide a significant opportunity for climate change mitigation.

### ASHRAE's ROLE

ASHRAE is the leading source of information and research for HVAC&R systems and building performance making this issue a key area for our members. ASHRAE's members use their expertise to help policymakers promote the implementation of energy efficient design practices and sustainable technologies that can help reduce GHG emissions. This is done most notably through ASHRAE's Task Force for Building Decarbonization, Energy Conservation Standard 90.1, existing building energy efficiency Standard 100, and the International Green Construction Code Powered by ASHRAE Standard 189.1, which addresses sustainability in buildings and building sites. ASHRAE has also published Standard 105, which provides a method for determining, expressing and comparing building energy performance and greenhouse gas emissions.

ASHRAE and its partners have published several Advanced Energy Design Guides (including Zero Energy Building Guides for K-12 Schools and Offices), which are available for free download and provide educational guidance to reduce energy consumption while achieving

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<sup>1</sup> 2018 Global Status Report Towards a Zero-Emission, Efficient and Resilient Buildings and Construction Sector. United Nations Environment Programme, International Energy Agency (IEA), and Global Alliance for Buildings and Construction (GlobalABC), [https://wedocs.unep.org/bitstream/handle/20.500.11822/27140/Global\\_Status\\_2018.pdf?sequence=1&isAllowed=y](https://wedocs.unep.org/bitstream/handle/20.500.11822/27140/Global_Status_2018.pdf?sequence=1&isAllowed=y).

<sup>2</sup> Lucon, Oswaldo, and Diana Ürge-Vorsatz. "AR5 Synthesis Report: Climate Change 2014." *Chapter 9: Buildings*, United Nations Intergovernmental Panel on Climate Change, 2014, [https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc\\_wg3\\_ar5\\_chapter9.pdf](https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc_wg3_ar5_chapter9.pdf).



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proper IEQ conditions.<sup>3</sup>

ASHRAE is also in the process of developing BSR/ASHRAE Standard 228P which will set requirements for evaluating whether a building or group of buildings meets a definition of “zero energy.”

With respect to refrigerants, ASHRAE also advances the HVAC&R field by performing research on low GWP refrigerants and developing safety and classification standards on refrigerants.<sup>4</sup>, developing guides and a standard for designing systems that minimize energy consumption and reduce emissions of high global warming potential (GWP) refrigerants. As part of this effort, ASHRAE supports the global phasedown of the production and consumption of refrigerants that are high-GWP HFCs, including through legislation, regulations, and policy.

### **ASHRAE's VIEW**

ASHRAE is committed to a leadership role in reducing climate change contributed to by building systems and responding to climate change experienced in the built environment. ASHRAE recommends:

- States adopt the most recent version of ANSI/ASHRAE/IES 100 for existing buildings and ANSI/ASHRAE/IES 90.1, which has been a benchmark for new commercial building energy performance in the United States and a key basis for codes and standards around the world for more than 40 years. The 2019 version of the standard is about 4.3% more energy efficient than the 2016 version.
- A full evaluation of new and existing buildings' climate impacts, carbon balance, and energy performance.
- Funding for research that improves energy efficiency/utilization in HVAC&R technology to minimize GHG emissions.
- Funding for building science research leading to advanced equipment and systems, grid-interactive designs and ability to load-shift, integration of the Internet of Things (IoT), net metering, and building based energy storage systems capable of providing dispatchable energy systems.
- Promotion of carbon and energy life-cycle- analysis to building owners to encourage sustainable building construction, operation and renewal.

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<sup>3</sup> For more information, see [www.ashrae.org/technical-resources/aedgs](http://www.ashrae.org/technical-resources/aedgs).

<sup>4</sup> For more information, see: <https://www.ashrae.org/technical-resources/bookstore/standards-15-34>





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## **ENVIRONMENTAL TOBACCO SMOKE**

### **THE ISSUE**

While indoor smoking has become less common in recent years in many countries, exposure to Environmental Tobacco Smoke (ETS) continues to have significant health and cost impacts. Researchers have investigated the health and irritant effects among non-smokers exposed to tobacco smoke in indoor environments. Such exposure is also known as passive smoking and as involuntary exposure to secondhand smoke. A number of national and global health research groups and agencies have concluded, based on the preponderance of evidence, that exposure of non-smokers to tobacco smoke causes specific diseases and other adverse effects to human health, most significantly cardiovascular disease and lung cancer. No cognizant authorities have identified an acceptable level of ETS exposure to non-smokers, nor is there any expectation that further research will identify such a level.

Despite extensive evidence of such harm and the well-documented benefits of smoking bans, many locations worldwide still lack laws and policies that provide sufficient protection. In many locations, laws and policies are only partially protective, permitting smoking in certain areas of buildings or specific building types including casino, entertainment and multifamily housing.

### **ASHRAE's ROLE**

Providing healthy and comfortable indoor environments through the management of indoor air quality is a fundamental goal of building and HVAC design and operation. ASHRAE has long been active in providing engineering technology, standards and design guidance in support of this goal. For example, ANSI/ASHRAE Standards 62.1 and 62.2 are standards that specify minimum ventilation rates and other measures in order to minimize adverse health effects for occupants. Therefore, the health effects of indoor exposure to emissions from cigarettes, cigars, pipes and other tobacco products are relevant to ASHRAE.

### **ASHRAE's VIEW**

Exposure to ETS can be reduced through a variety of strategies, but they do not completely eliminate exposure to ETS. Only an indoor smoking ban, leading to near zero exposure, provides effective control, and only such bans have been recognized as effective by health authorities. While there are no engineering design issues related to this approach, the existence of outdoor smoking areas near the building and their potential impacts on entryway exposure and outdoor air intake need to be considered.



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Because of ASHRAE's mission to act for the benefit of the public, it encourages lawmakers, policymakers and others who exercise control over buildings, to eliminate smoking inside and near buildings. ASHRAE also recommends:

- That building design practitioners work with their clients to define their intent, where smoking is still permitted, for addressing ETS exposure in their building and educate and inform their clients of the limits of engineering controls in regard to ETS.
- That multifamily buildings have complete smoking bans inside and near them in order to protect nonsmoking adults and children.
- That further research be conducted by cognizant health authorities on the health effects of involuntary exposure in the indoor environment from smoking cannabis, using hookahs, using Electronic Nicotine Delivery Systems (ENDS), and engaging in other activities commonly referred to as vaping or using e-cigarettes.



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Built Environment Today

## REFRIGERANTS AND THEIR RESPONSIBLE USE

### THE ISSUE

ASHRAE promotes the responsible use of refrigerants during the processes of design, manufacturing, operation and servicing of systems, as well as proper management at the end of equipment life. However, choosing a refrigerant for a given HVAC&R application has become increasingly complex due to their direct and indirect environmental impacts in addition to societal implications they may have based on performance, cost-effectiveness and safety of employees and the public.

Since the implementation of the 1987 Montreal Protocol, and the Kigali Amendment to the Protocol in 2016, transitions to lower global warming potential (GWP) refrigerants are on the rise. This has led to an increase in the development and utilization of flammable refrigerant options that have low-GWP characteristics to meet targets. As a result, safety standards need to be reassessed and updated to reflect the increasing interest in flammable or mildly flammable working fluids.

### ASHRAE's ROLE

With its technical expertise, ASHRAE plays a key role in guiding the choices that must be made for the management of new refrigerants due to the environmental and societal consequences posed by refrigerant management. ASHRAE contributed to the successful effort to phase out ozone depleting refrigerants, and it has a significant role in encouraging the proper and safe use of refrigerants going forward. ASHRAE develops voluntary standards and guidelines governing the application and use of all types of refrigerants. These technical requirements are being adopted into various codes and regulations.

As governments commit to using lower GWP refrigerants, ASHRAE wants to ensure the safe application of these refrigerants, including through the adoption of ASHRAE Standard 15 – 2019, *Safety Standard for Refrigeration Systems*, and Standard 34 – 2019, *Designation and Classification of Refrigerants*. Recent updates to these standards were made following a \$5.2 million research program, with financial contributions from DOE (\$3 million), ASHRAE (\$1.2 million) and AHRI (\$1 million), as part of an ongoing global effort to phase out the use of high-GWP refrigerants and identify appropriate climate-friendly alternatives.

### ASHRAE's VIEW

ASHRAE believes the selection of refrigerants and their operating systems should be based on a holistic analysis of multiple criteria. These criteria include energy efficiency and performance attributes, environmental impacts, employee and public safety and economic considerations.

To limit impacts on the environment, emissions of refrigerants must be reduced through research, education, improved design, manufacturing/construction of equipment, field commissioning,

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One year after approval



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maintenance procedures, decommissioning and enforcement of applicable standards and regulations.

ASHRAE is committed to a leadership role in reducing climate change contributed to by building systems and responding to climate change experienced in the built environment. As part of this effort, ASHRAE supports the global phasedown of the production and consumption of refrigerants that are high-GWP HFCs, including through legislation, regulations, and policy.

Where possible, refrigerants should be safely recovered for reuse, recycle, reclamation or destruction during service or at the end of the life of the equipment. Refrigerant inventory and management programs should be implemented to closely track refrigerant use.

ASHRAE encourages and supports ongoing efforts to develop new refrigerants and improve the application of existing refrigerants to meet these criteria.



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## INDOOR AIR QUALITY

### THE ISSUE

Indoor air quality (IAQ) refers to the types and concentrations of airborne contaminants found in buildings. Indoor air is a dominant pathway for exposure to airborne contaminants given that people spend the majority of their time indoors and indoor air commonly contains numerous contaminants originating from both indoor and outdoor sources. Many of the contaminants impact health, comfort, well-being, learning, sleep, and work performance.

For these reasons, it is important that IAQ is considered in the design, construction and operation of buildings and HVAC systems. Cost-benefit analyses have estimated that the health and economic benefits of improved IAQ are far greater than the costs of implementing these improvements. There are three widely accepted approaches to improving IAQ – Source Control, Ventilation, and Air Cleaning. Many strategies exist within these approaches that can help achieve good IAQ with lower energy impacts while still maintaining thermal comfort.

### ASHRAE's ROLE

IAQ has long been a critical issue for ASHRAE and its members because of the connection to ventilation and other HVAC systems in buildings. ASHRAE provides technical resources, coordinates and funds research, organizes conferences, and educates practitioners about IAQ.

ASHRAE has developed and continues to support standards, guidelines, and other resources related to improving IAQ. For example, ASHRAE promulgates the following standards and guides that specifically address IAQ:

- **ANSI/ASHRAE Standard 62.1, Ventilation for Acceptable Indoor Air Quality.** This Standard establishes ventilation and other IAQ related requirements for buildings other than residential and health care. Its outdoor air ventilation rate requirements have been adopted into the International Mechanical Code and Uniform Mechanical Code, the two most common model building codes in the US. The standard is also referenced by most green commercial building programs including LEED.
- **ANSI/ASHRAE Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Residential Buildings.** This Standard covers residential buildings. Ventilation requirements from this standard have been adopted into codes, including California's Title 24, and into LEED for Homes and the U.S. Environmental Protection Agency's (EPA) Indoor airPlus program.
- **ANSI/ASHRAE/ASHE Standard 170, Ventilation of Health Care Facilities.** Standard 170 brought together several documents used throughout North America into a single standard. It is now widely used in building codes for ventilation requirements in hospitals and other health care facilities.
- **ANSI/ASHRAE/ICC/USGBC/IES Standard 189.1, Standard for the Design of High-Performance, Green Buildings Except Low-Rise Residential Buildings.** Developed in



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- conjunction with USBGC, the International Code Council and Illuminating Engineering Society (IES), this standard provides IAQ requirements beyond those in Standard 62.1.
- **ASHRAE Indoor Air Quality Guide** – *Best Practices for Design, Construction, and Commissioning* and *ASHRAE Residential Indoor Air Quality Guide: Best Practices for Acquisition, Design, Construction, Maintenance and Operation*. These Guides present best practices for design, construction, commissioning, operation and maintenance that have proven successful in building projects to achieve good IAQ.
  - **2017 ASHRAE Handbook Fundamentals** – covers basic principles and data used in the HVAC&R industry including indoor air quality. The ASHRAE Technical Committees that prepare these chapters provide new information, clarify existing content, delete obsolete materials, and reorganize chapters to make the Handbook more understandable and easier to use.
  - **Damp Buildings, Human Health, and HVAC Design** – This report provides a summary of what is understood about dampness-related health risks in buildings as well as suggestions for HVAC system designers that can help avoid such risks.

### ASHRAE's VIEW

ASHRAE's view is that achieving and maintaining good IAQ should be included in all decisions that affect the design and operation of buildings and HVAC systems, including efforts to improve building energy efficiency, sustainability and resiliency. ASHRAE's IAQ standards should be adopted by building codes and regulations to enhance building purpose and improve occupant health, productivity and well-being.

ASHRAE recommends fundamental and applied IAQ research and standards development in the following areas:

- The relationship of ventilation rates and contaminant concentrations to occupant health, comfort, well-being, learning outcomes and work performance.
- Approaches to improving IAQ beyond dilution ventilation, e.g., air cleaning and source control.
- Development of tools to allow economic valuation of IAQ benefits for individual buildings and groups of buildings.
- Development of monitoring and HVAC equipment to automatically control IAQ by measurement of contaminants.
- Development of diagnostics for commissioning and maintenance of ventilation and related IAQ systems.
- The role of IAQ in building sustainability and resilience.
- Development of IAQ control systems and solutions that contribute to other building goals including reducing energy use and greenhouse gas emissions and supporting grid integration.
- Research on new contaminants of concern and development of technologies and approaches to address them.



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## **BUILDING ENERGY BENCHMARKING, ASSESSMENTS, AND PERFORMANCE TARGETS**

### **THE ISSUE**

Heating, ventilation, air conditioning, and refrigerating (HVAC&R) account for about 61% of commercial building site energy use.<sup>1</sup> While new buildings have realized improved energy performance, existing buildings represent the greatest opportunity for energy use performance improvement within the sector. Improving the energy performance of existing buildings requires the availability of a robust database of building energy data. Without understanding how a building is performing, it is impossible to improve the building's energy footprint.

To address this concern, building energy benchmarking has become a critical tool for quantifying and evaluating building operational energy use patterns in order to develop the most effective ways to reduce energy use in a city or state's building stock. In addition, better understanding of true energy performance is needed; a building may be designed as energy efficient, but its operations may prove otherwise.

Over 30 US and Canadian cities have building energy benchmarking programs.<sup>2</sup> Some jurisdictions require actions beyond benchmarking, from performing energy assessments (audits, tune-ups, or retrocommissioning) to meeting performance targets (maximum energy use or carbon emissions). Municipalities such as Montréal, Dallas, Atlanta, and New York City have set aggressive carbon reduction goals for existing buildings that will require accurate benchmarking to determine emissions and energy savings.

### **ASHRAE's ROLE**

ASHRAE disseminates credible evidence-based practices and technical information to professionals across the building sector by developing standards, guidance and educational resources informed by robust data on the actual energy performance of buildings. ASHRAE's tools and resources include:

- Benchmarking:
  - **ASHRAE Standard 105** provides a method for determining and comparing building energy performance and greenhouse gas emissions.
  - **ASHRAE Standard 214** provides uniformity in the building energy labeling and disclosure process.

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<sup>1</sup> Includes water heating; *2012 Commercial Building Energy Consumption Survey: Energy Usage Summary*. U.S. Energy Information Administration, 18 March 2016, <https://www.eia.gov/consumption/commercial/reports/2012/energyusage/>

<sup>2</sup> *Comparison of U.S. Commercial Building Energy Benchmarking and Transparency Policies*. Institute for Market Transformation, September 2020, <https://www.imt.org/resources/comparison-of-u-s-building-performance-standards/>





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- **ASHRAE Standard 228P:** *Standard Method of Evaluating Zero Energy Building Performance* provides a consistent method of expressing qualifications for zero net energy and zero net carbon buildings associated with the design of new buildings and the operation of existing buildings.
- Energy Assessments:
  - **ASHRAE Standard 211** establishes consistent practices for conducting and reporting energy audits for commercial buildings. *Referenced by ordinances in Atlanta, GA; Boulder, CO; Los Angeles, CA; New York, NY; and San Francisco, CA.*
- Building performance targets:
  - **ASHRAE Standard 100** sets energy use intensity (EUI) benchmarks for existing buildings in the commercial and residential sector and establishes methods for determining opportunities for improvement in EUI leading to compliance with the standard benchmarks. *Referenced by Washington State's Clean Buildings Act of 2019.*
  - **ASHRAE's Building EQ<sup>3</sup>** program, a building performance tool, calculates a building's energy performance in relation to other similar buildings, identifies the gap between "as designed" potential and actual performance in operation, and provides recommendations to reduce energy use. Building EQ can be used to publicly display building energy use and comply with disclosure requirements.

ASHRAE certification programs were developed to meet the industry needs of today and provide value to thousands of built-environment professionals, employers, and building owners. Certifications like Building Commissioning Professional (BCxP) and Building Energy Assessment Professional (BEAP) are recognized by the U.S. Department of Energy (DOE) as meeting the Better Buildings Workforce Guidelines (BBWG) and are used frequently by local jurisdictions to designate who is qualified to perform benchmarking and energy assessments.

### ASHRAE's VIEW

Energy metrics that are widely accepted, robust, and validated, are critical to achieving desired policy objectives including benchmarking, code compliance and investment decisions. Standardized procedures for energy performance assessments ensure an appropriate level of rigor and scope of work. Within a building owner's portfolio or across a city's building stock, decision-makers need consistent language, metrics, and procedures to effectively communicate goals, evaluate potential investments, and measure success. ASHRAE remains dedicated to sharing technical resources with policymakers to support legislative and regulatory solutions that improve building energy efficiency.

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<sup>3</sup> For more information, see <https://www.ashrae.org/technical-resources/building-eq>





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## STEM EDUCATION & WORKFORCE

### THE ISSUE

Strong education in science, technology, engineering and mathematics (STEM) to develop the future supply of technicians, engineers and scientists is critical to our future well-being and standard of living. Even students pursuing non-STEM specialties need basic knowledge of scientific and technological applications for effective participation in the workforce, success in their personal lives and responsible citizenship.

Moreover, there has been increased growth in jobs related to STEM that need to be filled. The U.S. Bureau of Labor Statistics projected that 65,000 new engineering jobs will be created from 2014 to 2024.<sup>1</sup> If you include retirees, the number of new engineering job openings in the U.S. rises to 500,000.<sup>2</sup>

The engineering workforce in North America remains a male-dominated employment sector, and the share of female workers in engineering and architecture has remained relatively constant since 1990. Additionally, people of color remain under-represented in the engineering and architectural sector.

### ASHRAE's ROLE

As professionals focused on design, construction, operation and maintenance of the nation's buildings and infrastructure, and as educators of future generations of engineers, our members also recognize the importance of mentoring and helping students learn about STEM careers, which is why our members are active in their local communities and in national programs, bringing exciting science and engineering programs to students. ASHRAE is actively engaged in the Solar Decathlon, National Engineers Week and other STEM education efforts worldwide, including through its 440 active student branches.

ASHRAE is also a member of the National STEM Education Coalition, which supports new and innovative initiatives that will help improve the content, knowledge, skills and professional development of the K-12 STEM teacher workforce and informal educators. ASHRAE is dedicated to ensuring quality STEM programs for teachers and students all around the world by encouraging its members to get involved with their local school systems.<sup>3</sup>

ASHRAE's Board of Directors has committed to promoting diversity and inclusion in all levels of the society. This effort will include efforts to promote STEM education and training

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<sup>1</sup> Fayer, Stella, et al. *STEM Occupations: Past, Present, And Future*. U.S. Bureau of Labor Statistics, Jan. 2017, [www.bls.gov/spotlight/2017/science-technology-engineering-and-mathematics-stem-occupations-past-present-and-future/pdf/science-technology-engineering-and-mathematics-stem-occupations-past-present-and-future.pdf](http://www.bls.gov/spotlight/2017/science-technology-engineering-and-mathematics-stem-occupations-past-present-and-future/pdf/science-technology-engineering-and-mathematics-stem-occupations-past-present-and-future.pdf).

<sup>2</sup> Fayer, Stella, et al. *STEM Occupations: Past, Present, And Future*. U.S. Bureau of Labor Statistics.

<sup>3</sup> For more information, see <https://www.ashrae.org/communities/student-zone/k-12-activities>.



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to children, schools, and educators, in a way that will attract, train, and retain more women, disabled, LGBTQ, and people of all socioeconomic and ethnic backgrounds to engineering education and employment.

### **ASHRAE's VIEW**

Future generations need to possess the skills and critical competencies necessary to be successful in a highly competitive, global and technologically sophisticated economy. We must work cooperatively to ensure that students receive the STEM training essential for future success. ASHRAE encourages policymakers to implement the following recommendations:

- Increase government funded research to improve teaching and learning of STEM concepts and critical thinking skills.
- Recruit, train and retain qualified STEM teachers through the development of programs recognizing educators who excel in STEM education and incentives that encourage the best and brightest scientists and engineers to teach.
- Foster partnerships among educational institutions, industry and non-profit organizations and their members to introduce students of all backgrounds to STEM career opportunities.
- Encourage the adoption of curriculum standards that cultivate high student performance; the development of curricula that foster creativity, experiential problem solving and critical thinking; and the development of assessments aligned with these standards and curricula.
- Create opportunities and incentives for women to pursue STEM coursework and careers.
- Encourage diversity in STEM education and the engineering workforce.



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## CONSENSUS STANDARDS: EXPERT SOLUTIONS TO MEET GLOBAL NEEDS

### THE ISSUE

Voluntary consensus standards developed by private organizations are essential for a sound global economy and to facilitate global commerce. Standards foster building technology innovation by providing a transparent baseline and needed metrics for assessing how that technology can impact building design and performance. They are necessary for comparing technologies in the expanding global marketplace. U.S. Federal policy recognizes the value of voluntary consensus standards by requiring their use in regulations when consistent with agency policy and appropriate for agency purposes.<sup>1</sup>

Voluntary consensus standards are developed through the participation of any and all interested and affected stakeholders including manufacturers, users, advocacy organizations and representatives of government and academia. Standards accreditors such as the American National Standards Institute (ANSI), the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC) follow several principles such as including consensus, openness, balance, transparency and due process, and ensure that designated standards development organizations follow these principles and processes.

Copyright protection of voluntary consensus standards is critical to the continuation of the development and maintenance of standards. Without copyright protection for standards, resource-limited government agencies would have to undertake the difficult and expensive task of replicating the system of standards development organizations, or the standards-development process would be put into the hands of regulated parties with uncertain outcomes.

### ASHRAE'S ROLE

ASHRAE develops and publishes robust standards; many of which are adopted into building codes. ASHRAE standards establish recommended practice in the areas of indoor air quality, energy conservation and management, building water systems, high-performance buildings and others. ASHRAE's standard development process is rigorous, and it is one of only six standards-developing organizations in the U.S. that can self-certify that its standards have followed ANSI's procedures. ASHRAE also serves on U.S. Technical Advisory Groups (TAGS) for ISO Committees and in the role of international secretariat for ISO Technical Committees to help ensure that ASHRAE views are represented. These standards are supported by technical committees that develop publications and educational materials to assist in the application of ASHRAE standards. ASHRAE standards are developed by volunteers from around the globe under strict ethical and non-commercialism guidelines.

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<sup>1</sup> The National Technology Transfer and Advancement Act of 1995 (P.L. 104-113) (NTTAA) and OMB Circular A-119



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### **ASHRAE's VIEW**

Use of voluntary consensus standards at all levels of government are a benefit to society. For this reason:

- Government entities should continue to support voluntary consensus standards in laws and regulations, which will protect public health and safety, improve commerce and save taxpayers money.
- Agencies should work with standards developers and industry to identify situations where societal interests could be addressed through the use of voluntary consensus standards and work together for common solutions.
- Governments should continue to foster and support the unique character and strengths of the public-private partnership in standards development as they pursue trade and other international agreements, regulatory harmonization and legislative and regulatory approaches.
- Governments should support policies, both domestically and internationally, which ensure the continued ownership and control of the copyrights and trademarks of standards developers.
- Government agencies should increase participation in the development of voluntary consensus standards, by encouraging government experts to participate, through release time and expenses incurred.
- Governments should update legislation and regulations to reference the latest versions of standards since they reflect the latest technical advances.



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## RESILIENCY IN THE BUILT ENVIRONMENT

### THE ISSUE

Resiliency in the built environment is a complex subject that involves many disciplines. The National Institute of Building Sciences (NIBS) Coalition on Resiliency, which includes ASHRAE and 38 other organizations, has defined resiliency as “the ability to prepare and plan for, absorb, recover from and more successfully adapt to adverse events or threats.” These events or threats may be financial, political, environmental, as well as disaster, conflict, cyber, climate, or health-related. Its recent prominence is in part due to increasing concerns over the adequacy of responses to natural or climate-related events around the world, as well as recognition that many such events are likely to increase in frequency and severity.<sup>1</sup> According to the National Oceanic and Atmospheric Administration (NOAA), weather and climate disasters in the United States alone have caused more than \$456 billion in damages in the last 3 years and over 3,500 deaths.<sup>2</sup>

Strengthening the built environment is vital to protecting the public when natural and human-induced events occur. Buildings often serve as the first line of defense and as a result, the built environment and engineered systems in buildings must become more resilient in how they are designed and operated in order to protect the public. A building’s ability to recover and be available to occupants following such an event, can have widespread economic and health implications. Additionally, as the built environment becomes more interconnected and operations shift towards automation, building systems will see increased vulnerability to cyber threats.

### ASHRAE’s ROLE

It is ASHRAE’s position that building design and operation must consider resiliency as part of an overall risk assessment and planning approach, and that major new efforts in research, education, standards and guidelines, and guidance documents are required to increase building resiliency. Building resiliency is of such importance that it has been identified as one of four key initiatives in the 2019-2024 ASHRAE Strategic Plan.

ASHRAE also has partnered with CIBSE to release a Joint Position Document on Resiliency in the Built Environment.<sup>3</sup> The two societies are committed to taking a leadership role with

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<sup>1</sup> IPCC. 2014. Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Geneva, Switzerland: Intergovernmental Panel on Climate Change. [www.ipcc.ch/report/ar5/](http://www.ipcc.ch/report/ar5/).

<sup>2</sup> “Billion-Dollar Weather and Climate Disasters: Overview.” National Climatic Data Center, National Oceanic and Atmospheric Administration, [www.ncdc.noaa.gov/billions/overview](http://www.ncdc.noaa.gov/billions/overview).

<sup>3</sup> For more information, see

[https://www.ashrae.org/file%20library/about/position%20documents/ashrae\\_cibse\\_resiliencyinthebuiltenvironment\\_2019.pdf](https://www.ashrae.org/file%20library/about/position%20documents/ashrae_cibse_resiliencyinthebuiltenvironment_2019.pdf)



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respect to building resiliency. ASHRAE will be developing and adopting designs, materials, components, systems, and processes that minimize the adverse impacts of extreme events and environmental changes over time.

### **ASHRAE's VIEW**

Investing in building resiliency is crucial to saving lives, protecting public property, and reducing the financial strain of post-disaster recovery. For these reasons, ASHRAE sees the need for policy setting entities world-wide to encourage sound, balanced, and innovative actions to address long-range resiliency issues and the specific technical concerns associated with them.

When it comes to strengthening the built environment, building codes and standards, such as those developed by ASHRAE, make our communities more sustainable, more efficient and more resilient. According to a 2018 study released by NIBS, by adopting the most recent building codes, there is an impressive cost-benefit ratio ranging from \$4—12 for every \$1 invested towards hazard mitigation. Unfortunately, most jurisdictions have not yet adopted the most recent standards and codes that are based on the latest research and technological innovation. Legislators and other government officials should examine the best ways to assist these jurisdictions with the adoption, implementation and enforcement of the most recent building energy efficiency codes and standards. This will help prevent future destruction and improve the resilience of the built environment. ASHRAE is committed to being a resource for government with respect to building codes and standards, and will continue to publish and maintain consensus-based building standards, guidelines, and Design Guides.

ASHRAE also holds the following positions with respect to resiliency in the built environment:

- Resiliency is an important societal, economical and technical issue that has a major impact on the built environment as well as how engineered building systems are designed and operated.
- Technical solutions to these challenges are needed. These solutions will include research, standard and guideline development, and the production of educational material.
- Policy setting entities need to encourage sound, balanced, and innovative actions to address the broad issues of resiliency and the specific technical concerns associated with them.
- Built environments need to be developed which are both resilient and sustainable.

Additionally, ASHRAE recommends that additional and continuing research be conducted with the intent to guide resilient infrastructure, building systems and community designs. ASHRAE aims to continue collaborating on building resiliency research opportunities with external organizations, national and international government agencies, and foundations. This is in addition to the over \$10 million in ongoing research projects currently funded by ASHRAE.

**REPORT TO EXECUTIVE COMMITTEE  
From Foundation Board of Trustees  
As of Friday, June 18,2021**

**Recommendations for ASHRAE Executive Committee:**

1. MOTION: None  
  
BACKGROUND:  
  
FISCAL IMPACT

**Information Items:**

1. The ASHRAE Foundation Board of Trustees approved a funding request from the Publishing and Education Council for a grant of \$8,242 from Undesignated Fund 101 to support Study Guide for Building Energy Modeling Professional (BEMP) Certification Program.

Fiscal Impact: \$8,242 July 1st, 2021.

2. The ASHRAE Foundation Board of Trustees approved a transfer of \$60,001 from Undesignated Fund 101 to Honors & Awards Fund 15.

Fiscal Impact: \$60,001

3. The Foundation Board of Trustees approved the ASHRAE Region III endowed Fund.

Fiscal Impact: \$20,000

4. The Foundation Board of Trustees approved the ASHRAE Puget Sound Chapter and the ASHRAE San Joaquin Chapter Endowed Funds.

Fiscal Impact: \$105,172

Friday, June 18, 2021     Mr. James R. Fields

Date

Chair