



## **MINUTES**

### **TECHNICAL ACTIVITIES COMMITTEE**

2020 Winter Meeting

**February 1 & February 5, 2020**

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**February 1 & February 5, 2020**

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**PRINCIPAL MOTIONS  
TECHNICAL ACTIVITIES COMMITTEE  
February 1 & February 5, 2020**

No.	Motion	Status
1	minutes of the TAC 2019 Annual Meeting be approved as drafted	PASSED
2	TAC change the TC MOP as shown (1.4):	WITHDRAWN
3	TAC recommends that OPS approve changes to the TAC MOP as shown below (A2.1):	PASSED
4	TAC recommends that OPS approve changes to the TAC MOP as shown below (A2.3):	PASSED
5	TAC recommends that OPS approve changes to TAC MOP as shown below (Part 4 Operation):	WITHDRAWN
6	TAC recommends that OPS approve changes to the TAC MOP as shown below:	PASSED
6a	to amend Motion 6 to explicitly refer to TAC and TechC	PASSED
7	TAC recommends that Technology Council review and provide clarification on ROB 3.960.001 Part 3.	PASSED
8	TAC approve the merger of TC 3.2, Refrigerant System Chemistry, and TC 3.3, Refrigerant Contaminant Control, with the new title and scope is as follows:	PASSED
9	TAC approve the merger of TC 8.10, Mechanical Dehumidification Equipment and Heat Pipes, and TC 8.12, Desiccant Dehumidification Equipment and Components, with the new title and scope is as follows:	PASSED
10	TAC approve the merger of TC 9.4, Justice Facilities, and TC 9.8, Large Building Air-Conditioning Applications, with the new title and scope is as follows:	PASSED
11	TAC approve a new scope for TC 8.6 with the following changes:	PASSED
12	TAC approve the formation the following new multidisciplinary task group MTG.CYB - Cybersecurity for HVAC Systems and Related Infrastructure with the following scope:	PASSED
13	TAC recommends that Technology Council approves changes to TAC MOP as shown in <b>Attachment K</b>	PASSED

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**NEW ACTION ITEMS  
TECHNICAL ACTIVITIES COMMITTEE  
February 1 & February 5, 2020**

<b>Action No.</b>	<b>Responsibility</b>	<b>Summary of Action Items</b>	<b>Status</b>
1	Kohler	Appoint a TAC subcommittee to determine the specific changes to implement (with timeline, etc.) for TAC follow up to ad hoc reorganization recommendations	
2	Mercer	Develop and share 1 page task checklist for TCs considering mergers	
3	TAC	TAC should discuss what and how to use TC activity dashboard tool	
4	Maston	Send a template of a program submission checklist	Complete
5	Kohler	Ask Tech Council for clarification on ROB 3.960.001 states the following:	Complete
6	Staff	Determine if roster web tool can allow for more than one submission before being locked out	
7	TAC	Reevaluate PCM policy and implementation to consider limited access to contact information.	
8	Staff	Look into errors with email alias system	
9	TAC	Evaluate the basecamp structure to determine what basecamps they will have and use, and what documents/communications each would be used for	
10	TAC	Review changes to TAC Reference Manual in preparation for the next meeting	

**ACTION ITEMS  
TECHNICAL ACTIVITIES COMMITTEE  
October 15, 2019**

<b>Action No.</b>	<b>Responsibility</b>	<b>Summary of Action Items</b>	<b>Status</b>
1	Staff	Post updated program submission topics to TC webpage	Complete

## TAC 2020 Winter Meeting Minutes

2	Staff	Send letter ballot for TAC approval of Hightower Award nomination	Complete
3	Staff	Update and post training modules on website as appropriate	Complete

### **CARRYOVER ACTION ITEMS** May 23, 2019, June 22 & June 26, 2019

<b>Action No.</b>	<b>Responsibility</b>	<b>Summary of Action Items</b>	<b>Status</b>
1	Goldschmidt	TAC will review TC MOP to determine balance requirements are needed for standards related TRG tasks	Complete
5	Kohler/Staff	Staff was asked to consider how to include TAC members recently rolling off in email distribution list that may be participating	Complete
6	Kohler/Maston	Explore reinstituting ExCom meeting with CEC (Handbook, others)	Complete
7	Goldschmidt, Smith, Leach	A subcommittee was asked to review proposed MOP changes and bring up later if warranted	Complete
8	Mercer	TAC develop guidance on performance criteria for dissolution or other imposed changes to FG so that mandates are more objective to more clearly communicate expectations.	Ongoing
9	SH1 (Leach)	Invite TC 1.5 to address TAC directly on why scope changes are appropriate	Complete
10	Staff	Staff was asked to determine what needs to be done with TC 2.7 representation and NIBS	Complete

### **CARRYOVER-ACTION ITEMS** Winter – June 16 & 19, 2019

<b>Action No.</b>	<b>Responsibility</b>	<b>Summary of Action Items</b>	<b>Status</b>
6	Justice/Kohler	Continue to meet with CTTC and CEC regarding updates to the Commercialism Policy (note ASHRAE BOD policy and a separate CEC presentation policy)	Complete

**CARRYOVER-ACTION ITEMS**  
**Annual Meeting** – June 23 & 27, 2018

Action No.	Responsibility	Summary of Action Items	Status
1	Todorovic	Develop a briefing document for CEC and PubEd explaining the need for possible new procedures and disclaimers covering Society program presentations held in TC meetings.	On-going.
14	MTG.SH & MOTS	Develop MTG activity form based on TC activity form, but focused on MTG activities instead	On-going

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## LIST OF ATTACHMENTS

<b>ATTACHMENT A:</b>	TC Re-org ad hoc update
<b>ATTACHMENT B:</b>	TC Activity Dashboard
<b>ATTACHMENT C:</b>	TAC 19-20 MBOs update
<b>ATTACHMENT D:</b>	BOD EX-O Presentation
<b>ATTACHMENT E:</b>	Section Head best practices list
<b>ATTACHMENT F:</b>	International Memory of the World Register
<b>ATTACHMENT G:</b>	TC Chairs Breakfast Reminders
<b>ATTACHMENT H:</b>	TC Chairs Breakfast Slides
<b>ATTACHMENT I:</b>	MTG proposal
<b>ATTACHMENT J:</b>	Approved TAC MOP changes
<b>ATTACHMENT K:</b>	Proposed TAC Reference Manual Changes

## LIST OF ACRONYMS

AI	Action Item
ASHRAE	American Society of Heating, Refrigerating and Air-conditioning Engineers
BOD	Board of Directors
CEC	Conferences & Expositions Committee
CIMA	Cellulose Insulation Manufacturers Association
CNV	Chair Not Voting
CTTC	Chapter Technology Transfer Committee
EHC	Environmental Health Committee
ExCom	Executive Committee
ExO	Ex-Officio
FG	Functional Group
H&A	Honors and Awards
HBC	Handbook Committee
HVAC	Heating, Ventilating & Air Conditioning
MBO	Management by Objectives
MOP	Manual of Procedures
MOTS	Manager of Technical Services
MTG	Multi-disciplinary Task Group

NIBS	National Institute of Building Scientists
OPS	Operations Subcommittee
PCM	Provisional Corresponding Member
RAP	Research Advisory Panel
RBC	Residential Building Committee
REF-CPPC	Refrigeration Committee (Comfort, Process, and Cold-Chain)
ROB	Rules of the Board
RPM	Remote Participation Meeting
RSP	Research Strategic Plan
SH	Section Head
SY	Society Year
TAC	Technical Activities Committee
TC	Technical Committee
TG	Task Group
TRG	Technical Resource Group
UNESCO	United Nations Educational, Scientific and Cultural Organization
WS	Work Statement
YEA	Young Engineers in ASHRAE

## MINUTES

### TECHNICAL ACTIVITIES COMMITTEE February 1 & February 5, 2020

#### MEMBERS PRESENT:

Jay Kohler, *Chair*  
Dustin Meredith, *Vice Chair*  
Jennifer Leach, *Section 1*  
Jon Cohen, *Section 2*  
Barbara Minor, *Section 3*  
James Bennett, *Section 4*  
Larry Smith, *Section 5*  
Dawen Lu, *Section 6*  
Craig Messmer, *Section 7*  
Kevin Mercer, *Section 8*  
Vance Payne, *Section 9*  
Charles Henck, *Section 10*  
Carl Huber, *Section MTG*  
Sarah Maston, *Membership Coordinator/CEC Liaison*  
Victor Goldschmidt, *Training Coordinator*  
Marija Todorovic, *Operations Coord.*  
Rick Hermans, *BOD Ex-O*  
Dennis Knight, *Coordinating Officer*

#### MEMBERS ABSENT:

None

#### GUESTS:

Michael Collarin  
Wade Conlan  
Paul Francisco  
Nate Hart  
Mark Hegberg  
Suzanne LeViseur  
Corey Metzger  
Chee S. Ow  
Danielle Passaglia

#### ASHRAE STAFF:

Tony Giometti, *Staff Liaison CEC*  
Steve Hammerling, *MOTS*  
Tara Thomas, *AA*

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#### **A. CALL TO ORDER & INTRODUCTIONS**

Chair, Jay Kohler, called the meeting to order at 8:00 am, EST on Saturday, February 1, 2020. Members and staff attended as recorded above. Kohler referred to the commitment to the ASHRAE Code of Ethics:  
*In this and all other ASHRAE meetings, we will act with honesty, fairness, courtesy, competence, integrity and respect for others, and we shall avoid all real or perceived conflicts of interests. (See full Code of Ethics: [www.ashrae.org/about-ashrae/ashrae-code-of-ethics](http://www.ashrae.org/about-ashrae/ashrae-code-of-ethics))*

#### **B. ADDITIONS AND/OR CHANGES TO THE AGENDA**

The current version of the agenda on Basecamp is revision 7. No additional changes were requested.

#### **C. ACTION ITEM TRACKING AND PRELIMINARY REVIEW OF ACTION ITEMS**

Action Items from previous meetings were reviewed. [A status summary can be found on page iv of these minutes]

#### **D. APPROVAL OF MINUTES**

It was moved (DM) and seconded (SM) that,

- (1) minutes of the TAC 2019 Annual Meeting be approved as drafted

**BACKGROUND:** The draft minutes from the 2019 Annual meeting were emailed/uploaded on August 6<sup>th</sup>.

**MOTION #1: 13-0-2 CNV - PASSED**

**E. CHAIR'S REPORT** (Kohler)

a) Disposition of Motions from Last Meeting Requiring Higher Body Approval

Letter Ballot #19-11, motion to approve winner of George Hightower Award was approved by TAC. TAC's recommendation was sent to Honors & Awards (H&A) Committee to consider in Orlando. They will notify the winner after the meeting.

No motions from Annual Meeting (KC) required higher approval

b) New or Carryover Action Items Assigned to TAC by Tech. Council

There were no action items from Tech Council.

c) New Information Items:

1. New drop in meeting area planned for ASHRAE meetings.

Maston noted this "TC Collaboration Area" is taking place for the first time here in Orlando. The intent is to be used as drop in space for subcommittee meetings. Maston noted the plan is to have this sort of space available at meetings going forward. The larger plan is to reduce TC meeting spaces, allow some flexibility and increase participation. In Orlando, this space will be in Orange D, Hilton Orlando LL (next to the Speaker's Lounge). It will be available for use Sunday, Monday, Tuesday 7:30 AM- 4:00 PM, & Wednesday 7:30 AM- 1:00 PM

Maston asked all to help publicize and encouraged TAC members to use it for various TC functions, meetings that did not make the official schedule, ad hoc meetings, any other TC related activity. Maston asked for feedback Wednesday on setup, logistics, etc.

2. TC Re-org updates

Maston reported that the TC reorganization ad hoc committee met frequently since KC and has issued a report to TAC (**Attachment A**) with several recommendations. Section Heads were asked to track the status of potential merges and other related TC actions related to the reorganization. TAC would collect this information and continue to implement recommendations. Kohler would appoint a TAC subcommittee to determine specific changes (with timeline, etc.) for TAC follow up to ad hoc reorganization recommendations (**AI #1**).

Going forward, TAC will be clear in enforcing the annual review of all functional groups (FGs) to assure activity and productivity. TCs will be asked to reaffirm their committee annually with a space on TC agendas and activity forms to confirm.

TAC is still working with Meetings and may consider a block TC schedule status to avoid conflicts with program. The results of the TC mergers may help determine direction taken.

Finally, it was noted that any mergers requested here would require TC title and scope change approvals in Orlando, with a leadership plan and combined roster by the Feb. 19 deadline.

Mercer had developed a 1-page resource list for TCs considering mergers that detailed what to do, a sample proposal, and a checklist of issues (website, roster, etc.) that needed to be completed. Meredith asked Mercer to share the list for other Section Heads (**AI #2**).

3. New ASHRAE 2019-2024 Strategic Plan Approved by Board – TAC will play key role in Initiative 3 (Organizational Streamlining)  
TAC supports a number of activities related to the TC reorg that contribute to Initiative 3 of the Strategic Plan.
4. CIMA complaint on bias in Handbook chapter development  
Kohler noted this issue was being formally addressed by Handbook committee. In short, there was a group that felt they were not able to contribute to development of handbook chapter content. The issue for TAC to consider is language in the TC MOP on the makeup of TCs or TC subcommittees.  
TAC agreed to defer to Handbook committee rules for content development.
5. TC websites to notify TC members to obtain a free name badge for TC meeting in Registration  
This was updated for Orlando. See <http://messages.ashraetcs.org>
6. Training on new Activity Form and Dashboard for TAC Section Heads – Messmer  
Messmer summarized updates to the form and dashboard (**Attachment B**) and walked through the tools with TAC. Messmer would lead training presentation after the TC breakfast on Sunday.
7. Research Advisory Panel (RAP) formed and has started work  
A RAP member will attend SH breakfast with a slide to discuss the development of the new ASHRAE Strategic Research Plan (RSP). A survey for feedback on the ASHRAE research plan was sent to all members.
8. Region Referrals  
All TAC referrals are reported as complete and new referrals have been assigned.

d) MBOs

An update on TAC MBOs is included as **Attachment C**.

e) Proposed plan for reducing time commitment for meetings

Section heads were again asked to prepare written section head report and send to staff and TAC chair by Tuesday, (~9:00 pm). Section Heads were asked for a 3-5-minute oral report during Wednesday meeting to highlight action items and motions or any major issues.

**F. BOD EX-OFFICIO & COORDINATING OFFICER** (Hermans & Knight)

Hermans reviewed the BOD EX-O presentation (**Attachment D**). Highlights included:

- Nominations for ASHRAE committees – [www.ashrae.org/committee-nominations](http://www.ashrae.org/committee-nominations).
- ASHRAE Code of Ethics and ASHRAE Sexual Harassment policy updates
  - TAC feedback included recommending that training go down to the grass roots level and that reporting be anonymous and go to a third party.
- Bylaw change proposal (Section 3.3 Voting) will be letter balloted to membership later in year.
  - Members asked if there'd be a Journal article or other efforts to explain impact
- Strategic Plan Initiative 3 related to streamlining of particular interest to TAC.

Knight thanked TAC members for their work and encouraged efforts related to ASHRAE Strategic Plan streamlining.

## **G. VICE CHAIR'S REPORT** (Meredith)

- a) New online activity form & section head trend report template  
Messmer suggest TAC members review the data in the tool now that we will have ~6 meetings of TC activity data. TAC should discuss what and how do we want to use this tool (**AI #3**). The goal is not to use as an activity measurement tool, it should measure TC productivity. It was noted the online tool is targeted for use in Austin.
- b) Develop a Document - Best Practices for Section Heads – MBO 1  
A draft was developed and is available (**Attachment E**). TAC should continue to review and comment with eventual inclusion in the TAC Reference Manual.
- c) Update on YEA/TAC mixer  
All Section Heads were asked to get at least 2 TC representatives for the mixer on Sunday.

## **H. MULTIDISCIPLINARY TASK GROUP SECTION REPORT** – (Huber)

- a) Status of MTGs:
  - 1. *MTG.ACR – Air Change Rate*  
This MTG is very active. No issue to report.
  - 2. *MTG.BIM – Building Information Modeling*  
This MTG is discussing their future direction. Activity has been waning. A formal decision is expected here or in Austin.
  - 3. *MTG.CEA – Controlled Environment Agriculture*  
This MTG was formed in KC and has had a lot of interest. Their first meeting will be here in Orlando.
  - 4. *MTG.EBO – Effective Building Operation*  
No updates were reported on this MTG.
  - 5. *MTG.HCDG – Hot Climate Design Guide*  
This MTG is finishing up a final draft of the document. Their current aim is to approve and send to publications in February. The plan is to disband upon publication.
  - 6. *MTG.HWBE – Health and Wellness in the Built Environment*  
Noted this MTG is seeking new leadership as the chair is unable to fully participate. Mercer suggested contacts at Purdue University that is doing work in this area and may have interest.
  - 7. *MTG.IAST – Impact of ASHRAE Standards and Technology on Energy Savings / Performance*  
This MTG is finishing up a research project that they'd spearheaded. They could finish their work by end of 2020.
  - 8. *MTG.LowGWP – Alternative Lower Global Warming Potential Refrigerants*  
This MTG is very active. They've completed RPs, have another project underway, and will be starting another RP shortly. This MTG is meeting frequently with 40-100 attendees each time.
  - 9. *MTG.OBB – Occupant Behavior in Buildings*  
This MTG is doing work related to standards, handbook, etc. and was interested in becoming a TC.
  - 10. *MTG.RAC - Refrigeration and Air Conditioning (RAC) Plant Assessment Guide*  
This MTG was approved in KC and will have their first meeting in ORL.

b) Proposed New MTGs

Huber noted an MTG on *Cybersecurity for HVAC Systems and Related Infrastructure* is in the works. It will be considered Wednesday if they formally submit the request.

**I. POTENTIAL MOTIONS READY FOR TAC CONSIDERATION INDIVIDUALLY OR AS CONSENT AGENDA**

Nothing was ready for vote currently.

**J. ROSTER COORDINATOR / CEC LIAISON** – (Maston)

a) 19-20 Rosters – Status on Goals & Number

The new roster update process has been operational since last year. Rosters for next SY will be due to Section Heads by mid-February.

b) Roster Update Process –Online form and integration with ASHRAE Database?

It is expected that ASHRAE IT will have time to fully coordinate roster tool in net forum in near future.

c) Roster Update schedule and goals for 20-21 Rosters

Updates for next SY are due to Section Heads Feb. 19<sup>th</sup>. Links were sent to TC chairs for the online update tool. It was noted more time than usual may be needed by staff depending on the number of mergers that are approved.

d) CEC activities and issues – (Maston)

The goal was to improve the understanding of TC chairs and program subcommittee chairs about how CEC and the ASHRAE program selection process work. Maston agreed to send a template of a program submission checklist (**AI #4**).

Cohen suggested seeking input from TAC on track ideas farther out ahead of conferences than done currently.

Kohler noted CEC was one of the groups at the joint ExCom meeting this morning to help continue this sort of communication and brainstorming.

**K. OPERATIONS COORDINATOR** (Todorovic)

a) TAC Activities Report to other Standing Committees

1. Standing committee Liaisons to TCs – New Tips and Suggestions for Speaking Time at new Section Head Breakfast format  
Liaisons from CTTC, RBC, RAP, REF-CPCC and CEC would attend SH breakfast and were forwarded speaking guidelines.

b) Proposed TAC or TC Procedure Motions for approval:

1. AI #2 (ATL) & AI#12 (Fall) – Review TC & TAC procedures against Rules of Board (ROB) & suggest edits to procedures to be consistent w/ ROB intent.  
Goldschmidt noted these would be handled later on TAC agenda.

2. Review of TAC MOP, TC MOP and Reference Manual (Minor & Maston)

Minor and Maston had reviewed the documents for updates and changes. These would be discussed Wednesday.

c) Summary of TAC ExCom interface

Kohler noted TAC invited committees to attend joint interface meetings. Leadership from RBC, EHC, HBC, CEC and CTTC all attended and there was a good exchange of information. TAC updated all on mergers effort. Updates were provided to TAC on presentation commercialism policy, EHC's restructuring and other topics. The following was discussed:

- The change for the TC Chairs breakfast format was not well communicated to other Standing Committees
- RBC again requested to know which TC's have a specific residential interest. It was believed that this review was done previously.

Staff agreed to follow up on these two points.

- During the discussion with CEC, the issue was raised about providing feedback to TC's on why certain programs weren't accepted.
- The general feeling was that the Interface meeting was productive. We discussed the need for future interface meetings. TAC ExCom would discuss further.

d) TAC Inter-society Liaisons

Annual Reports from Intersociety liaisons are due to TAC in Austin

e) Public notice for off-line FGs meeting

TAC discussed how TCs and TC subcommittees, etc. could be encouraged to meet in between ASHRAE meetings without limiting participation from all interested parties (members and non-members). Ideas suggested were listservs, email notifications from chair, web postings, etc. TAC would continue to explore.

f) New Business

Todorovic suggested TAC pursue an effort to nominate ASHRAE Handbook content in the International Memory of the World Register (**Attachment F**). TAC suggested this be pursued through Handbook, Historical Committee, or perhaps Publications and Education Council, as the most appropriate ASHRAE avenues.

## **L. TRAINING COORDINATOR** - (Goldschmidt)

a. TC/TG/TRG Chair's Training Workshop plans for Orlando

No leadership training was planned for Orlando. Staff would lead the roster training presentation and Messmer would lead training on TC activity worksheet.

b. Update on accuracy of current recorded "How to" Training Modules posted to website

Staff reported updating a number of presentations on TC and TAC website. A comprehensive review is underway so more updates will be made.

c. Enabling Motions for TAC MOP to Reflect the ROB

Goldschmidt revisited motions last considered in KC related to incorporating sections from ROB into the TAC MOP.

It was moved (VG) and seconded (JC) that,

(2) TAC change the TC MOP as shown:

1.4 Committee Organization

1.4.1 Each committee shall have a Chair and Vice Chair

1.4.2 TC, TG, TRG, MTG voting Membership shall be comprised of individuals (See section 2 for qualifications):

- a) Who, in the opinion of the Committee Chair, have recognized proficiency in

the field of interest or have the expressed desire to gain proficiency in that field.

- b) Who represent segments of the industry such as users, contractors, product manufacturers, academicians, consulting engineers, and research organizations. ~~The committee chair should work to develop and maintain a balance of these interests, but in some situations a balance may not be possible, therefore, this is not a formal requirement.~~ Balance is mandatory for any committee, or sub-committee developing or amending a standard – unless otherwise approved by the Standards Committee.

**BACKGROUND:** Motion was proposed to address issues with a TRG developing guidance for an ASHRAE Standard.

**MOTION #2: WITHDRAWN**

Motion 2 was withdrawn by VG and JC. They agreed to rework for later at request of the chair.

It was moved (VG) and seconded (JC) that,

- (3) TAC recommends that OPS approve changes to the TAC MOP as shown below:

~~A.2.1 The Technical Activities Committee shall consist of 16 voting members as described in Section 2.428.002.1 of the TAC ROB.~~

A.2.1 The Technical Activities Committee shall consist of

- A. 16 (sixteen) voting members as described in Section 2.428.002.1 of the ROB.
- B. Non-voting members include a Board ex-officio member and a coordinating office.

**BACKGROUND:** This language is from ROB 2.428.002.1 and is added to the TAC MOP to ensure awareness and consistency.

**MOTION #3: 14-0-0 CNV - PASSED**

It was moved (VG) and seconded (JC) that,

- (4) TAC recommends that OPS approve changes to the TAC MOP as shown below:

A.2.3 Term of Service:

The term of service for voting members is intended to be four (4) years subject to ROB 3.300 Election and Appointment Procedures.

**BACKGROUND:** This language is from ROB 2.428.002.3 and is added to the TAC MOP to ensure awareness and consistency.

**MOTION #4: 13-0-0-1 CNV - PASSED**

It was moved (VG) and seconded (JC) that,

- (5) TAC recommends that OPS approve changes to TAC MOP as shown below:

Part 4. Operation (ROB 2.428.003)

Part 4. Operation

A.4.1 This committee shall develop and maintain a plan to manage the implementation of the Society's technical efforts for BOD approval upon recommendation of the Technology Council.

A.4.2 It is the policy of the Society that information obtained from the Society technical program is to be considered preliminary and subject to revision until it is published by the Society.

A.4.3 Appointments to represent the Society in a specific technical area (except standards) shall be made by the chair of the Technical Activities Committee with the advice of the TC, TG, MTG, or TRG or panel at interest, with the advice of the Director of Technology and with the approval of the coordinating officer.

A.4.4 Instructions for their voting as an intersociety representative shall be given to them by their committee with the proviso that, if there is a new activity, this will first be reported to the Board for its consideration so that the Board will not be giving blanket delegation of authority, but will have approved in advance the character, scope and general contents of this activity. Thereafter, it will be the duty of the committee involved to instruct the intersociety representative as to how to vote to accomplish this.

A.4.5 The Board ex officio member shall be responsible for referring to the Board of Directors actions taken by the intersociety representatives.

A.4.6 This committee is authorized to appoint Technical Committees, Task Groups and Technical Resource Groups, and is responsible for their oversight and administrative support.

A.4.7 This committee shall be responsible for recommendation for publication of technical bulletins, other than those resulting from technical meetings.

A.4.8 Any member of TAC is eligible to introduce motions or items for consideration

**BACKGROUND:** This language is from ROB 2.428.003 and is added to the TAC MOP to ensure awareness and consistency.

**MOTION #5: WITHDRAWN**

Motion 5 was withdrawn by VG and JC. They agreed to rework for later at request of the chair.

It was moved (VG) and seconded (LS) that,

- (6) TAC recommends that OPS approve changes to the TAC MOP as shown below:

It was moved (JC) and seconded (JB) to amend Motion 6 to explicitly refer to TAC and

TechC. (14-0-0 CNV)

#### Part 5. Strategic Plan

A5.1 This committee [TAC] shall develop procedures for recommending updates to the strategic plan on a continuous basis. As the minimum the committee [TAC] shall submit a report to the council [Technology Council] prior to the Annual Meeting. The report includes the current status of each activity which supports the fulfillment of the committee's [TAC] assignments under the strategic plan. The committee [TAC] shall report to the council [Technology Council] all recommendations for changes to the strategic plan as provided by the committee's constituents prior to the Annual Meeting.

**BACKGROUND:** This language is from ROB 2.428.004 and is added to the TAC MOP to ensure awareness and consistency.

#### **MOTION #6: 14-0-0 CNV - PASSED**

It was moved (LS) and seconded (JC) that,

- (7) TAC recommends that Technology Council review and provide clarification on ROB 3.960.001 Part 3.

#### **BACKGROUND:**

ROB 3.960.001 states the following:

#### *SECTION F – ANCILLARY RESPONSIBILITIES*

##### *Part 3 Society Chapters Technical Publication*

*F3.1 Research and Technical Information Activities initiated by Society Chapters which may result in Chapter Technical Publications shall be conducted under the supervision and direction of the Technical Activities Committee and the appropriate TC/TG/TRG. (ROB 3.960.001).*

TAC is not performing this task to oversee research and technical information activities from Society Chapters. TAC seeks clarification as to what the expectation is and if this is feasible for TAC to do.

#### **MOTION #7: 15-0-0 CNV - PASSED**

Kohler agreed to ask Tech Council for clarification in the report to Tech Council (**AI #5**).

Kohler recessed TAC at 2:41 PM EDT. TAC would reconvene at 7 AM EDT on Wednesday, February 5<sup>th</sup>.

#### **M. SUNDAY'S SECTION MEETINGS/BREAKFAST AND REMINDERS** (Kohler/Maston)

- a) Liaison Speaking Guidelines (TAC chair conveys to all TC Liaisons prior to Orlando)  
Liaisons from CTTC, RBC, RAP, REF-CPPC and CEC would attend SH breakfast and were forwarded speaking guidelines. All were asked to limit presentation to 1-3 slides and 2-3 minutes.
- b) Section Head Meeting Sunday A.M. – Finalize draft agenda (see attached prelim. Draft)  
The list of reminders (**Attachment G**) and slides (**Attachment H**) for breakfast meeting were

finalized by TAC.

#### **N. CEC CONSULTANT REPORT (Maston)**

As noted earlier CEC met with TAC ExCom this morning to reinstitute joint planning meetings. Maston noted the input TAC section heads have offered in reviewing track submissions has been helpful. Incoming SHs may continue but the best way to influence program is track recommendation. Leach seconded this that conference track chairs actively encourage TC input on track ideas. Cohen suggested input be given well in advance so CEC could properly consider in time.

#### **O. STAFF REPORT**

Hammerling did not present a formal report.

#### **P. SECTION HEAD REPORTS**

Section heads were reminded to present only highlights from their written reports submitted Tuesday night. Section Head reports and activity reports should be uploaded to basecamp.

For TC mergers, TAC agreed to renumber TCs to smallest available TC number in the section or the smallest of the two merging TCs. Also, merged TCs would have some latitude on holding joint meetings in Austin. Changes would not formally be incorporated until the new SY, but TCs could meet together, jointly chair and request votes.

- a) New motions that TAC must consider at this meeting from TCs in section?
  - i. Proposed New TC/TG/TRGs, or Merges, or Disbands?

It was moved (BM) and seconded (JB) that,

- (8) TAC approve the merger of TC 3.2, Refrigerant System Chemistry, and TC 3.3, Refrigerant Contaminant Control, with the new title and scope is as follows:

##### TC 3.2, Refrigerant System Chemistry and Contaminant Control

TC 3.2 is concerned with all chemical reactions and contaminant control inside refrigerant systems. occurring inside refrigerant systems with the The primary focus includes effects of temperature, pressure and materials on the chemical reaction rates. It also includes sources, generation, as well as control of water and other contaminants. Materials of primary interest include refrigerants, lubricants, lubricant additives, motor insulation, driers, and metallic structural materials manufacturing chemicals and materials of construction. Scope includes identifying and quantifying contaminants that affect properties and performance of system components such as filters and driers. It is also concerned with contaminants during recovering, recycling and reclaiming refrigerants.

**BACKGROUND:** Mark up shows current TC 3.2 scope with changes to incorporate TC 3.3. TCs formally voted to approve the proposed title and scope change. They have agreed to new leadership team and voting roster. This would formally be implemented at new Society Year. The TCs could start meeting with new structure if they wish.

##### **MOTION #8: 14-0-0 CNV- PASSED**

It was moved (KM) and seconded (BM) that,

- (9) TAC approve the merger of TC 8.10, Mechanical Dehumidification Equipment and Heat Pipes, and TC 8.12, Desiccant Dehumidification Equipment and Components, with the new title and scope is as follows:

TC 8.10, Mechanical and Desiccant Dehumidification Equipment, ~~and~~ Heat Pipes and Components

TC 8.10 is principally concerned with mechanical and solid/liquid desiccant dehumidification equipment and heat pipes, and their design performance, applications ~~and features. engineering, related load calculations, commissioning, operation, and maintenance.~~ The committee is also concerned with the integration of desiccant equipment and components into other systems and with fundamental abstracts of heat and mass-transfer as they relate to desiccant materials and compounds.

**BACKGROUND:** Mark up shows current TC 8.10 scope with changes to incorporate TC 8.12. TCs formally voted to approve the proposed title and scope change. They have agreed to a new leadership team and voting roster. This would formally be implemented at new Society Year.

**MOTION #9: 14-0-0 CNV - PASSED**

It was moved (VP) and seconded (JC) that,

- (10) TAC approve the merger of TC 9.4, Justice Facilities, and TC 9.8, Large Building Air-Conditioning Applications, with the new title and scope is as follows:

TC 9.8, Large Building Air-Conditioning Applications

TC 9.8 is concerned with the application of heating, ventilating, air-conditioning, refrigeration, humidity control, and energy conservation systems to large buildings. Specific areas of primary responsibility and expertise to include applications for the following types of large commercial and public buildings: domiciliary, hospitality, retail, assembly, natatoriums, atria, warehouses, transportation centers, museums, archives, galleries, ~~and~~ libraries, and justice facilities.

**BACKGROUND:** Mark up shows current TC 9.8 scope with changes to incorporate TC 9.4. TCs formally voted to approve the proposed title and scope change. They have agreed to new leadership team and voting roster. This would formally be implemented at new Society Year.

**MOTION #10: 14-0-0 CNV - PASSED**

ii. Proposed Name and Scope Changes

It was moved (KM) and seconded (JC) that,

- (11) TAC approve a new scope for TC 8.6 with the following changes:

Scope: Technical Committee TC 8.6 is concerned with open and closed circuit cooling towers, evaporative ~~liquid coolers and~~ condensers, adiabatic condensers and fluid coolers, spray ponds, and other types of contact type liquid-to-air heat ~~exchangers and applications to rejection equipment along with their application and impact on complete~~

HVAC, Industrial, and Refrigeration systems, including the associated energy and water usage as well as water treatment requirements.

**BACKGROUND:** TC 8.6 voted to approve these changes at their meeting in Orlando.

**MOTION #11: 14-0-0 CNV - PASSED**

iii. Proposed New MTGs

It was moved (CH) and seconded (JC) that,

- (12) TAC approve the formation the following new multidisciplinary task group MTG.CYB - Cybersecurity for HVAC Systems and Related Infrastructure with the following scope:

Scope: The scope of this MTG includes areas of Cybersecurity relevant to HVAC and related systems, infrastructure, and interfaces, including industry standards, advocacy and education. The scope includes the entire lifecycle of buildings, including building planning, design, construction and operation. The MTG will be active in Program to fulfill advocacy and education. The MTG would contribute to the Handbook by coordinating information in the section on cybersecurity. The MTG would also be active in Publications by production of guideline documents to assist ASHRAE members in implementing and developing cybersecurity designs and practices.

**BACKGROUND:** The proposal with proposed TC structure, chair (Mike Galler) and roster is shown in **Attachment I**.

**MOTION #12: 14-0-0 CNV - PASSED**

b) Updates, problems & issues for TAC action or information?

1. RPM Meetings

Nine sets of RPM equipment were utilized for committee meetings in Orlando. Priority was given to TCs that weren't going to make quorum and had requested a reservation by the deadline. Staff is evaluating the future of the RPM program given overhead costs and staff time to administer. More TCs are looking to utilize this technology, with some using their own services and equipment, to involve more people in ASHRAE committee meetings. There are notification, bandwidth, and attendance issues to consider as well. TAC should continue to evaluate.

TCs 4.5 and 5.2 were using their own equipment and services to expand TC meeting participation.

2. TC breakfast format comments

Members again praised the joint breakfast format. There were suggestions for electricity at tables as well as tables that let all attendees be closer together, but TAC would continue joint breakfast for next meeting.

3. TC collaboration area

Response to the new TC collaboration area was positive and it was suggested it be done in Chicago as well. The space was frequently used on a drop in and scheduled basis and a nice tool. It was suggested it be more clearly differentiated from speaker lounge next time. There was also a request for electricity at the tables.

4. Rosters

It was suggested by a number of TCs that the web roster tool allow for changes after initial submission. It currently closes and allows no changes after initial submission. Staff was asked to explore this possibility (**AI #6**).

Also related to rosters was addition of Provisional Corresponding Members (PCM). Currently anyone can sign up to be a PCM and get access to the roster and contact information. Should TAC reevaluate this policy (**AI #7**).

Bennett reported a 25% error rate on TC aliases. Staff was asked to look into (**AI #8**).

5. TCs merger related items reported

- TC 1.11 and 1.9 considering merger
- TC 4.4 discussing scope and merger with TC 1.12
- Two Section 5 TCs are discussing a possible merge
- All TCs in Section 6 confirmed they would not seek to merge
- Section 10 TCs are exploring mergers that would reduce the 7 TCs to 4

6. Call for high performing TC activities or leaders

Kohler asked for section heads to make him aware of high performing individuals and TCs, TC activities that may be of interest to others, etc. These can be highlighted in section head breakfast and explored for expanded use.

7. New Basecamp tool

A Basecamp folder was added for communication between TAC and all TC leadership (<https://3.basecamp.com/3106353/projects/15520814>). It was noted several sections (1, 4,5) already have a preferred section basecamp folder. TAC should evaluate the basecamp structure to determine what basecamps they will have and use, and what documents/communications each would be used for (**AI #9**).

8. Other

Requests were made for TC meeting agenda templates to assure all subcommittees, liaisons, etc. were included. Bennett also suggested the need for membership requirement training.

**Q. UNFINISHED BUSINESS**

It was moved (SM) and seconded (LS) that,

- (13) TAC recommends that Technology Council approves changes to TAC MOP as shown in **Attachment J**

**BACKGROUND:** Changes were made to reflect current practices of TAC. Some changes are just editorial, others are related to meetings and reporting.

**MOTION #13: 14-0-0 CNV - PASSED**

A motion to approve changes to TAC Reference Manual was delayed for spring. TAC members were asked to review (**Attachment K**) in preparation for the next meeting (**AI #10**).

Todorovic reported that Handbook Committee and Publications and Education Council were receptive to ideas for the UNESCO course and Tesla archive. She noted she would pursue through these ASHRAE groups. TAC thanked Todorovic for her efforts.

**R. NEW BUSINESS**

Meredith assumed role of chair as Kohler left to report to Technology Council. Meredith thanked TAC members for their participation.

**S. REVIEW NEW ACTIONS**

Action Items are included in minutes. TAC leadership will work with staff to schedule a spring meeting.

**T. ADJOURN**

TAC 2020 Winter Meeting adjourned at approximately 10:00 AM., Wednesday, February 5, 2020.

## **Update on TC Reorganization for TC leadership, 12/2019**

In an effort to keep all TC leadership in the loop, TAC thought it was a good idea to give you a little history, an update, and possible future steps in the efforts of the TC Reorganization.

### **History**

The direction to look at the TC structure came from the 2014 strategic plan. Based on a survey of TC chair and vice-chairs, we found the following issues were important to our members:

- We are working in silos; too specific; need wider perspective
- We need to better manage stagnant TCs and membership
- Takes too long to change things; get discouraged
- We are not maintaining industry leadership
- We need to do a better job of sharing best practices

By taking on this reorganization, we hope to accomplish many things, including:

- Increase opportunity for collaboration for programs & research
- Increase opportunity for workshops for Handbook
- Increase meeting efficiency and increase effectiveness of members' volunteer time

We asked our SHs to discuss restructuring the TCs with TC leadership- this could include merging some TCs or creating a new TC organizational structure for example. As with major change anywhere, some TCs took this as an opportunity for real change and some dug in their heels.

### **Update**

In the past year, TAC has looked into making small changes to the processes we have in place, in an effort to seek collaboration and meeting efficiency.

**TC Breakfast:** In Kansas City, we rolled out a joint breakfast for the first time. The reasons for this were many, including a more efficient way of getting important information into everyone's hands and increasing collaboration. Overall this effort was well-received, with a couple details to work out. In Orlando we will have larger tables and a bigger room, offering less background noise and enough room for everyone to have a seat at the table. This format has been very successful for RAC, so it is not a new concept.

### ***Large Meeting Room for small meetings:***

In Orlando, we are working with staff to offer a large meeting room (similar to Atlanta, if you remember) which will be setup with many round tables. There will also be a quiet area if members need to get work done. Smaller TCs or subcommittees (10 people or less) will be encouraged to utilize this area instead of taking up multiple meeting rooms, and/or cancelling last minute. This will most likely continue in future meetings, depending on feedback in Orlando.

**TC Mergers:** Many TCs are looking into restructuring. We encourage all TCs to voluntarily consider their scope, membership and leadership, and how they can be merged with other, similar, TCs with a vote on this action at the Orlando meeting. That being stated, TAC may need to take a more proactive approach, if there is evidence of an unwillingness on the part of Functional Groups to consider change. The first round of change needs to be wrapping up in Orlando, so staff has time to update rosters as part of the regular timeline.

For TCs looking into mergers, we would recommend that the merging TCs have a revised Title, Purpose & Scope ready for TC vote in Orlando. In addition, proposed leadership and voting roster should be completed.

**Review Reminder:** Please recall that there is an annual review requirement for each committee as detailed below. We will ask each Section Head to report the recommendations from each committee to their Section at the Annual meeting in Austin. If not already on the agenda, your committee should be prepared to start discussing this recommendation in Orlando.

From the Manual of Operating Procedures (MOP):

## 1.5. Review

### 1.5.1.

Once a year, preferably at, or prior to, each Annual meeting, the Committee Chair and Committee Membership shall evaluate their progress in accomplishing the purpose for which they were constituted and recommend one of the following actions to their Section Head:

- a) Continue as a TC, TG, MTG, or TRG
- b) Convert from a TG to a TC
- c) Convert from a TRG to a TG or TC
- d) Merge with a TC/TG/TRG and submit a revised scope for the merged committee
- e) Dissolve the TC, TG, MTG, or TRG
- i) If a TC/TG/TRG/MTG votes to disband, it must establish whether any current responsibilities should be continued and, if so, recommend existing TC/TRG/MTG(s) to assume responsibility and obtain those committee's written concurrence

## Future Steps

So, a couple things that were identified early on, are still in process:

- Review functional group definitions and scopes of work to determine if current groups are efficient and best use of volunteer time.
- Clarify procedures for combining and/or dissolving FGs.
- SHs to review Activity Forms and determine which TCs are not performing. Determine plan for TC to perform or dissolve.
- Adjusting meeting times into a block schedule. We currently have many meetings happening at non-standard times which leads to conflicts in people's schedules and is a very inefficient use of meeting space.
- Looking into moving subcommittee meetings into a time slot on the same day as the main TC meeting, and maybe immediately before the main group meeting. This way, if someone can only attend for a few days, they can attend all meetings for a functional group.

As we embark in the effort of organizational restructuring to become more efficient and effective in this new strategic plan, we think it is important to focus on what makes ASHRAE special. If someone in the HVAC industry could only afford to attend one conference a year, why would they come to ASHRAE? Are we showcasing our volunteers and their knowledge effectively? We think what makes our conference great is the ability to collaborate with professionals from all over the world. Meet real people and serve humanity by solving real problems. Together. We need to step up our game- provide more opportunities for the dispersion & discussion of technical information. This is where the FG Reorganization can make a difference.

Section:	Meeting in:					Date:		Section Head:							Section Summary
TC Number:	0	0	0	0	0	0	0	0	0	0	0	0	0		
TC Name:	0	0	0	0	0	0	0	0	0	0	0	0	0		
Meeting City:	0	0	0	0	0	0	0	0	0	0	0	0	0		
Meeting Day:	0	0	0	0	0	0	0	0	0	0	0	0	0		
Meeting Date:	1/0/1900	1/0/1900	1/0/1900	1/0/1900	1/0/1900	1/0/1900	1/0/1900	1/0/1900	1/0/1900	1/0/1900	1/0/1900	1/0/1900	1/0/1900		
Form Version:	0	0	0	0	0	0	0	0	0	0	0	0	0		
TC Chair:	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>Membership Statistics</b>															
Quorum Achieved:	0	0	0	0	0	0	0	0	0	0	0	0	0	Average	
Voting Members Present:	0	0	0	0	0	0	0	0	0	0	0	0	0	#DIV/0!	
Non Quorum Voting Members Present:	0	0	0	0	0	0	0	0	0	0	0	0	0	#DIV/0!	
Corresponding Members Present:	0	0	0	0	0	0	0	0	0	0	0	0	0	#DIV/0!	
Provisional Members Present:	0	0	0	0	0	0	0	0	0	0	0	0	0	#DIV/0!	
Visitors Present:	0	0	0	0	0	0	0	0	0	0	0	0	0	#DIV/0!	
YEA Members:	0	0	0	0	0	0	0	0	0	0	0	0	0	#DIV/0!	
% of Total Voting Members Present:	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
% Total VM / Total VM + CM:	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Projected Room Size for Next Meeting:	0	0	0	0	0	0	0	0	0	0	0	0	0	#DIV/0!	
<b>Handbook/Standards</b>															
# Handbook Chapters:	0	0	0	0	0	0	0	0	0	0	0	0	0	Totals	
Chapter(s) approved at this meeting:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# of Standards (SPC, Std, Gd, etc.):	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# Standards recommended this meeting:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# Special Publications:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Program Activities</b>															
Total # of Forums scheduled:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Submitted:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Accepted:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Co-sponsored:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total # of Seminars Scheduled:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Submitted:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Accepted:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Co-sponsored:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total # of Debates Scheduled:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Submitted:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Accepted:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Co-sponsored:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total # of Paper Sessions scheduled:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Submitted:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Accepted:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Co-sponsored:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Other Presentations:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TC Research Results:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Other papers:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Programs:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Submitted but not accepted:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Research Activities</b>															
# of new/revised RTARs submitted:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# of other active RTARs:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# of new/revised Work Statements:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# of other active Work Statements:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# of active TRPs:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# of active RPs:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# of RPs completed & approved:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Problems getting RTAR/WS Approved:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total number of active Projects:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>TC Management</b>															
Minutes Completed on Time:	0	0	0	0	0	0	0	0	0	0	0	0	0	Total "No"	
Agenda distributed on time:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Did Chair attend training:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Did Vice Chair attend Training:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Did Program Chair attend Training:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Did Handbook Chair attend Training:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Did Research Chair attend breakfast:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Other Technical Activities</b>															
# FAQs updated this meeting:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# New members added to roster:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Award Nominations</b>															
Other Awards:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Award Nominations:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>TC Feed Back to TAC</b>															
0															

**TAC SY 2019-2020 MBOs**  
**Jay Kohler, Chair and Dustin Meredith, Vice Chair**  
**Date: 2/1/2020**

<b>MBO #</b>	<b>MBO</b>	<b>Status</b>	<b>Date Due</b>	<b>Assigned To</b>	<b>Applicable initiative #</b>	<b>MBO Comments</b>	<b>Strategic Direction Specific Comments</b>	<b>Fiscal Impact</b>
1	Develop a Document - Best Practices for Section Heads	<u>Complete</u>	Jun-20	Meredith	3	A draft was compiled and reviewed by TAC. The document will be completed with feedback and added to the TAC reference manual.	Goal 3a, 3b	none
2	Establish expectations for notification regarding interim TC/TG/TRG/MTG conference calls so that all interested personnel receive notification of the call.	<u>On-going</u>	Jun-20	Smith	3	Interested parties to become provisional member will be on TC roster. Chairs are expected to announce all members of all interim meetings. Also, TCs will be encouraged to explore use of TC listservs. These efforts will help to ensure openness of all TC meetings.	Goal 3a, 3b	none
3	Clarify the process for MTGs to transition to TC, TG, or TRG	<u>On-going</u>	Jun-20	Re-org	3	TAC's re-org subcommittee included this task within their larger effort to reorganize. Changes are proposed in MOP changes to clarify this process.	Goal 3a, 3b	none
4	Revisit the MTG expectations - temporary v permanent	<u>On-going</u>	Jun-20	Re-org	3	TAC's re-org subcommittee took this task on within their larger effort to reorganize TC structure. Changes are proposed in MOP changes to clarify this process.	Goal 3a, 3b	none
5	Clarify procedures for combining and/or dissolving FG's	<u>On-going</u>	Jun-20	Mercer	3	No MOP changes were suggested at this time. Mercer developed a one-pager of guidance on what needs to be done to merge TCs. A subcommittee was formed to finalize guidance and include in MOP.	Goal 3a, 3b	none

# ASHRAE UPDATE

## ExO Report to Committees

### ASHRAE Winter Conference Society Year 2019-20



**In all your interactions at these meetings,  
please remember...**

## **Code of Ethics**

*“As members of ASHRAE or participants in ASHRAE activities, we pledge to act with honesty, fairness, courtesy, competence, integrity and respect for others in our conduct. We will avoid conflicts of interest and behavior that is discriminatory and/or harassing.”*





**Monday, February 3**  
**12:15 – 2:00 pm**

*Building for People and Performance.*  
*Achieving Operational Excellence.*

**2019-20 ASHRAE President**  
**Darryl K. Boyce, P.Eng**

# Nominations Needed NOW!

- Nominations for appointed standing committees are sought annually
- Speak with your committee ExO if your current appointment ends **June 2020** and you wish to be nominated for another committee Society Year 2020-21
- Self-nomination is also encouraged
- Nominations are due by **mid-February 2020**
- Councils are elected by the Board of Directors, but nominations are welcome



For more information, visit: [ashrae.org/committee-nominations](https://ashrae.org/committee-nominations)



# ASHRAE Commercialism Policy

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

## Principles for Managing Advertising and Sponsorships

- Content should be labeled as advertising or sponsored.
- Use of commercial names and logos shall not imply ASHRAE endorsement, approval or certification of products or services.
- The inclusion of commercial information shall be fair and unbiased so as to avoid explicit promotion of a product or commercial entity.
- Content shall adhere to accepted business practices specified by the U.S. Federal Trade Commission and recognized publishing authorities.
- Activities including events at chapter meetings shall be managed to prevent an atmosphere in which commercial entities are encouraged to critique one another in the public forum.

For more information, visit: [ashrae.org/commercialism](https://ashrae.org/commercialism)

# Proposed Bylaw Change

## PROPOSED BYLAW CHANGES

*The proposed changes are noted in red text below.*

**Section 3.3 Voting.** At any annual, winter, or special meeting, each voting member, as defined in Section 2.11, shall be entitled to one vote, which may be cast in person or by proxy. A proxy shall not be valid longer than three months from its date of execution.

Nominations shall be put forward by the Nominating Committee as hereinafter provided in Section 7.6.

Nominations may also be made in writing by petition signed by not fewer than ½ of 1% of the fifty members eligible to vote. No more than 50% of the petitioners belonging to any single region shall count towards the required minimum. The minimum number of members eligible to vote shall be based on the Society's membership roster as of the first day of the Society year. Upon presentation of such nominations by petition to the Secretary with each nominee's written consent, not less than one hundred twenty days prior to the first session of the annual meeting, the nominees' names shall be placed upon the ballot. A notation on the ballot shall indicate that such nominees are presented by members independent of the Nominating Committee.

# Sexual Harassment

**The Society takes Sexual Harassment seriously and does not condone it.**

Every employee is given our policy in the Employee Handbook and all members can read our policy here:

<https://www.ashrae.org/about/governance/ashrae-discrimination-and-harassment-policy>

**All instances of harassment must immediately be reported in writing to ASHRAE's Executive Vice President.**

Any member found to have violated this policy will be subject to disciplinary action, up to and including expulsion from membership in accordance with the Code of Ethics Enforcement Procedures and ASHRAE's Bylaws.

**ASHRAE is committed to educating members to eliminate all instances of sexual harassment. The Society will soon deploy an online training program to Society volunteers to help educate and protect all members, and to sustain the professional environment members deserve and expect.**

This training will be a requirement prior to serving on certain standing committee and/or leadership position.

Please contact [hr@ashrae.org](mailto:hr@ashrae.org) to arrange to take the training before assuming a leadership position.

# Government Outreach Days

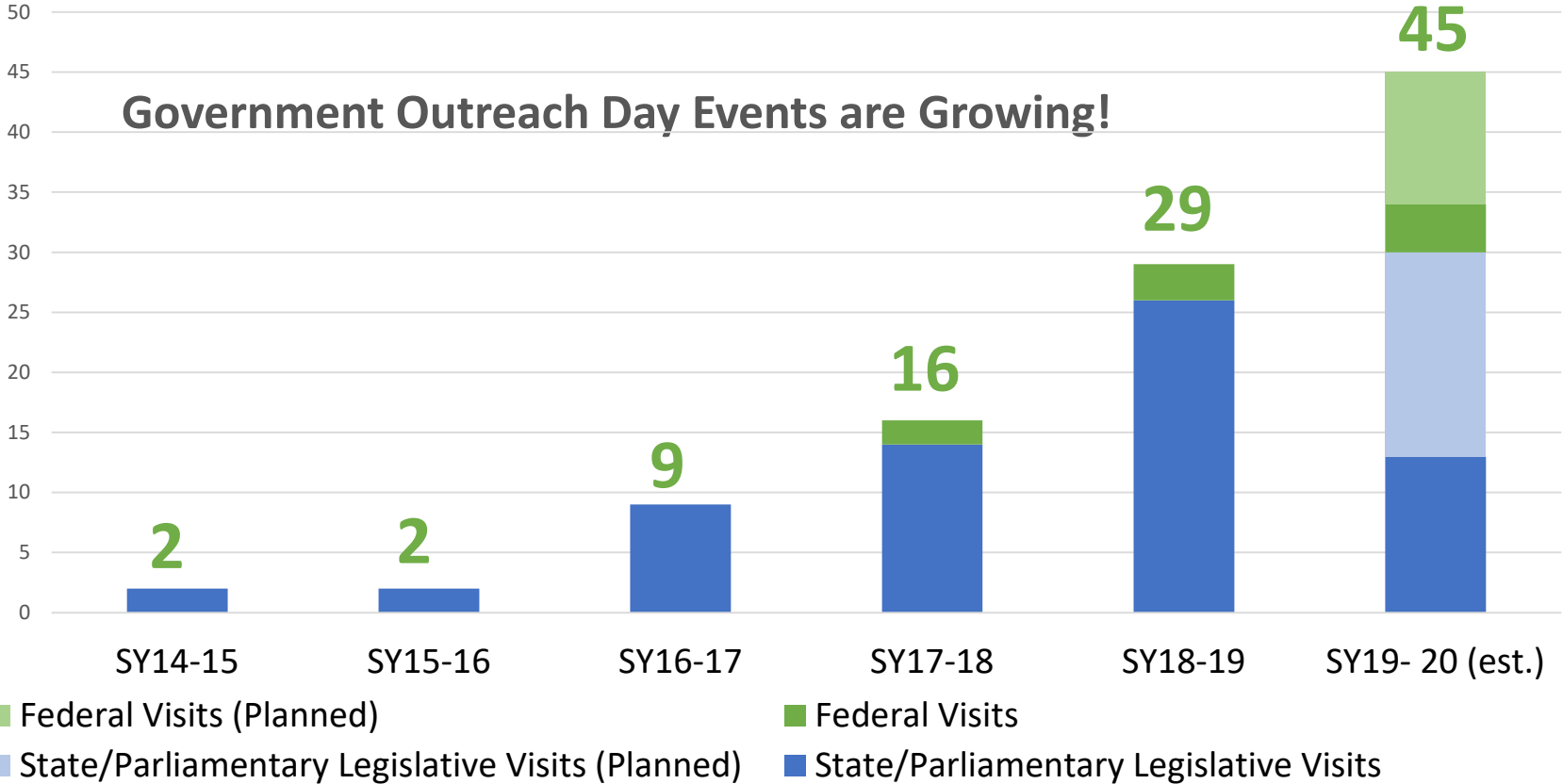
All ASHRAE Members are invited to participate – Get Involved!



174 Member  
Participants  
in SY 18-19



296 Meetings  
in SY 18-19



Advocacy resources available in **ASHRAE 365** and [ashrae.org/advocacytoolkit](https://www.ashrae.org/advocacytoolkit)

# Signed Memoranda of Understanding



- American Chemistry Council (ACC)



- APPA: Leadership in Educational Facilities (APPA)



- International Facility Management Association (IFMA)



- National Environmental Balancing Bureau (NEBB)



- National Institute of Standards and Technology – U.S. Depart of Commerce (NIST)



- Smart Cities Council



- United Nations Environment Programme (UNEP)

For more information, visit:  
[ashrae.org/mous](https://ashrae.org/mous)



# ASHRAE's New Global HQ



**180 Technology Parkway  
Peachtree Corners, GA**

- Renovation kick-off Jan. 10, 2020
- Corporate and all-member fundraising campaign progressing well
- Showcases a net-zero-energy ready building
- Demonstrates the latest HVAC&R equipment and technology
- Move expected by October 2020

Design team members were chosen based on an RFP, competitive bids and committee interviews. The design team includes: McLennan Design, Houser Walker Architecture and Integral Group.

Project Management: Collins Project Management

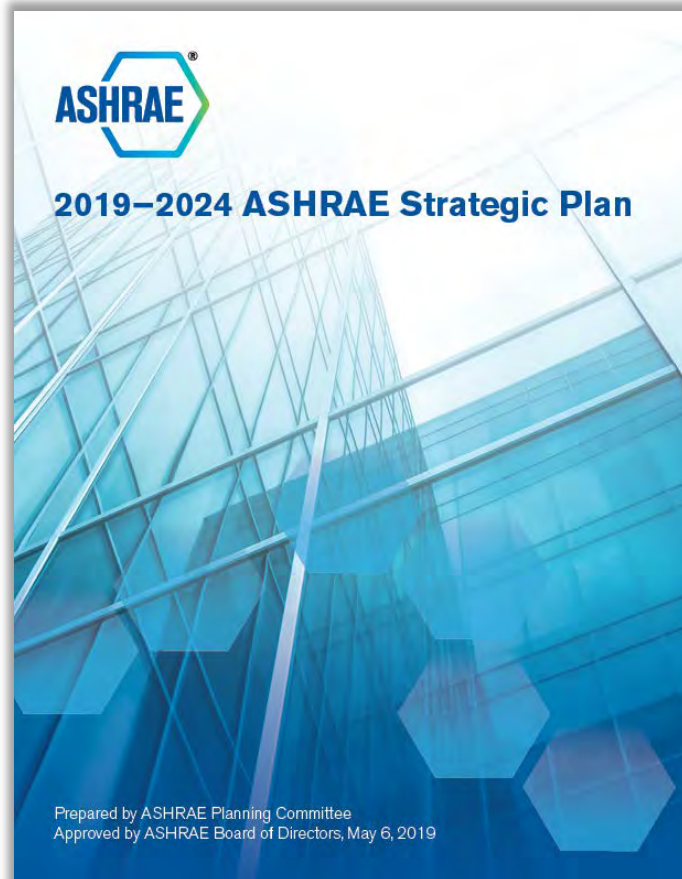
Construction Manager at Risk: Skanska

Commissioning Agent: Epsten Group

For more information, visit: [ashrae.org/newhq](https://ashrae.org/newhq)



# 2019-2024 ASHRAE Strategic Plan



## Mission

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

## Vision

A healthy and sustainable built environment for all.

**Strategic Plan Resources available** [ashrae.org/strategicplan](https://www.ashrae.org/strategicplan)

- Full **2019–2024 Strategic Plan** in PDF format
- Quick and Simple **Strategic Plan At-a-Glance** in PDF format
- **Strategic Plan Presentations**
  - 2019–2024 ASHRAE Strategic Plan Overview PPT
  - Recordings of *Kansas City Seminar 27: The ASHRAE 2019-2024 Strategic Plan: What and Why* in MP4 format



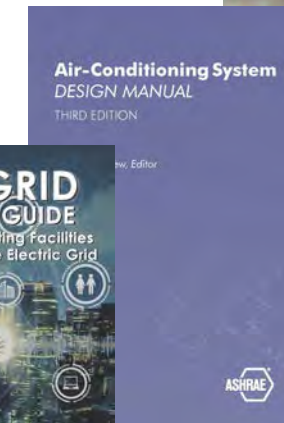
# Publications

## Selected Recent Releases

- ANSI/ASHRAE/IES Standard 90.1-2019, *Energy Standard for Buildings Except Low-Rise Residential Buildings* (I-P Edition)
- ANSI/ASHRAE Standard 62.1-2019, *Ventilation for Acceptable Indoor Air Quality*
- ANSI/ASHRAE Standard 62.2-2019, *Ventilation and Acceptable Indoor Air Quality in Residential Buildings*
- ASHRAE Guideline 0-2019, *The Commissioning Process*
- *High-Performance Buildings Simplified*
- *Air-Conditioning System Design Manual*, 3rd ed.
- *Smart Grid Application Guide: Integrating Facilities with the Electric Grid*

## Selected Upcoming Publications

- *Duct Systems Design Guide*
- *ASHRAE Design Guide for Multifamily Residential Buildings*
- *ASHRAE Design Guide for Tall, Supertall and Megatall Buildings Design Guide*, 2nd ed.



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



# ASHRAE Learning Institute (ALI)

## New Courses being offered at the Winter Conference



- Guideline 36: Best in Class HVAC Control Sequences
- Save 40% by Complying with Standard 90.1-2019
- Best Practices for Installing DDC Systems
- IgCC and ASHRAE Standard 189.1 Technical Provisions
- Principles of Building Commissioning: ASHRAE Guideline 0 and Standard 202
- Designing for Cold Climates
- V in HVAC – What, Why, Where, How, and How Much



For more information, visit: [ashrae.org/education](https://ashrae.org/education)

# ASHRAE eLearning

- PDHs/CEUs: Most courses recognized by AIA and GBCI
- Train on your own schedule from any computer with Internet access
- No special software required
- 12-month subscription access to courses
- Free tracking reports
- More than 90 courses available, including:
  - Introduction to HVAC Design **UPDATED!**
  - Refrigerants Handling for Technicians - Best Practices **NEW!**



For the complete course catalog, visit: [elearning.ashrae.org](https://elearning.ashrae.org)

# ASHRAE Certification

## Digital Badging Launched

- Embedded metadata uniquely linked to certificants
- Shareable in electronic media, including LinkedIn and email
- Instant recognition, with real-time, third-part verification



For more information visit: [ashrae.org/certification](https://ashrae.org/certification)

# ASHRAE Building EQ Portal

## Building EQ:

- Provides a benchmarking, assessment and asset rating tool that performs both In Operation and As Designed Ratings
- Helps make bad buildings good and good buildings great
- Aligns with ASHRAE Standard 211 Level 1 Energy Audits
- Allows for consistent benchmarking and audit formats from a group of contractors.



Videos, training, case studies, and more information available at: [ashrae.org/BuildingEQ](https://ashrae.org/BuildingEQ)



# ASHRAE Resources

**ASHRAE Technology Portal** is your one-stop location for ASHRAE papers, articles, reports, Handbook PDFs, and seminar recordings.  
[ashrae.org/technology-portal](https://ashrae.org/technology-portal)

**Online Standards Database** allows access to public review drafts for standards, guidelines, and addenda to submit comments, to do online balloting, and to submit proposals to standards and guidelines.  
[ashrae.org/publicreviews](https://ashrae.org/publicreviews)

**Zero Energy Advanced Energy Design Guides** for offices and K-12 schools are available for free download. Multifamily AEDG available Summer 2020.  
[ashrae.org/freeaedg](https://ashrae.org/freeaedg)

**Science and Technology For the Built Environment** (*Members Only*) provides free online access to ASHRAE's archival research publication offering comprehensive reporting of original research.  
[ashrae.org/technical-resources/science-and-technology-for-the-built-environment](https://ashrae.org/technical-resources/science-and-technology-for-the-built-environment)

**ASHRAE Technical Apps** deliver mobile design, calculation, and analysis tools to the palm of your hand.  
[ashrae.org/technical-resources/technical-apps](https://ashrae.org/technical-resources/technical-apps)

**ASHRAE's Free Resources** offer downloads of a variety of well-known resources to everyone.  
[ashrae.org/technical-resources/free-resources](https://ashrae.org/technical-resources/free-resources)



# Tech Hour



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

**New!** Tech Hour introduces the latest technical content presented by some of ASHRAE's brightest minds. Tech Hour videos are one hour and conveniently available through the ASHRAE 365 app.

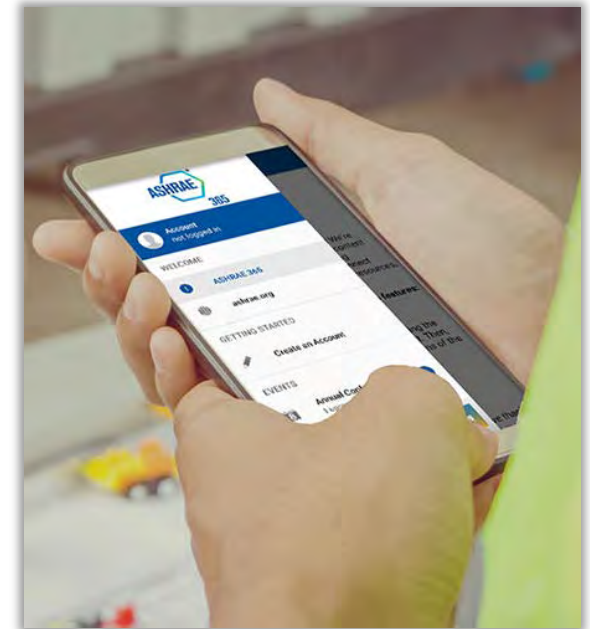
## Access Tech Hour in ASHRAE 365

- Receive one PDH within the first 30 days after each video's publication
- Submit questions to each presenter and read viewer feedback
- New videos published quarterly
  - Tech Hour #1: [Optimize Occupant Health, Building Energy Performance and Revenue through Indoor-Air Hydration](#)
  - Tech Hour #2 coming February 25, 2020: [Where Have All the Ethics Gone?](#)



This **FREE** app provides year-round updates and one-tap access to a range of ASHRAE programs and services:

- Events
- Notifications and news
- Professional development resources
- Volunteer and member resources
- Exclusive technical content
  - Just added **ASHRAE Tech Hour**, which brings the latest technical information in the form of one-hour videos



Learn more and download at [ashrae.org/365](https://ashrae.org/365)

# See You There!

- AHR Expo 2020  
*February 3-5, 2020 – Orlando, FL*
  - Booth #3201
  - Receive a limited edition 125<sup>th</sup> anniversary lapel pin
- RESNET  
*February 24-25, 2020 – Scottsdale, AZ*
- ACREX India 2020  
*February 27-29, 2020 – Noida, Delhi, India*
- 2020 ASHRAE Annual Conference  
*June 27- July 1, 2020 – Austin, TX*



For more information, visit: [ashrae.org/conferences](https://ashrae.org/conferences)



# Questions?

Please let your committee's ExO know how and where you'd like to serve next!



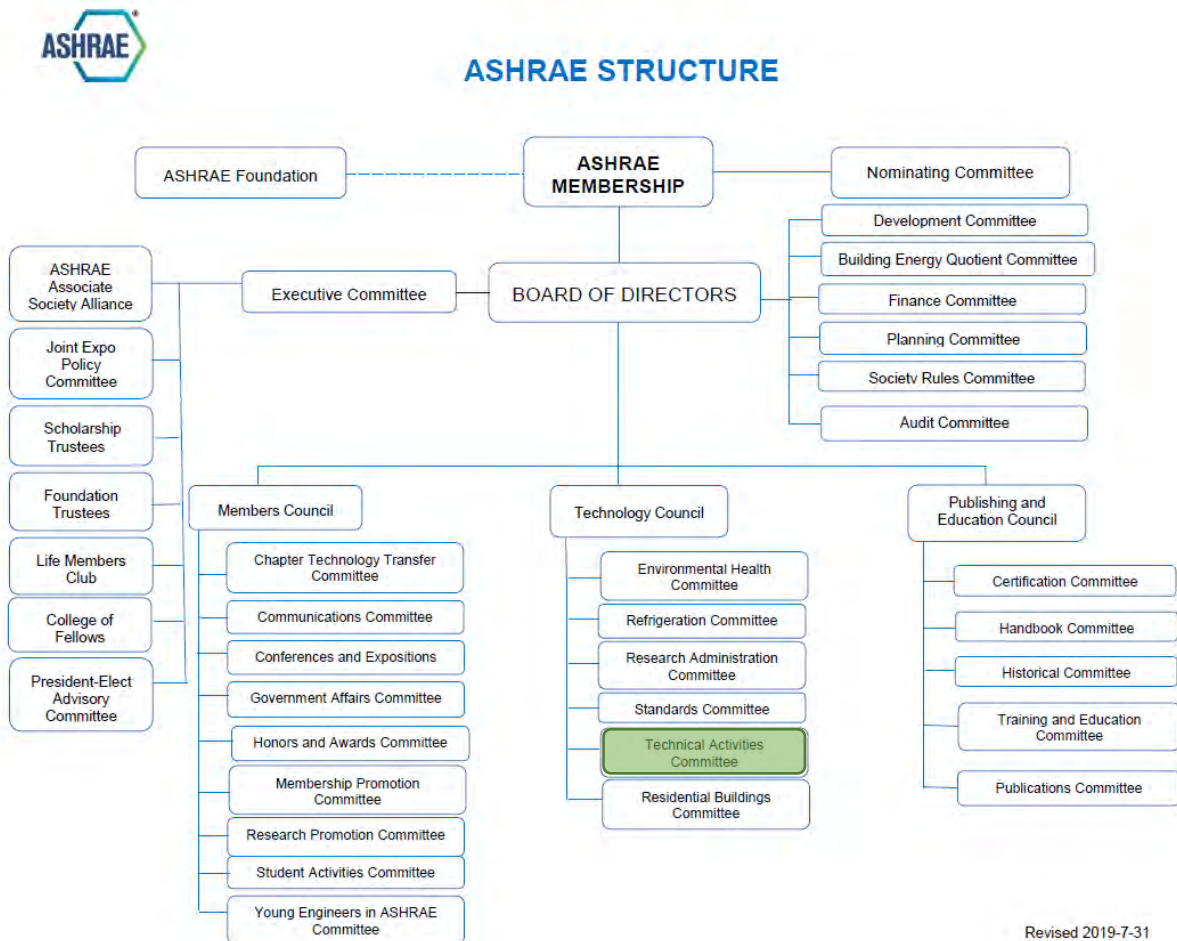
# Section Head Best Practices

*This guide will be useful for both incoming and continuing Section Heads. For an incoming Section Head, this guide should supplement the guidance provided by their assigned mentor.*

## Section Head Role

Each Section Head shall be responsible for the coordination and development of the activities of the functional groups within his/her Section and shall provide liaison between them and TAC.

The below organizational chart details how TAC fits within the broader ASHRAE structure.



## Section Head Expectations/Timeline

Use the following timeline as a guide for Section Head expectations. The timeline is relative to the Winter and Annual meetings as much of the activity occurs before, during, and after these meetings.

### Between meetings:

- [Prior to August 1<sup>st</sup>] Furnish a list of names that should be considered for appointment to TAC
- [Prior to September 1<sup>st</sup>] Review Hightower Award submissions
- Approve any emergency roster change requests
- Review and score program submissions for the upcoming meeting in conjunction and with guidance from Conferences and Expositions Committee (CEC)
- Attend any scheduled TAC conference calls

### Prior to a meeting:

- [30 days prior] Send a reminder to the functional group Chairs (with a copy to the Vice-Chairs):
  - Agenda is due 30 days prior to a meeting
  - Website should be up to date
  - [Winter only] Suggestion to poll their membership
    - Options include: wish to remain on the roster, consider for voting, etc.
  - [Annual only] Provide recommendation to TAC whether the functional group should continue, convert (to a TC), merge with an existing functional group, or dissolve
- 2 weeks prior:
  - Send final meeting reminders including: attendance expectations (breakfast, training, and subcommittee chair training/breakfasts), and activity form/roster deadlines
    - See appendix for an example
  - Review websites (see Appendix for a review guide)

### During a meeting:

- Attend Saturday 8:00 AM–3:00 PM and Wednesday (7:00 AM–10:00 AM) TAC meetings
  - And any special liaison meetings (e.g., 7:00 AM – 8:00 AM meeting with CEC)
- Attend the 6:30 AM–8:00 AM Sunday morning breakfast and conduct a Section meeting
- Visit each functional group:
  - Make announcements
  - Take questions
  - Observe (is the functional group effective, etc.)
  - Recognize achievements—especially the outgoing Chair at the Annual meeting
- Copy received activity forms to the Dashboard tool
- Upload Section Head report to BaseCamp (see Appendix for a sample report)
- [Annual only] Approve any last minute roster changes that will take effect July 1<sup>st</sup>

### After a meeting:

- [Winter only] Approve rosters (see Appendix for a suggested process)
- Send minutes reminder (due 60 days after a meeting)

## Additional Information:

The following additional information may be helpful for a Section Head.

### Important links:

- Functional group webpage:
  - <https://www.ashrae.org/technical-resources/technical-committees>
- TAC webpage:
  - <https://www.ashrae.org/communities/committees/standing-committees/technical-activities-committee>

### Sources for more information:

The following documents can be found on the TAC webpage linked above. Highlights from each are listed.

- TC Manual of Procedures (MOP)
  - Purpose and objectives of a functional group
  - Roles and duties for functional group members
  - Voting requirements
  - Parliamentary procedure
- TAC Manual of Procedures (MOP)
  - TAC organization and responsibilities
- TAC Reference Manual
  - Section Head responsibilities
  - Guidelines for section meetings

### Staff contacts:

- Steve Hammerling: [shammerling@ashrae.org](mailto:shammerling@ashrae.org)
  - General questions for ASHRAE headquarters
- Tara Thomas: [tthomas@ashrae.org](mailto:tthomas@ashrae.org)
  - Roster updates
- Mike Vaughn: [mvaughn@ashrae.org](mailto:mvaughn@ashrae.org)

## Appendix—Sample Section Head Report

The following should be submitted before providing an oral report on Wednesday morning.

### **Meeting Summary:**

- TCs represented at the breakfast:
- TCs visited:
- TCs with quorum:
- TCs that submitted activity forms:
- TCs that submitted rosters (Winter meeting only):

### **Website Report:**

(See other Appendix)

### **Questions/Comments/Requests for TAC**

- New motions for TAC to consider at this meeting?
- Proposed new functional groups, merges, or disbands?
- Proposed name and/or scope changes?
- Updates on any special assignments assigned to functional groups within section?
- Remote Participation Meeting (RPM) feedback?

## Appendix—Pre Meeting Reminder Example

Looking forward to seeing everyone in Kansas City! Here are a few reminders and notes in preparation for the meetings that start in just a few weeks:

### Meetings to attend:

- The **TC Chair's Breakfast** will meet on **Sunday from 6:30AM to 8:00 AM** in room 2215BC of the Kansas City Convention Center
  - This year, the breakfast will be a combined session with all TCs in attendance. Be sure to sit at the table for Section 8.0 as there will be time in the agenda for us to meet as a Section.
- The **TC Chair's Training Workshop** will be held on **Sunday from 9:45 AM to 10:45 AM** in room 2205 of the Kansas City Convention Center
- Per the TC Manual of Procedures, both the Chair and the Vice Chair are expected to attend both the Chair's Breakfast and the Chair's Training Workshop. If the Chair will not be attending, please let me know who will be representing your TC.
- Please remind your Handbook, Research, and Program subcommittee chairs that they too have meetings they are expected to attend:
  - The **Handbook Training Workshop** will be held on Sunday from 8:00 AM to 9:00 AM in the Eisenhower room of the Marriott-East hotel (Lobby level)
  - The **Research Subcommittee Chairs** meeting will be held on Monday from 6:30 AM to 9:00 AM in the Imperial room of the Marriott-East hotel (Lobby level)
  - The **TC Program Subcommittee Training** will be held on Tuesday from 11:15 AM to 12:00 PM in room 2208 of the Kansas City Convention Center

### Actions needed during the meeting:

- A completed **TC Activity Feedback Form** should be submitted electronically to me **by 9:00 PM on Tuesday, June 25<sup>th</sup>**
  - If possible, **please use the attached template** in lieu of the generic form linked on the ASHRAE website (or a form used during prior meetings). We import the completed forms into a dashboard tool to investigate trends, etc. and the attached form has been recently modified to minimize any potential issues.
  - I'd recommend you have the activity form substantially completed before you arrive in Houston and simply finalize the form immediately after your main meeting concludes
- Thank you to those that have distributed and posted both your agenda for Kansas City and draft minutes from Atlanta. If you haven't yet done so, please do ASAP.
- Thank you to those that have updated your website in advance of the upcoming meeting. If you haven't yet done so, please do ASAP.
- You all should receive a copy of your final roster for 2019-2020 from Tara Thomas any day now. Please review and let Tara know if you come across any errors.

If you have any questions, please let me know. Safe travels everyone, see you on Sunday the 23<sup>rd</sup>!

### Additional conference information:

<https://www.ashrae.org/conferences/annual-conference>

## Appendix—Website Review

Use the following guidelines to review each functional group's website (update text in **red**).

Item	Website Characteristic – <b>A19</b>		<b>Section 1</b> Place appropriate FG number in the cells below
1	Absolutely complete and up to date		<b>1.1, 1.2, etc.</b>
2	Complete except for most recent meeting minutes	Probably fault of secretary, not webmaster, if everything else is updated	
3	Not updated since last meeting		
4	Good website but minutes not posted recently		
5	Badly out of date or incomplete		
6	No website		
7	Not on ASHRAE server		
8	Overly secure - all information for members only	No benefit to having a website if only members can get information	
9	<b>Excessive personal information **</b>		

\*\* - "Excessive personal information" refers to violation of ASHRAE's privacy policy - information posted online not password protected may only include name, company affiliation, and position on the committee, unless the individual gives permission to release it (in writing). Our assumption for website review is that information posted for a minority of the members of the committee (such as webmaster and chair) is presumed to have permission, but information on all or most members is presumed to be a violation and you need to talk about it with the functional group Chair.

## Appendix—Roster Review

The following details a process to use when reviewing a roster submitted by a functional group. This process assumes the new, online roster form process.

### **Roster review process:**

- Check for changes (changes will be in blue)
  - Note if the Chair changed (the Chair is appointed by the TAC Chair after consultation with the Section Head)
- Check leadership:
  - All leadership positions are filled
  - Check to ensure new Chair served as Secretary or Vice Chair (if possible)
- Check additional comments, add these to the Section Head report
- Check to see if the form has actually been submitted
- Check to ensure proper number of voting members:
  - Minimum of 6, maximum of 18 (not including 2 optional, non-quorum for 20 total)
  - Check for duplicate names
  - Ensure no two voting members from the same employer (just review the lower section)
- Check lower section to verify any end years have been addressed
  - Chair or Vice-Chair max = 2 years (or 3 at the discretion of the Section Head)
  - Voting max = 4 years
- Other notes:
  - Verify that the Chair & Vice-Chair are ASHRAE members (if possible)
  - Voting members SHOULD (not must) have been corresponding for 1 year
  - Verify that any expiring Provisional Corresponding Members have been rolled on (by checking their end years)
- From Tara's instructions:
  - If a member serves in multiple positions, you might see them listed duplicate times under the Membership List Section. Additional entries are for the management team section only. No Changes (NC) is required for those entries under the membership list.

## Appendix—Example TC Agenda

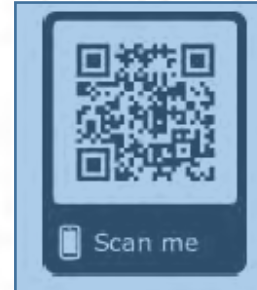
**ASHRAE TC8.11**  
**Unitary and Room Air Conditioners and Heat Pumps**  
**Full Committee Agenda**

2019 ASHRAE Summer MEETING  
 Kansas City, MO

Monday, June 24, 2019: 4:15 – 6:30 PM  
 Location: Room 2013C, Kansas City Convention Center

TC8.11 Subcommittee Meeting – Sunday, Jun 23, 3:00-6:30 PM  
 Location: Basie C1, Marriott Downtown Kansas City

Wi-Fi: ASHRAE  
 Password: kansascity19



QR code for  
 sign-in and  
 surveys

1. Call to order Christensen  
 Sign in: <https://tinyurl.com/TC811-attend> -or- scan QR code at right -or- use the paper form
2. Review Scope  
 Technical Committee 8.11 is concerned with products for use in comfort cooling and/or heating systems. The factory engineered vapor compression systems include: (1) unitary equipment which generally requires the field engineering of the product mounting and ducting, piping and electrical connections, (2) room air conditioners such as window mounted units and ductless split systems and (3) packaged terminal equipment. Specifically excluded are unitary combustion engine driven systems.
3. ASHRAE Code of Ethics Commitment Christensen  
 In this and all other ASHRAE meetings, we will act with honesty, fairness, courtesy, competence, integrity and respect for others, and we shall avoid all real or perceived conflicts of interests. See full Code of Ethics: <https://www.ashrae.org/about-ashrae/ashrae-code-of-ethics>
4. Introductions All
  - a. Determination of a quorum Christensen  
 VOTING MEMBERS FOR THIS MEETING (Need 7 for a Quorum)
 

Chad Bowers (6/2022)	Kishan Padakannaya (6/2021)
Dane Christensen (6/2020)	Bo Shen (6/2021)
Henry 'Skip' Ernst (6/2021)	Chris Stone (6/2022)
Sivakumar Gopalnarayanan (6/2020)	Dutch Uselton (6/2020)
Chad Kirkwood (6/2022)	Jeff Warther (6/2022)
Darin Nutter (6/2021)	Kasey Worthington (6/2019)
5. Agenda additions All
6. Chair's Report Christensen
  - a. Chair's Goals
  - b. Announcements and Highlights from TC Chairs' Breakfast Meeting
7. Liaison reports (as they arrive) Liaisons
  - a. MTG – Low GWP Refrigerants Uselton
  - b. Section 8 Meredith
8. Approval of minutes from Atlanta Christensen
9. Membership/Roster Berg

Set goals for both  
 the Chair's term  
 and the committee  
 as a whole, report  
 on progress

**10. Subcommittee reports**

41 Attendees at subcommittee meetings! Thank you for joining us.

- |  |                     |
|--|---------------------|
| a. Programs  | Jeff Warther        |
| b. Research  | Eric Berg           |
| i. RP-1721: Oil Return and Retention in Unitary Split System Gas Lines with HFC and HFO Refrigerants   | Rite                |
| ii. RP-1733: Develop Design Criteria for Psychrometric Air Sampler and Mixer Apparatus for Use in ASHRAE Test Standards  | Kirkwood            |
| iii. RP-1743: Effect of Inlet Duct and Damper Design on ASHRAE 37/116 Fan Performance and Static Pressure Measurements   | Berg                |
| iv. RP-1785: Refrigerant Charge Modeling in Coils for Residential Split Systems  | Rite                |
| v. WS-1824: Accounting for Barometric Pressure Impacts on Psychrometric Performance Testing of Unitary Air Conditioning and Heat Pump Equipment                          | Winkler             |
| c. Handbook  | Ted Duffy           |
| d. Standards   | Chris Stone         |
| i. ANSI/ASHRAE Standard 16 - Method of Testing for Rating Room Air Conditioners and Packaged Terminal Air Conditioners   | no action (2016)    |
| ii. ANSI/ASHRAE Standard 37 - Methods of Testing for Rating Electrically Driven Unitary Air-Conditioning and Heat Pump Equipment   | Stone               |
| iii. ASHRAE Standard 116 - Methods of Testing for Rating Seasonal Efficiency of Unitary Air Conditioners and Heat Pumps  | no action (2010)    |
| iv. ANSI/ASHRAE Standard 137 - Methods of Testing for Efficiency of Space-Conditioning/Water-Heating Appliances that Include a Desuperheater Water Heater (co-cognizant) | no action (RA 2017) |
| v. ASHRAE 206 - Method of Testing for Rating of Multi-Purpose Heat Pumps for Residential Space Conditioning and Water Heating  | no action (RA 2017) |
| vi. SPC 15.2P - Safety Standard for Air-conditioning and Heat Pump Systems in Residential Applications   |                     |
| e. Web site  | Darin Nutter        |
| f. Awards  | ?                   |
| g. YEA   | ?                   |

**11. Old Business****12. New Business**

- a. Awards
- b. YEA

**13. Adjourn**

## Nomination form

### International Memory of the World Register

#### 1.0 Checklist

Nominees may find the following checklist useful before sending the nomination form to the International Memory of the World Secretariat. The information provided in italics on the form is there for guidance only and should be deleted once the sections have been completed.

<input type="checkbox"/>	Summary completed (section 1)
<input type="checkbox"/>	Nomination and contact details completed (section 2)
<input type="checkbox"/>	Declaration of Authority signed and dated (section 2)
<input type="checkbox"/>	If this is a joint nomination, section 2 appropriately modified, and <b>all</b> Declarations of Authority obtained
<input type="checkbox"/>	Documentary heritage identified (sections 3.1 – 3.3)
<input type="checkbox"/>	History/provenance completed (section 3.4)
<input type="checkbox"/>	Bibliography completed (section 3.5)
<input type="checkbox"/>	Names, qualifications and contact details of up to three independent people or organizations recorded (section 3.6)
<input type="checkbox"/>	Details of owner completed (section 4.1)
<input type="checkbox"/>	Details of custodian – if different from owner – completed (section 4.2)
<input type="checkbox"/>	Details of legal status completed (section 4.3)
<input type="checkbox"/>	Details of accessibility completed (section 4.4)
<input type="checkbox"/>	Details of copyright status completed (section 4.5)
<input type="checkbox"/>	Evidence presented to support fulfilment of the criteria? (section 5)
<input type="checkbox"/>	Additional information provided (section 6)
<input type="checkbox"/>	Details of consultation with stakeholders completed (section 7)
<input type="checkbox"/>	Assessment of risk completed (section 8)
<input type="checkbox"/>	Summary of Preservation and Access Management Plan completed. If there is no formal Plan attach details about current and/or planned access, storage and custody arrangements (section 9)
<input type="checkbox"/>	Any other information provided – if applicable (section 10)
<input type="checkbox"/>	Suitable reproduction quality photographs identified to illustrate the documentary heritage. (300dpi, jpg format, full-colour preferred).
<input type="checkbox"/>	Copyright permissions forms signed and attached. Agreement to propose item(s) for inclusion on the World Digital Library if inscribed

## Nomination form International Memory of the World Register

*title of item being proposed*

**ID Code** [*Internal use only*]

### 1.0 Summary (max 200 words)

*Give a brief description of the documentary heritage being nominated and the reasons for proposing it.*

*This is the “shop window” of your nomination and is best written **last!** It should contain all the essential points you want to make, so that anyone reading it can understand your case even if they do not read the rest of your nomination.*

### 2.1 Name of nominator (person or organization)

### 2.2 Relationship to the nominated documentary heritage

### 2.3 Contact person(s) (to provide information on nomination)

### 2.4 Contact details

*Name*

*Address*

*Telephone*

*Facsimile*

*Email*

### 2.5 Declaration of authority

**I certify that I have the authority to nominate the documentary heritage described in this document to the International Memory of the World Register.**

**Signature**

**Full name (Please PRINT)**

**Institution(s), if appropriate**

**Date**

### 3.0 Identity and description of the documentary heritage

#### 3.1 Name and identification details of the items being nominated

**If inscribed, the exact title and institution(s) to appear on the certificate should be given**

*In this part of the form you must describe the document or collection in sufficient detail to make clear precisely what you are nominating. Any collection must be finite (with beginning and end dates) and closed.*

---

#### 3.2 Catalogue or registration details

*Depending on what is being nominated, appending a catalogue can be a useful way of defining a collection. If this is too bulky or impractical, a comprehensive description accompanied by sample catalogue entries, accession or registration numbers or other ways of defining a collection's size and character can be used.*

---

#### 3.3 Visual documentation if appropriate (for example, photographs, or a DVD of the documentary heritage)

*It is useful to append photographs (or in the case of audiovisual material a CD, DVD, USB key of all or some of the material), where this adds additional information, to help the assessors visualize or listen to the collection or document.*

---

#### 3.4 History/provenance

*Describe what you know of the history of the collection or document. Your knowledge may not be complete, but give the best description you can.*

---

#### 3.5 Bibliography

*A bibliography demonstrates what others have independently said and written about the heritage you are nominating. It is best if you can cite scholars from several countries, rather than just your own country, and if they are authoritative voices clearly independent from both your own institution and UNESCO.*

---

#### 3.6 Names, qualifications and contact details of up to three independent people or organizations with expert knowledge about the values and provenance of the documentary heritage

Name	Qualifications	Contact details
1.		
2.		
3.		

*The referees you cite will be asked for their opinions. UNESCO may also contact other authoritative referees so that a good spectrum of opinion is available for assessment purposes.*

#### 4.0 Legal information

##### 4.1 Owner of the documentary heritage (name and contact details)

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Name

Address

---

Telephone

Facsimile

Email

---

##### 4.2 Custodian of the documentary heritage (name and contact details if different from the owner)

---

Name

Address

---

Telephone

Facsimile

Email

---



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##### 4.3 Legal status

Provide details of legal and administrative responsibility for the preservation of the documentary heritage

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##### 4.4 Accessibility

Describe how the item(s) / collection may be accessed

All access restrictions should be explicitly stated below:

*Encouraging accessibility is a basic objective of MoW. Accordingly, digitization for access purposes is encouraged and you should comment on whether this has been done or is planned. You should also note if there are legal or cultural factors that restrict access.*

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#### 4.5 Copyright status

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Describe the copyright status of the item(s) / collection

*Where copyright status is known, it should be stated. However, the copyright status of a document or collection has **no bearing** on its significance and is not taken into account in determining whether it meets the criteria for inscription.*

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#### 5.0 Assessment against the selection criteria

##### 5.1 Authenticity.

*Is the documentary heritage what it appears to be? Have identity and provenance been reliably established?*

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##### 5.2 World significance

*Is the heritage unique and irreplaceable? Would its disappearance constitute and harmful impoverishment of the heritage of humanity? Has it created great impact over time and/or within a particular cultural area of the world? Has it had great influence (positive or negative) on the course of history?*

---

##### 5.3 Comparative criteria:

***Does the heritage meet any of the following tests? (It must meet at least one of them.)***

###### 1 Time

*Is the document evocative of its time (which may have been a time of crisis, or significant social or cultural change? Does it represent a new discovery? Or is it the "first of its kind"?*

###### 2 Place

*Does the document contain crucial information about a locality important in world history and culture? For example, was the location itself an important influence on the events or phenomena represented by the document? Does it describe physical environments, cities or institutions that have since vanished?*

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### 3 People

*Does the cultural context of the document's creation reflect significant aspects of human behaviour, or of social, industrial, artistic or political development? Or does it capture the essence of great movements, transitions, advances or regression? Does it illustrate the lives of prominent individuals in the above fields?*

### 4 Subject and theme

*Does the subject matter of the document represent particular historical or intellectual developments in the natural, social and human sciences? Or in politics, ideology, sport or the arts?*

### 5 Form and style

*Does the document have outstanding aesthetic, stylistic or linguistic value? Or is it a typical exemplar of a type of presentation, custom or medium? Is it an example of a disappeared or disappearing carrier or format?*

### 6 Social/ spiritual/ community significance:

*Application of this criterion must reflect living significance – does documentary heritage have an emotional hold on people who are alive today? Is it venerated as holy or for its mystical qualities, or revered for its association with significant people and events?*

*(Once those who have revered the documentary heritage for its social/ spiritual/ community significance no longer do so, or are no longer living, it loses this specific significance and may eventually acquire historical significance.)*

## 6.0 Contextual information

### 6.1 Rarity

### 6.2 Integrity

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## 7.0 Consultation with stakeholders

### 7.1 Provide details of consultation about this nomination with the stakeholders in its significance and preservation.

*Apart from the nominating institution itself, have other organizations or groups been consulted in the process of preparing the nomination – and, if so, did they support it or oppose it, or have useful comments to make?*

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### 8.0 Assessment of risk

**Detail the nature and scope of threats to this documentary heritage.**

*Attach a separate statement if space insufficient.*

*Be accurate and honest. If your document(s) is at risk for any reason, say so. UNESCO needs to know its true situation.*

### 9.0 Preservation and Access Management Plan

**9.1 Is there a management plan in existence for this documentary heritage?**

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YES	NO
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*If yes, attach a summary of the plan. If no, please attach further details about current storage and custody of the materials.*

### 10.0 Any other information

**Detail any other information that supports the inclusion of this documentary heritage on the International Memory of the World Register. If the nomination is successful, how will you use this to promote the MoW Programme?**

*Attach a separate statement if space insufficient.*

## Announcements and Reminders for TC/TG/TRG & MTG Chairs Orlando 2020

### A. **NEW!**

#### 1. **Discuss and confirm that TGs, TRGs, and MTGs in section will continue in 20-21 Society Year**

From TC MOP:

##### 1.5. Review

- 1.5.1.** Once a year, preferably at, or prior to, each Annual meeting, the Committee Chair and Committee Membership shall evaluate their progress in accomplishing the purpose for which they were constituted and recommend one of the following actions to their Section Head:
- a) Continue as a TC, TG, MTG, or TRG
  - b) Convert from a TG to a TC
  - c) Convert from a TRG to a TG or TC
  - d) Merge with a TC/TG/TRG and submit a revised scope for the merged committee
  - e) Dissolve the TC, TG, MTG, or TRG.
    - i) If a TC/TG/TRG/MTG votes to disband, it must establish whether any current responsibilities should be continued and, if so, recommend existing TC/TRG/MTG(s) to assume responsibility and obtain those committee's written concurrence

#### 2. **20-21 Roster Update & Schedule**

Remember, the current 2019-2020 roster for your TC, TG or MTG is in effect until after the June meeting later this year.

By now, each TC Chair should have received a unique link to an online workbook for your particular TC that will allow you to update membership and roster assignments in order to create your SY20-21 roster. Please make sure that you received this link and that the completed workbook is submitted on or before Tuesday night, February 4<sup>th</sup>, of the Winter Meeting. On-site training will be available at the Winter Meeting immediately after the TC chairs breakfast. A recorded training presentation on how to use this workbook is posted on our website at [www.ashrae.org/technical-resources/technical-committees/tc-training-and-presentations](http://www.ashrae.org/technical-resources/technical-committees/tc-training-and-presentations).

#### 3. **New Section Head/TC leadership Basecamp**

A new Basecamp (<https://3.basecamp.com/3106353/projects/15520814>) is set up to communicate and transfer documents between TAC Section Heads and TC leadership (Chairs, Vice Chairs, Secretary) at TC members can participate at <https://3.basecamp.com/3106353/join/8MHSS5gveaLg>.

#### 4. **TC Re-Org update**

Status update sent to TCs by section heads. Summary letter available on 'TAC Section Heads and TC Leadership' Basecamp (<https://3.basecamp.com/3106353/projects/15520814>).

#### 5. **New Collaborative Meeting Space at ASHRAE Headquarters**

- **TC Collaboration Area** (Hilton Orlando LL, Orange D)
- Available for your use
- Sunday, Monday, Tuesday 7:30 AM – 4:00 PM,

## Announcements and Reminders for TC/TG/TRG & MTG Chairs Orlando 2020

- Wednesday 7:30 AM – 1:00 PM
- You are encouraged to use it for various TC functions – meetings that did not make the official schedule, ad hoc meetings, any other TC related activity

### 6. MTGs that have been formed since Kansas City Meeting

- **MTG.CEA** (Controlled Environment Agriculture)
  - **MTG.RAC** (Refrigeration and Air Conditioning)
- Both are meeting in Orlando

### 7. How to Import Your TC Roster Information into MS-Outlook

Detailed instructions on how to import your TC roster information into MS-Outlook has been created and an e-mail announcement will be issued to all TC chairs, vice chairs, and secretaries once these instructions and the restructured TC MOP are posted to the TC page of the website ([www.ashrae.org/TCs](http://www.ashrae.org/TCs) )

## B. AT THIS MEETING

### 1. On-Site Training Options

#### i. **TC/TG/TRG/MTG Chair's Training Topic - "Roster Updates & TC Activity Sheets"**

Sunday February 2<sup>nd</sup>, 8:00-9:00 AM in Room Orlando I/II (LL) in the Orlando Hilton. The training will immediately follow the joint TC Chair's Breakfast.

#### ii. **RAC's Research Subcommittee Chair's Breakfast**

Monday, February 3<sup>rd</sup>, 6:30 AM – 9:00 AM in Room Orlando I/II (LL) in the Orlando Hilton. Please encourage your Research Subcommittee Chair or another representative from the TC to attend this meeting so that your RAC Research Liaison (RL) can get an update on the TC's research activities and so that your RL can help resolve issues & questions that TC may have concerning their research program.

#### iii. **TC Program Subcommittee Chair Training**

Tuesday, February 4<sup>th</sup>, 11:15 AM – Noon in Room Lake Down B (L). *"Don't complain about the meeting program and your TC's submissions if you have not been to training."*

A few things you might learn in training are as follows:

- Incomplete program submissions is the biggest reason for rejection now. All information is needed up front for CEC selection process.
- A packaged session on a similar topic is the best way to greatly improve your chances for acceptance.
- There is no difference in how CEC handles 60 and 90 minute program slots. 60 minute slots are just as good as 90 minute slots if complete.

## Announcements and Reminders for TC/TG/TRG & MTG Chairs Orlando 2020

### 2. Free Wi-Fi Access at this Society meeting

Orlando Hilton & GRBCC Wi-Fi Access: Network Name: **ASHRAE**, PWD: **ASHRAE125**  
(both case sensitive).

### C. UPCOMING DEADLINES

#### 1. **TC Activity Forms for the Orlando Meeting are due to Your Section Head before Wednesday, 2/5/2020**

*TC/TG/TRG Activity Feedback Form (Excel)* can be downloaded from the TAC Section and TC Leadership Basecamp - [www.ashrae.org/standards-research--technology/technical-committees/tc-forms-and-documents](http://www.ashrae.org/standards-research--technology/technical-committees/tc-forms-and-documents). Section heads can also provide an electronic copy of the form if requested.

#### 2. **Seminar and Forum proposals for Austin are due by Monday, February 10, 2020.** Please visit the following site to submit your proposal:

For more information, go to: [www.ashrae.org/austin](http://www.ashrae.org/austin)

#### 3. **20-21 Roster Update & Schedule**

Please make sure that the completed workbook is submitted on or before Tuesday night, February 4<sup>th</sup>, of the Winter Meeting. On-site training will be available at the Winter Meeting immediately after the TC chairs breakfast. A recorded training presentation on how to use this workbook is posted on our website at [www.ashrae.org/technical-resources/technical-committees/tc-training-and-presentations](http://www.ashrae.org/technical-resources/technical-committees/tc-training-and-presentations).

#### 4. **2020 RPM (Remote Participation Meetings) Request for Austin Meeting**

- If you think you might need an RPM meeting in Austin, please submit your request via the committee meeting room request link on the ASHRAE website before the submission deadline of ~ **April 1, 2020**
- Use the form for Technical Committees under the Committee Meetings accordion.

#### 5. **2020-2021 Hightower Award Nominations by Tuesday, September 1st**

TAC wishes to encourage TCs to make nominations for the 2020-2021 *George B. Hightower Technical Achievement Award*. Nominations are due to Section Heads by September 1, 2020 or sooner. The award recognizes outstanding technical leadership and contributions on a TC/TG/TRG during the past four years, excluding research and standards activities. Please go to the Technical Committee page of the ASHRAE website at the following link under the "Procedures, Forms..." heading:

<http://www.ashrae.org/tcs>

### D. REMINDERS

## Announcements and Reminders for TC/TG/TRG & MTG Chairs Orlando 2020

1. **19-20 Rosters Access & Distribution** - Remember, the current 2019-2020 roster for your TC, TG or MTG is in effect until after the June meeting this year – through Sunday, June 30th.
2. **Useful TC/TG/TRG/MTG Chair Information and forms on ASHRAE website**  
Information for TC/TG/TRG and MTG chairs can be found on the Technical Committee page of the ASHRAE website at the following link: <http://www.ashrae.org/tcs>
3. **Request for each TC to briefly review ASHRAE Code of Ethics at start of meeting**  
See the following link for the latest version of the ASHRAE Code of Ethics:  
[www.ashrae.org/about-ashrae](http://www.ashrae.org/about-ashrae).
4. **Make a Special Effort to welcome new Members, and Visitors to TC meeting**  
Potential new members for your committee have been encouraged to drop-by your meeting. As a result, please make a special effort to recognize and warmly welcome all visitors to your meeting – A TC can never have too many willing and able volunteers.
5. **Option for TC Subcommittee Meetings via Conference Calls and Web Meetings**  
More and more TCs are taking advantage of a new Society service that allows TCs to hold subcommittee meetings by phone and/or web. Many TCs are finding this to be a more efficient way for them to conduct subcommittee business and it also allows TC members that can't travel to meetings on a regular basis a way to still contribute to the TC. Such a change can also eliminate potential conflicts with the TC's program sessions at Society meetings. Please pass your conference call/web meeting/webinar requests on to the Manager of Technical Services, Steve Hammerling at [shammerling@ashrae.org](mailto:shammerling@ashrae.org) or [MOTS@ashrae.net](mailto:MOTS@ashrae.net).
6. **Is Your Committee Website up to Date?**  
If not, please ask your webmaster to at least post the latest minutes and the Kansas City meeting times and agenda. If your website has been neglected, add an action item for this meeting to appoint a responsible member of the TC/TG/TRG who will bring it back to life. The new TC website template has greatly simplified the duties of the TC webmaster and this form of communication is critical to the efficient operation of your committee, and for attracting new members. Please note a listserv is available to TCs to communicate with rostered members and all interested in keeping track of TC activities.

The recent conversion to a new TC website platform highlighted a couple areas where a refresher of the ASHRAE rules on website maintenance is warranted. First be aware that ASHRAE Products (i.e., handbook chapters, journal articles, final reports from research projects, etc.) cannot be published on your TC's website. It is very appropriate to post the title and scope of the product and then link the reader to the ASHRAE bookstore or other location on the ASHRAE site where the product may be purchased. Any possible exceptions to this rule must be sent through Mark Owen for review and approval ([mowen@ashrae.org](mailto:mowen@ashrae.org)). The second issue involves timely posting of the draft minutes. Draft minutes (and final, approved minutes from the prior meeting) should be

## Announcements and Reminders for TC/TG/TRG & MTG Chairs Orlando 2020

posted to your website (or otherwise distributed to the members) within 60 days after the meeting. Please ensure that your secretary and webmaster are aware of this deadline. To assist your secretary in understanding the procedures for taking and reporting minutes, a video has been developed and posted on the Technical Committees' Training page <http://www.ashrae.org/tcs>). On the same page, a video has also been posted for use by webmasters to learn about the procedures and schedule to maintain the new websites.

### 7. **TC 2019-2020 Master Calendar – Now Available through Google** - The Technical Committee Master Calendar is now available through Google. In order to access this calendar you need to have a Google account.

Once you log into your Google account, follow the instructions below:

To add a friend's calendar, just follow these steps:

- At the bottom of the calendar list on the left, click Add and select Add a friend's calendar.
- Enter the appropriate email address (techservices1791@gmail.com) in the field provided, then click Add.

This calendar is public and will appear under 'Other Calendars' in the left column.

To set up Google Calendar Sync to your Outlook:

- Make sure you're using a supported operating system and Outlook version.
- Download Google Calendar Sync (version 0.9.3.6) at
- [http://dl.google.com/googlecalendarsync/GoogleCalendarSync\\_Installer.exe](http://dl.google.com/googlecalendarsync/GoogleCalendarSync_Installer.exe)
- Once a dialog box appears, click Save File. The downloaded file should open automatically. If it doesn't, manually open it from your browser's download window.
- Click OK to confirm that you're aware this is an executable file.
- Read through the Google Calendar Sync Terms of Service, and click I Agree.
- Follow through the Installation Options and click Install to finish the set-up process.

Once Google Calendar Sync is installed on your computer, the Google Calendar Sync Settings window will appear:

In the Settings window, enter your email address and password and select the Sync Option you prefer. Read about each Sync Option.

You'll also be able to set the time interval for syncing to occur. Please keep in mind that 10 minutes is the minimum time interval allowed.

After the initial set-up, you can access the Google Calendar Sync Settings window again by double-clicking the calendar icon in your Windows System Tray.

### 8. **TC E-mail Position Aliases available**

## **Announcements and Reminders for TC/TG/TRG & MTG Chairs Orlando 2020**

SY 19-20 TC Position e-mail alias addresses for the mandatory positions of the Technical Committee management team (Secretary, Standards Sub. Chair, Program Sub. Chair, Handbook Sub. Chair, and Webmaster) will stay in effect until July 1st. The 19-20 E-mail Alias list with these position aliases is posted on the ASHRAE website [www.ashrae.org/TCs](http://www.ashrae.org/TCs) under the heading *Procedures, Forms & Information for TCs/TGs/MTGs and TRGs*.

### **9. Restructured TC MOP (Manual of Procedures)**

TAC has restructured the TC MOP so that it is easier to navigate and find information. The new TC MOP can be found on the ASHRAE website [www.ashrae.org/TCs](http://www.ashrae.org/TCs) under the heading *Procedures, Forms & Information for TCs/TGs/MTGs and TRGs*.

### **10. Distribution of TC minutes changed in TC MOP**

The TC MOP and *TC/TG/MTG/TRG Minutes Cover Sheet* form have both been updated and you are no longer required to send the TAC chair a copy of your minutes after each meeting. The new minutes cover sheet can be found on the ASHRAE website [www.ashrae.org/TCs](http://www.ashrae.org/TCs) under the headings *Procedures, Forms & Information for TCs/TGs/MTGs and TRGs – Routine Forms for TC/TG/MTGs/TRGs*.

### **11. Updated TAC Presentation Template Available for TC members to use with local Chapter**

TAC recently updated the standard presentation and presentation notes that TC members can use, without a lot of effort, to explain what TCs do for the Society and how that work benefits members in your local ASHRAE Chapter.

The new presentation and presentation notes files are posted now at the following link [www.ashrae.org/tcs](http://www.ashrae.org/tcs) under the heading *General TC Information* at the top of the page in case you prefer to direct others to these files posted online. The presentation material is now also available in both English and Spanish.

### **12. Basecamp Information from ECC**

More and more TCs and standing committees are making use of ASHRAE's subscription to Basecamp3 to better organize, store, and distribute on-line committee files that are needed for their meetings through a dedicated committee Basecamp site. If you would like to learn more about Basecamp and how to request a site for your particular committee, please go to the Electronic Communications Committee (ECC) web page: (<https://www.ashrae.org/communities/committees/standing-committees/electronic-communications-committee> ) and scroll down to the section titled *Basecamp Guidance*

## **E. RECENT ANNOUNCEMENT**

### **1. CEC's Standing Request for Future Society Meeting Program Track Suggestions**

The Conferences and Expositions Committee (CEC) oversees ASHRAE's annual and winter conferences and other specialty conferences and expositions globally. The CEC continually works to improve the conference experience for all attendees. To help keep a

## **Announcements and Reminders for TC/TG/TRG & MTG Chairs Orlando 2020**

“pulse” on the technical issues facing professionals in the HVAC&R marketplace, and to create meetings that reach all of ASHRAE’s constituencies, the CEC seeks ideas for tracks for the Chicago 2021 Winter meeting and annual and winter conferences beyond as well as topics for specialty conferences from TC members.

Please submit your suggestions to ASHRAE Staff member Tony Giometti ([Giometti@ashrae.org](mailto:Giometti@ashrae.org)). You can also add your track suggestion in the “Comment” section of the TC Activity form for the Orlando meeting.

### **2. CEC Always Seeks TC Volunteers willing to Support Content Development and Quality Control for Society Technical Program at Society Meetings**

Provide to your Section Head after each Society meeting a list of qualified volunteers from your TC that are potential Technical Session chairs and reviewers of session papers that are related to TC’s scope for use by the Conferences & Expositions Committee (CEC) in developing technical content for future technical programs.

### **3. The Professional Development Committee (PDC) is seeking ideas for new ASHRAE Learning Institute (ALI) courses.**

The Professional Development Committee (PDC) is actively seeking ideas for new ASHRAE Learning Institute (ALI) courses. We need practical courses of broad interest to be presented as face-to-face seminars or short courses, instructor-led online courses and self-paced courses. Examples include courses with a focus on new technologies that need to be shared, fundamentals for engineers new to the discipline, standard applications that need explanation, and courses based on new design guides. Does your TC have a potential course idea?

Contact Karen Murray (ASHRAE staff) [kmurray@ashre.org](mailto:kmurray@ashre.org) or Charlie Henck (2018-19 PDC chair) [PDCchair@ashrae.net](mailto:PDCchair@ashrae.net) with your course ideas.

### **4. ASHRAE Certification Committee seeking ideas from TCs for possible professional certification programs**

Certification Committee seeking ideas from TCs for possible professional certification programs related to 1) support adaptability, resilience and recovery of buildings and communities, 2) promote understanding of indoor environmental quality (IEQ) among practitioners). Representatives from the Certification Committee will meet with TCs in Orlando that expressed an interest or had ideas.

## **F. CURRENT & UPCOMING ASHRAE CONFERENCE PROGRAMS**

### **1. Orlando Winter Conference – Feb. 1 – Feb. 5, 2020**

Conference Website: <https://www.ashrae.org/conferences/winter-conference>  
Conference Program Chair: Melanie Derby.

#### **Program Focus at Orlando Winter Conference**

- i. Track 1: HVAC&R Fundamentals and Applications

## Announcements and Reminders for TC/TG/TRG & MTG Chairs Orlando 2020

- ii. Track 2: Systems and Equipment
- iii. Track 3: Refrigeration & Refrigerants
- iv. Track 4: Cutting Edge Approaches
- v. Track 5: High Efficiency Design and Operation
- vi. Track 6: Big Data and Smart Controls
- vii. Track 7: Ventilation, IAQ and Air Distribution Systems
- viii. Track 8: Standards, Guidelines and Codes

### 2. Austin Annual Conference - June 27 – July 1, 2020

Seminar and Forum proposals for Austin are due by **February 10, 2020**.

Conference Website: [www.ashrae.org/austin](http://www.ashrae.org/austin)

Conference Program Chair: Bing Liu

#### Program Focus at Austin Annual Conference:

- i. Track 1: Fundamentals and Applications
- ii. Track 2: HVAC&R Systems and Equipment
- iii. Track 3: Research Summit
- iv. Track 4: Professional Development
- v. Track 5: Grid-Interactive Efficient Built Environment
- vi. Track 6: Multifamily and Residential Buildings
- vii. Track 7: Resilient Buildings and Communities
- viii. Track 8: Zero Energy Buildings and Communities: Opportunities and Challenges
- ix. Track 9: Building Myths

### 3. Chicago Winter Conference – January 23-27, 2021

Seminar and Forum proposals for Chicago are due by **July 8, 2020**.

Conference Website: [www.ashrae.org/chicago](http://www.ashrae.org/chicago)

Conference Program Chair: tbd

#### Possible Track ideas at Chicago Winter Conference:

- HVAC&R Fundamentals and Applications
- Systems and Equipment
- Refrigeration and Refrigerants
- Environmental Health through IEQ
- Building Performance and Commissioning for Operation and Management
- Energy Conservation

## Announcements and Reminders for TC/TG/TRG & MTG Chairs Orlando 2020

- International Design
- Standards, Guidelines and Codes

### **G. OTHER UPCOMING WORKSHOPS, CONFERENCES AND EVENTS**

#### **1. 2020**

- i. 13<sup>th</sup> IEA Heat Pump Conference – May 11 to 14, 2020 – Ramada Plaza Hotel, Jeju, Korea – <http://www.hpc2020.org> - Abstract Submission Deadline extended to June 30, 2019. See handout at end of this document
- ii. 2020 Building Performance Analysis Conference & SimBuild Co-organized by ASHRAE and IBPSA-USA – August 12-14, 2020 – Chicago, IL - [www.ashrae.org/buildperform2020](http://www.ashrae.org/buildperform2020).
- iii. Ventilation 2021: 13<sup>th</sup> International Ventilation Conference for Contaminant Control – August 15-18, 2021 – Toronto, Canada – [www.ashrae.org/ventilation2021](http://www.ashrae.org/ventilation2021).
- iv. IAQ 2020: Indoor Environmental Quality Performance Approaches: Transitioning from IAQ to IEQ – September 14-16, 2020 – Athens, Greece - [www.ashrae.org/iaq2020](http://www.ashrae.org/iaq2020)
- v. 4th International Conference on Efficient Building Design: Materials and HVAC Equipment Technologies – October 1-2, 2020 – Beirut, Lebanon – [www.ashrae.org/beirut](http://www.ashrae.org/beirut).
- v. AHR Expo 2021 – January 25-28, 2021 – Chicago, IL - <https://ahrexpo.com/>



# TAC

## TC Chair - Vice Chair Breakfast

# TCs with Special Publications since 2019 Winter Conference

- TC 6.9
  - *ASHRAE Design Guide for Cool Thermal Storage*, Second Edition
- TC 9.1
  - *Air-Conditioning System Design Manual*, Third Edition
- TC 9.6
  - “Humidity Control Events in Perioperative Care Areas” (white paper)
- TC 9.9
  - *Advancing DCIM with IT Equipment Integration* (Datacom Series Book 14)
  - “Hard Disk Drive Performance Degradation Susceptibility to Acoustics” (white paper)
  - “Water-Cooled Servers: Common Designs, Components, and Processes” (white paper)

# Agenda

<b>Introductions, recognition</b> •	TAC Chair	20 mins
<b>Liaison Reports</b> <ul style="list-style-type: none"> <li>• CTTC</li> <li>• RBC</li> <li>• RAP</li> <li>• REF-CPPC</li> <li>• CEC</li> </ul>	Liaisons	15 mins
<b>Section Discussions</b> <ul style="list-style-type: none"> <li>• Handout topics</li> <li>• Other topics</li> </ul>	Section Heads to lead	40 mins
<b>Regroup - opportunity to address anything that came-up during the section discussions that might benefit the wider audience</b>	TAC Chair	10 mins
		5 mins

# Happy Groundhog Day!



# Welcome and Introductions

- Introductions of TAC personnel and ASHRAE staff
- Recognize new TC Chairs (by standing, as a group) and thank you for your service!
- Note that in the presentation, the abbreviation of TC is also applied to TG, TRG, and MTG. In TAC, we often refer to these groups collectively as Functional Groups (FG's).



# Orlando ASHRAE Event Planning

Following are events of importance to TC Leadership, starting Sunday, Feb 2

- |                                  |               |                |
|----------------------------------|---------------|----------------|
| • TC Chairs / V-Chairs Breakfast | Sunday, Feb 2 | 6:30 – 8:00 AM |
| • TC/TG Chair Training Workshop  | Sunday, Feb 2 | 8:00 – 9:00 AM |

For Subcommittee Chairs:

- |                                |                |                 |
|--------------------------------|----------------|-----------------|
| • Handbook Training Workshop   | Sunday, Feb 2  | 8:00 – 9:00 AM  |
| • Research Subcommittee Chairs | Monday, Feb 3  | 6:30 – 9:00 AM  |
| • TC Program SubC Training     | Tuesday, Feb 4 | 11:15 AM - noon |

Also note that TAC meets Saturday 8:00 AM to 3:00 PM and Wednesday 7:00 to 10:00 AM

See the conference schedule for room locations

# Orlando ASHRAE TC Chairs Deliverables

By the end of the day, Tuesday February 4, you should have entered or submitted to your Section Head:

- TC Roster for 2020/21
- TC Activity Form

Training for completion of these items will be provided at the TC Chairs training, following this breakfast.



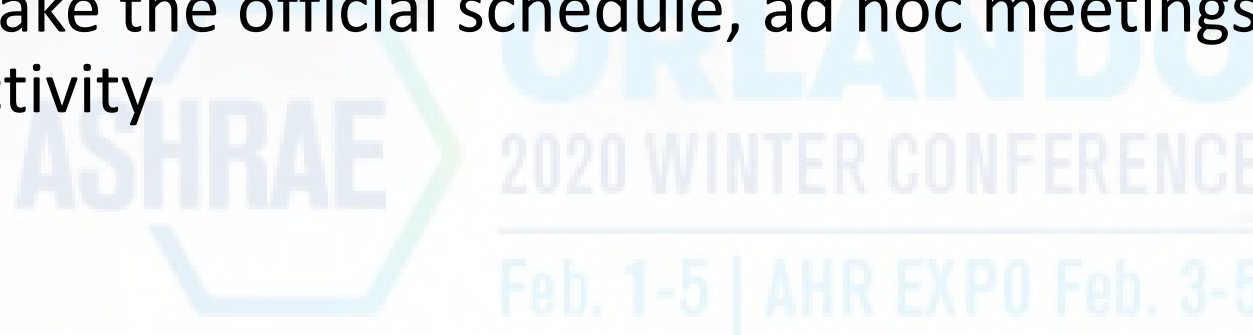
# Orlando ASHRAE TC Chairs Deliverables

- TC Roster for 2020/21
- Work with TC Leadership to establish a leadership succession plan and voting membership
- Follow the requirements of the TC MOP
  - One such TC MOP requirement is in Section 1.4.2.b - TC voting Membership shall be comprised of individuals...Who represent segments of the industry such as users, contractors, product manufacturers, academicians, consulting engineers, and research organizations. The committee chair **should work to develop and maintain a balance of these interests...**

ASHRAE 2020 WINTER CONFERENCE  
Feb. 1-5 | AHR EXPO Feb. 3-5

# New for Orlando

- TC Collaboration Area
- Available for your use
  - Sunday, Monday, Tuesday 7:30 AM – 4:00 PM,
  - Wednesday 7:30 AM – 1:00 PM
- Hilton Orlando LL, Orange D
- You are encouraged to use it for various TC functions – meetings that did not make the official schedule, ad hoc meetings, any other TC related activity



# New for Orlando

- New Basecamp for Section Heads and TAC leadership to communicate with TC leadership

## **ASHRAE - TAC Sections leadership**



# TC Reorg

- The TC ReOrg committee has met on a regular basis since the Kansas City meeting.
- An update was distributed to TC Chairs in late December
- Since then, the TC ReOrg committee held their final meeting in January. They are preparing a report and recommendations to deliver to TAC. Going forward, the TC ReOrg will be handled within TAC.



# TC Reorg

For those TC's that have decided to merge, you need to:

- Vote on the revised Title, Purpose & Scope here in Orlando. Any combining TC's need to be voting on the same TPS.
- Proposed leadership and voting roster should be completed.
- Please work closely with your Section Head.

For those TC's still in the discussion phase, please keep your Section Head aware of your discussion status.

# TC Reorg

Section 1.5 of the TC MOP calls for an annual review of each TC:

*1.5.1 Once a year, preferably at, or prior to, each Annual meeting, the Committee Chair and Committee Membership shall evaluate their progress in accomplishing the purpose for which they were constituted and recommend one of the following actions...*

For TC's, those actions are to continue, merge, or dissolve.



# TC Reorg

As a reminder, we hope to accomplish:

- Increase opportunity for collaboration for programs & research
- Increase opportunity for workshops for Handbook
- Increase meeting efficiency and increase effectiveness of members' volunteer time



# 2019–2024 ASHRAE Strategic Plan

- Mission - To serve humanity by advancing the arts and sciences of heating, ventilation, air conditioning, refrigeration and their allied fields.
- Vision - A healthy and sustainable built environment for all.
- Values – Excellence, Commitment, Integrity, Collaboration, Volunteerism, Diversity



# 2019–2024 ASHRAE Strategic Plan

## Goals:

1. Position ASHRAE as an Essential Knowledge Resource for a Sustainable, High-Performance Built Environment
2. Maximize Member Value and Engagement
3. Optimize ASHRAE's Organizational Structure to Maximize Performance



# 2019–2024 ASHRAE Strategic Plan

## Strategic Plan Areas and Initiatives:

### Initiative Area: Built Environment of the Future

1. Resilient Buildings and Communities
2. Indoor Environmental Quality

### Initiative Area: Future of ASHRAE

3. Organizational Streamlining
4. Improve Chapter Engagement, Capacity and Support

# YEA/Student Activities Mixer



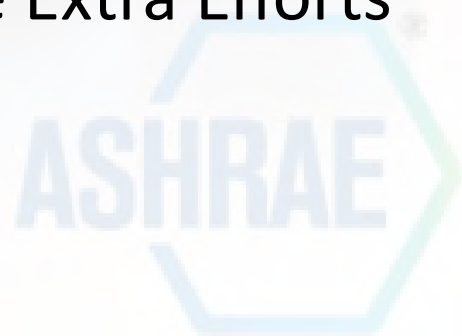
# YEA/Student Activities Mixer

- This is your committee's Future.
- Take a proactive approach.
- Greet visitors to your committee.
- Support your TC at the YEA/Student Mixer.

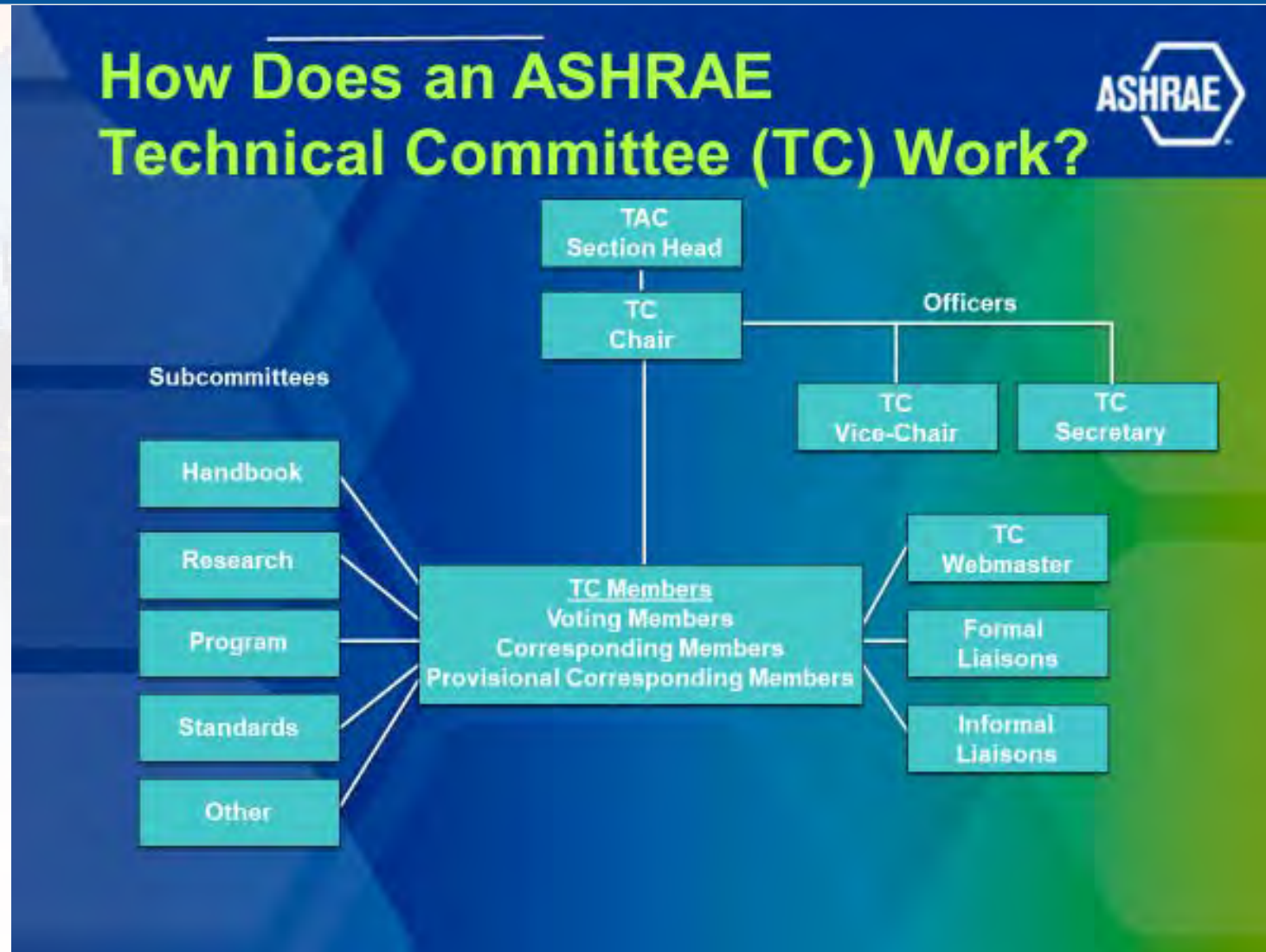


# Equipping Yourself to Serve as TC Chair

- Take advantage of all training opportunities
- Recruit strong sub-committee chairs
- Read ASHRAE's TC MOP
- Study Robert's Rules of Order
- Establish and Maintain a Vision
- Recognize Extra Efforts



# How Does an ASHRAE Technical Committee (TC) Work?



# TC Manual of Procedures (MOP)

- Latest update available on ASHRAE website
- Outlines membership Categories & Requirements
- Summarizes the responsibilities of the executive committee
- Defines TC purpose & scope
- Lists the ASHRAE acronyms
- Guide to parliamentary motions in Appendix H



# Thank You

Thank you for all you do for ASHRAE! Your contributions to society are important and appreciated.



# Chapter Technology Transfer Committee

TAC Minutes 20.W - Attachment H

- Chapter Technology Transfer Committee is responsible for enhancing the communication on technical issues between the chapters and Society. We do this through multiple programs that ASHRAE offers.



# Chapter Technology Transfer Committee

## Key Areas of Focus

TAC Minutes 20.W - Attachment H

- Distinguished Lecturer Program
  - 206 Allocated Visits / 230+ actual visits
  - 46 Multi-chapter visits
- ASHRAE Tech Hour (formerly ASHRAE Webcast)
  - Three (3) 1-hour technical presentations via ASHRAE 365 App and archived for member access
- Training of Chapter Chairs/Committees



# Residential Buildings Committee

- Currently in its 5<sup>th</sup> year as a standing committee under Tech Council
- Mission is to help ASHRAE have a greater impact in the residential space
- New subcommittee structure:
  - Internal Activities
  - External Activities
  - Executive Committee (Chair, Vice-chair, subcommittee chairs)

# Residential Buildings Committee

- Part of RBC's charge is to work with TCs to identify and support development of research and other activities that serve the residential sector
- RBC members will be looking to become liaisons to relevant committees – we look forward to working with you!



# ASHRAE's Research Strategic Plan

TAC Minutes 20.W - Attachment H

ASHRAE Research Strategic Plan  
Update to coordinate with ASHRAE  
Strategic Plan



Research Advisory Panel kick-off in November 2019

## RAP Membership

Reinhard Radermacher (Chair)	Chris Wilkins (RAC VC)
Larry Markel (past RAP)	Pawel Wargocki (Intl)
Eckhard Groll	Kishor Khankari
Allen Chad Kirkwood	Dawen Lu
Chun-cheng Piao	Agami Reddy


# ASHRAE's Research Strategic Plan

## Need input from membership

- Survey opened on Jan 13
- Sent to all 44,530 members



Please encourage all members of your TCs to respond before leaving Orlando



CELEBRATING **125** YEARS

---

ASHRAE asks for your input to the Strategic Plan for ASHRAE RESEARCH. The Research Advisory Panel (RAP) is looking in particular for your suggestions on emerging areas of research that should be included but may not have been fully appreciated by ASHRAE in the past. Please complete the questionnaire [here](#).

Your input is crucial to guide RAP in its effort to update the Strategic Research Plan, and to bring it into alignment with the new Strategic Plan for ASHRAE as a whole.

Please complete the questionnaire as soon as you reasonably can before the upcoming Winter Conference. It will take only 5 minutes of your time, unless you provide more detailed input which will be greatly appreciated!

For questions and comments about the questionnaire, please contact [Mike Vaughn](#) ([mvaughn@ashrae.org](mailto:mvaughn@ashrae.org)).

To complete the questionnaire, please click here:

[Questionnaire](#)

Best Regards,

Reinhard Radermacher, ASHRAE RAP Chair

# Refrigeration Committee (Comfort, Process, and Cold-Chain)

## REF-CPCC

TAC Minutes 20.W - Attachment H

- New REF-CPCC Subcommittee Structure:
  1. Program - Chair: **Stephen Gill** – Members: Coulomb, Kazachki, Ravi, Miyara, Hwang
  2. Research – Chair: **Yunho Hwang** – Members: **TBD**
  3. HVAC – Chair: **Walid Chakroun** – Members: **TBD**
  4. Cold Chain – Chair: **Dustin Lilya** – Members: **TBD**
  5. R in ASHRAE – Chair: **Didier Coulomb** – Members: Rajan, Stephen
  6. Refrigeration Technology Report – Chair: **Martin Dieryckx** – Members: Rajan
  7. Award Subcs – Briley and Garland- Chair: **Ayman Eltalouny** – Members: **TBD**



# REF-CPCC Seeks TC Volunteers for new Subcs.

- In order to make participation easy and inclusive, ALL REF-CPCC subcommittees will meet via web meetings only and all subcommittee members will have a vote at the subcommittee level.
- Subcommittee Chairs will then report in person to REF-CPCC on subcommittee activities at Society meetings.
- Each Subc. will benefit greatly from a wealth of expertise drawn from the Section 10 TCs and possibly other TCs working in a collaborative way.
- It is expected that this new subcommittee structure will also make it easier to identify and recruit Board elected members for REF-CPCC by creating a large pool of interested volunteers.

# Orlando Conference

TAC Minutes 20.W - Attachment H

## **Paper Sessions**

*(Conference/Technical Papers combined)*

25 Paper Sessions

## **Conference Papers**

165 conference paper abstracts submitted,

137 approved

73 conference papers presented

## **Technical Papers**

27 Technical papers received

25 Technical papers presented

## **Seminars**

123 submitted

75 presented

## **Panels**

2 submitted

2 scheduled

## **Workshops**

6 submitted

2 scheduled (*1 presented in TC Mtg.*)

## **Forums**

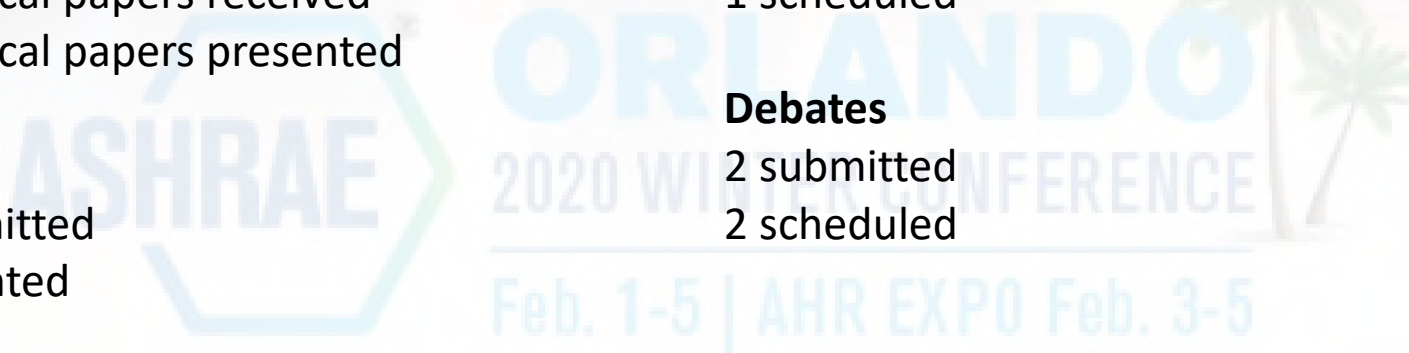
5 submitted

1 scheduled

## **Debates**

2 submitted

2 scheduled



# Upcoming Conferences

TAC Minutes 20.W - Attachment H

Conference	Upcoming Deadline	Conference Site
<a href="#"><u>2020 ASHRAE Annual Conference</u></a> Austin, TX June 27 – July 1, 2020	Extended Paper abstracts and program proposals due February 10	<a href="https://ashrae.org/Austin"><u>ashrae.org/Austin</u></a>
<a href="#"><u>IAQ 2020: Indoor Environmental Quality Performance Approaches</u></a> Athens, Greece September 14-16, 2020	Notifications on abstract submissions, February 12	<a href="https://ashrae.org/iaq2020"><u>ashrae.org/iaq2020</u></a>
<a href="#"><u>The Fourth International Conference on Efficient Building Design</u></a> Beirut, Lebanon October 1-2, 2020	Conference papers due February 15	<a href="https://ashrae.org/beirut"><u>ashrae.org/beirut</u></a>
<a href="#"><u>2021 ASHRAE Winter Conference</u></a> Chicago, Illinois January 23–27, 2021	Conference paper abstracts and technical papers due March 18	<a href="https://ashrae.org/chicago"><u>ashrae.org/chicago</u></a>
<a href="#"><u>Ventilation 2021</u></a> Toronto, ON Canada August 15-18, 2021	Call for papers to be announced shortly	<a href="https://ashrae.org/ventilation2021"><u>ashrae.org/ventilation2021</u></a>

Track #	Description	Track Chair
1	<b>Fundamentals and Applications</b>	Rupesh Iyengar Rupesh_iyengar@yahoo.com
2	<b>HVAC&amp;R Systems and Equipment</b>	Ashu Gupta Ashu.energy@gmail.com
3	<b>Research Summit</b>	Kristen Cetin cetinkri@msu.edu
4	<b>Professional Development</b>	Devin Abellon devin.abellon@yahoo.com
5	<b>Grid-Interactive Efficient Built Environment</b>	Vikrant C Aute vikrant@umd.edu
6	<b>Multifamily and Residential Buildings</b>	Sonya Pouncy sonyapouncy@gmail.com
7	<b>Resilient Buildings and Communities</b>	Christine Reinders-Caron christinereinders@gmail.com
8	<b>Zero Energy Buildings and Communities: Opportunities and Challenges</b>	Raul Simonetti raul.simonetti@carel.com
9 (Mini-Track)	<b>Building Myths</b>	Kimberly Pierson kdpwildcat@gmail.com

## Upcoming Dates:

**Monday, January 13, 2020** Website Opens for Seminar, Workshop, Panel, Debate, Forum and Extended Abstract Proposals

**Monday, January 13, 2020** Revised Conference Papers/Final Technical Papers Due

**Monday, February 10, 2020** Program (Seminar, Forum, Workshop, Debate and Panel) and Extended Abstract Paper Due

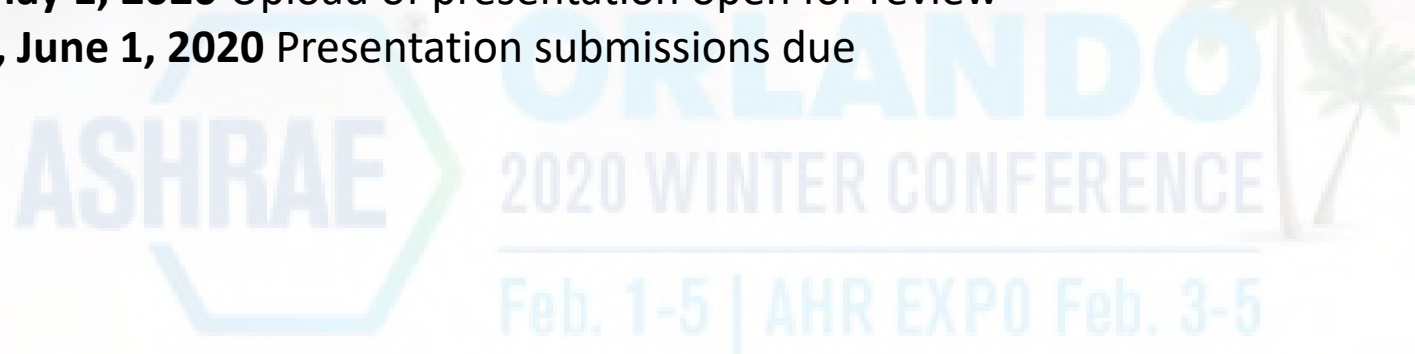
**Tuesday, February 18, 2020** Conference and Technical Paper Final Accept/Reject Notifications

**Monday, March 2, 2020** Extended Abstracts Accept/Reject Notifications

**Monday, March 16, 2020** Debate, Panel, Seminar, Forum, Workshop Accept/Reject Notifications

**Friday, May 1, 2020** Upload of presentation open for review

**Monday, June 1, 2020** Presentation submissions due



**HVAC&R Fundamentals and Applications**

**Systems and Equipment**

**Refrigeration and Refrigerants**

**Environmental Health Through IEQ**

**Building Performance and Commissioning for Operation and Management**

**Energy Conservation**

**International Design**

**Standards, Guidelines and Codes**

Submissions website for conference paper abstract submissions opening soon!

**Deadlines:**

**Wednesday, March 18, 2020:** Conference Paper Abstracts, Technical Papers and Paper Session Requests Due

**Wednesday, April 22, 2020:** Conference Paper Abstract Accept/Reject Notifications

**Monday, June 15, 2020:** Website Opens for Seminar, Workshop, Forum, Debate, and Panel Proposals

**Wednesday, July 8, 2020:** Final Conference Papers Due - Submitted for Review (Includes Bio, Learning Objectives and Methods of Assessment); Request for Conference Paper Sessions Due

**Monday, July 27, 2020:** Conference Paper Accept/Revise/Reject Notifications

**Monday, August 10, 2020:** Revised Conference Papers/Final Technical Papers Due

**Monday, August 24, 2020:** Conference and Technical Paper Final Accept/Reject Notifications

**Monday, October 5, 2020:** Seminar, Workshop, Forum, Debate, and Panel Accept/Reject Notifications

Thank you for your continued support and participating in the paper and program review process.

Please join CEC Technical Chair for Chicago, Maggie Moninski

**TC Program Sub-Committee Training**  
**Tuesday, 11:15a – noon**  
**Lake Down B**



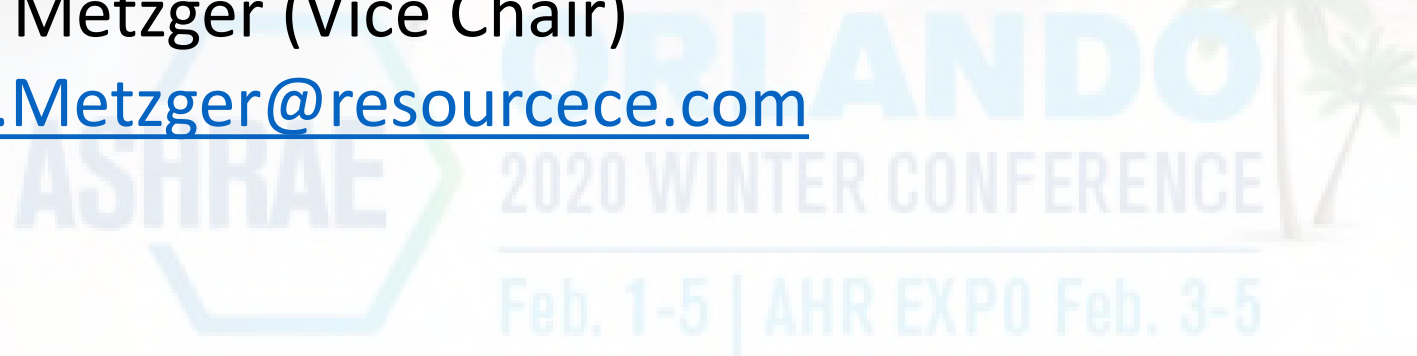
If you have any questions for CEC, please feel free to contact us:

Michael Collarin (Chair)

[michael.collarin@greshamsmith.com](mailto:michael.collarin@greshamsmith.com)

Corey Metzger (Vice Chair)

[Corey.Metzger@resourcece.com](mailto:Corey.Metzger@resourcece.com)



**MTG PROPOSAL FORM**

Return Form to:  
 Manager of Research & Technical Services  
 ASHRAE  
 1791 Tullie Circle, NE  
 Atlanta, Georgia 30329-2305  
 ☎ 404-636-8400 • Fax 404-321-5478  
 E-mail: techserv@ashrae.org

**Date:** September 13, 2019

\* Turn in no later than 3 weeks prior to the meeting for consideration by TAC

**MTG Name:** Cybersecurity for HVAC Systems and Related Infrastructure

**MTG Scope:** The scope of this MTG includes areas of Cybersecurity relevant to HVAC and related systems, infrastructure, and interfaces, including industry standards, advocacy and education. The scope includes the entire lifecycle of buildings, including building planning, design, construction and operation. The MTG will be active in Program to fulfill advocacy and education. The MTG would contribute to the Handbook by coordinating information in the section on cybersecurity. The MTG would also be active in Publications by production of guideline documents to assist ASHRAE members in implementing and developing cybersecurity designs and practices.

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<sup>1</sup>Please see page 2 for an example of a MTG scope.

**Impact on TC/TG/TRGs and Other MTGs:** As more HVAC and related systems have become connected to the internet, the need to keep them secure has become more apparent and urgent. Cybersecurity is a complex field outside the area of expertise of most members, yet it is becoming a priority to most if not all of them. Knowledge of cybersecurity is now a need at every stage in the lifecycle of a building, impacting a wide range of interests. An MTG is required to coordinate the requirements and interests of the disparate TCs which have an interest in cybersecurity. This will also allow ASHRAE to provide a uniform message on this important topic.

**MTG Roster:**

Requirements below apply to MTG Rosters Only:

- \* Only one person from each TC/TG/TRG or non-TC group participating in MTG may serve as voting member.
- \* The Chairs or leaders of participating TC/TG/TRG s or non-TC groups will designate the MTG member to represent their group with a vote on the MTG.
- \* Alternate Members are nominated by the MTG Chair, and there are no restrictions on the number or affiliations of nominees
- \* Alternate Members are expected to participate in MTG activities and attend meetings when possible.

- \* An Alternate Member normally has no right to vote at the MTG level, but can vote at the MTG subcommittee level
- \* An Alternate Member may be given proxy authority, however, by a MTG voting member to vote in his or her absence so that groups participating in the MTG are always represented in a MTG vote.
- \* Chair & Vice Chair are not required to be ASHRAE members, but it is preferred.

	<i>Position</i>	<i>Person's Name:</i>	<i>TC/TG/TRG or Non-TC Group Affiliation</i>	<i>ASHRAE Member #</i>
1	<b>Chair:</b>	Mike Galler	ASHRAE	
2	<b>Vice-Chair:</b>	Dave Branson	ASHRAE	
3	<b>Voting Members:</b>			
4		<b>Dave Branson</b>	<b>COF</b>	
5		<b>Kim Barker</b>	<b>TC 1.4</b>	
6		<b>Mike Galler</b>	<b>TC 1.5</b>	
7		<b>Jason Degraw</b>	<b>TC 2.10</b>	
8		<b>Carol Lomonaco</b>	<b>TC 7.5</b>	
9		<b>David Branson</b>	<b>TC 5.6/7.9</b>	
10		<b>Alexander Zhivavo</b>	<b>TC 7.6</b>	
11		<b>Ecton English</b>	<b>TC 9.9</b>	
12		<b>TBD</b>	<b>SSPC 135</b>	
13	<b>Alternate Member:</b>			
14				
15				

**T A C   U S E   O N L Y :**

Date Received: \_\_\_\_\_ Date Sent to TAC/FP: \_\_\_\_\_ Meeting Date: \_\_\_\_\_ Approved?    Yes    No



**MANUAL OF PROCEDURES**

**FOR**

**TECHNICAL ACTIVITIES COMMITTEE**

**REVISED: 12/11/2017**

## FOREWORD

The Technical Activities Committee is a General Standing Committee of the Society and operates under the direction of the Board of Directors and Technology Council. The Rules of the Board (ROB) for the Technical Activities Committee are the constitution of the committee. Proposed changes to the ROB and their appendices must be approved by the Board of Directors.

This Manual of Procedures (MOP) is a supplement to the TAC ROB and describes the methods and procedures by which the committee accomplishes the duties and responsibilities assigned to it. The MOP is an internal document of the committee for its own guidance. The MOP and revision thereto, following approval by the committee, shall be submitted to Technology Council or designated council subcommittee for approval.

Proposed TAC MOP and ROB changes shall normally only be presented to Tech. Council for approval once a year for consideration at their fall meeting. Proposed changes that TAC believes require more immediate attention shall first be presented to the chair of Tech. Council for permission to submit to Tech. Council.

## YOUR COMMENTS ARE WELCOME

Should you have a comment or suggestions on this Manual of Procedure, please submit them electronically to the ASHRAE Manager of ~~Research and~~ Technical Services (MORTS).

E-mail: [MORTS@ashrae.net](mailto:MORTS@ashrae.net)

The MORTS will consolidate comments for TAC. TAC intends to maintain Manual of Procedure as a “living document” and update it as it is needed and practical.

## RECENT REVISIONS

### Summary of Changes for 12/11/2017 Revision:

1. Section D - COORDINATORS streamlined to continue to allow TAC Chair the authority to name and dissolve Coordinator positions, but all details on the current TAC Coordinators will now reside in latest TAC Reference Manual.

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## **SECTION A – TECHNICAL ACTIVITIES COMMITTEE – GENERAL**

### **Part 1 Technical Activities Committee**

- A1.1 The Technical Activities Committee (TAC) shall supervise and assist in the formation and operation of technical committees (TCs), task groups (TGs), multidisciplinary task group (MTGs), and technical resource groups (TRGs), including determining scopes and membership.
- A1.2 The Technical Activities Committee shall coordinate and cooperate with other committees whose activities involve TCs, TGs, MTGs, and TRGs, such as Chapter Technology Transfer, Handbook, Program, Refrigeration, Research Administration, Special Publications, and Standards in order to achieve the Society's objectives.

### **Part 2 Membership**

- A2.1 The Technical Activities Committee shall consist of 16 voting members as described in Section 2.428.002.1 of the TAC ROB.

### **Part 3 Meetings**

- A3.1 Normally ~~three~~two meetings are held each year: one at each Annual and Winter Society meeting ~~and one at the fall Technology Weekend~~and online interim meetings as needed

### **Part 4 Operations**

- A4.1 Any member of TAC is eligible to introduce motions or items for consideration.

## **SECTION B – CHAIR AND VICE CHAIR**

### **Part 1 Selection**

- B1.1 The Chair and Vice Chair of TAC are nominated by the President-Elect of the Society from the current membership of TAC and elected by the Board of Directors to serve one-year terms commencing at the close of the next Annual Meeting of the Society.

### **Part 2 Responsibilities of Chair**

- B2.1 The Chair of TAC is responsible for the organization of TAC and the TAC Executive Committee.
- B2.2 The Chair shall preside over all meetings of TAC and the TAC Executive Committee.

- B2.2.1 The Chair shall be responsible for the preparation of agendas for meetings of TAC and the TAC Executive Committee with the advice of the Manager of ~~Research and~~ Technical Services and TAC members.
- B2.2.2 The Chair shall be responsible for ensuring that the Manager of ~~Research and~~ Technical Services provides minutes of the meetings of TAC and the TAC Executive Committee within 30 days of the meetings.
- B2.2.3 All draft minutes distributed by TAC shall include the following notice on the bottom of the cover page: "These draft minutes have not been approved and are not the official, approved record until approved by this committee."
- B2.3 The Chair shall annually designate members of TAC to serve as Liaison Coordinator and Special Activity Coordinator during each Society year.
- B2.4 The Chair shall appoint other Coordinators, ad hoc committees, or working groups from the membership of TAC or the Society whenever necessary in order to assist in fulfilling the responsibilities of TAC. As conditions change, the Chair may dissolve these other Coordinator positions and committees.
- B2.4.1 The Chair shall appoint other committees and representatives as directed by the President or the Board of Directors or as requested by other standing committees of the Society.
- B2.5 The Chair shall annually designate members of TAC to serve as Section Heads during each Society year.
- B2.6 The TAC Chair shall, after consultation with the Section Heads, appoint a Chair for each Technical Committee, Task Group, Multidisciplinary Task Group, and Technical Resource Group. The TC/TG/MTG/TRG Chair shall preferably have served at least one term as Vice Chair or Secretary and may be appointed for one or more one-year terms, but not normally to exceed two consecutive terms.
- B2.6.1 An exception for additional consecutive terms may be granted by the TAC Chair if the TC/TG/MTG/TRG makes a written request and that request is approved by the Section Head. The extended appointment shall be made only if it serves the best interest of the Society.
- B2.6.2 The TAC Chair shall thank retiring TC/TG/MTG/TRG Chairs for their services.
- B2.7 Members of TC/TG/MTG/TRGs shall be appointed by the TAC Chair from nominations made by the current TC/TG/MTG/TRG Chair and endorsed by the Section Head. Members of TC/TG/MTG/TRGs are appointed normally for a maximum of four consecutive one-year terms.

- B2.7.1 An exception for additional consecutive terms may be granted by the TAC Chair if the TC/TG/MTG/TRG makes a written request and that request is approved by the Section Head. The extended appointment shall be made only if it serves the best interest of the Society.
- B2.8 With the assistance of the Manager of ~~Research and~~ Technical Services, the Chair shall prepare and submit to the Technology Council ~~and the Board of Directors, through the Executive Vice President, reports as required. a semi-annual report, an annual report, and such other reports as are required to be submitted to the Board. The Chair shall submit a written or an oral report at the fall meeting of Technology Council.~~
- B2.9 The Chair shall be responsible for providing information to Society members to publicize the activities of the ~~Technical Committees(TCs), Task Groups(TGs), (MTGs) and Technical Resource Groups(TRGs);~~ and other items of current significant interest concerning the operation of TAC.
- B2.10 The Chair shall be responsible for meeting annual objectives for TAC. A status report on the objectives shall be included in the semi-annual report submitted to the Technology Council at the Society Winter meeting. A final report of the objectives shall be included in the annual report submitted to the Technology Council at the Society Annual meeting.
- B2.11 The Chair shall serve as a non-voting member of Technology Council and as a voting member of the Oversight and Functional Planning Subcommittees of Technology Council.

### Part 3 Responsibilities of the Vice Chair

- B3.1 In the absence of the Chair, the Vice Chair shall assume the Chair at any scheduled or called meeting of TAC or the TAC Executive Committee. Specific responsibilities of the TAC Vice Chair are outlined in the TAC Reference Manual.

## **SECTION C – EXECUTIVE COMMITTEE**

### Part 1 Membership

- C1.1 The members of the Technical Activities Executive Committee (TAC ExCom) include the TAC Chair, the TAC Vice Chair, and the TAC Coordinators.
- C1.2 The following Ex-Officio members of the Technical Activities Executive Committee may participate in the discussions but are not eligible to vote:

Manager of ~~Research and~~ Technical Services  
Director of Technology  
Board Ex Officio  
Coordinating Officer  
Consultants to the TAC

## Part 2 Meetings

- C2.1 The Technical Activities Executive Committee shall meet before the first scheduled meetings of TAC at the Annual and Winter Meetings of the Society. See the TAC Reference Manual for details concerning meetings of the Technical Activities Executive Committee.

## **SECTION D – COORDINATORS**

### Part 1 Authority to Appoint & Dissolve Coordinator Positions

- D1.1 The TAC Chair shall have the authority to appoint and dissolve Coordinator positions as needed.

Specific responsibilities of the current coordinators are outlined in the TAC Reference Manual

## **SECTION E – SECTION HEADS**

### Part 1 Selection

- E1.1 A Section Head is a member of TAC who has been designated by the Chair to supervise the TCs, TGs and TRGs that are assigned to a Section.
- E1.2 The MTG Section Head is a member of TAC who has been designated by the Chair to supervise the MTGs in the MTG Section.

### Part 2 Section Head Responsibilities

- E2.1 Each Section Head shall be responsible for the coordination and development of the activities of the TCs, TGs and TRGs within his/her Section and shall provide liaison between them and TAC.
- E2.2 The MTG Section Head shall be responsible for the coordination and development of the activities of the MTGs within the MTG section and shall provide liaison between them and TAC. The MTG scope may also involve interactions with other Councils, and those interaction activities shall be managed by the MTG Section Head and reported through TAC to Technology Council.

| Specific responsibilities of the Section Heads are outlined in the TAC Reference Manual.

## **SECTION F – ANCILLARY RESPONSIBILITIES**

### Part 1 Honors and Awards

- F1.1 TAC will annually review all eligible nominations received and make a recommendation to the Honors and Awards Committee for its consideration on the George B. Hightower Award recipient based on the procedures outlined in the TAC Reference Manual.

- F1.2 TAC will review all requests or suggestions for new awards, revisions to current awards, or award deletions according to the guidelines for awards outlined in the TAC Reference Manual.

Part 2 Broad Peer Review of Special Publications

- F2.1 The Chair of TAC shall be notified by staff on a regular basis of all new special publications that are in development at the TC/TG/MTG/TRG level. The TAC Chair, in consultation with TAC members, shall then determine whether a publication requires a broader peer review by members of other TC/TG/MTG/TRGs per the broad peer review procedure described in Appendix F of the TC/TG/MTG/TRG MOP.



Shaping Tomorrow's  
Built Environment Today

**REFERENCE MANUAL**

**FOR**

**TECHNICAL ACTIVITIES COMMITTEE**

**REVISED: 12/11/2017**

TAC

REFERENCE MANUAL

12/11/2017

## FOREWORD

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## YOUR COMMENTS ARE WELCOME

Submit comments or suggestions about this document electronically to the ASHRAE Manager of ~~Research and~~ Technical Services (MORTS).

E-mail: MORTS@ashrae.net

The MORTS will consolidate comments for TAC. TAC intends to maintain this Reference Manual as a “living document” and update it as it is needed and practical.

## RECENT REVISIONS

12/11/2017    Updated to reflect the latest TAC Coordinator Positions and Responsibilities

TAC

REFERENCE MANUAL

12/11/2017

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## CHAIR AND VICE CHAIR

### 1. Chair Responsibilities

- 1.1. Preside over all meetings of TAC and the TAC Executive Committee.
  - 1.1.1. Responsible for the preparation of agendas for meetings of TAC and the TAC Executive Committee with the advice of the Manager of ~~Research and~~ Technical Services and TAC members.
  - 1.1.2. Responsible for ensuring that the Manager of ~~Research and~~ Technical Services provides minutes of the meetings of TAC and the TAC Executive Committee within 30 days of the meetings.
  - 1.1.3. Ensure that all draft minutes distributed by TAC include the following notice on the bottom of the cover page: "These draft minutes have not been approved and are not the official, approved record until approved by this committee."
- 1.2. Appoint committee Chairs as detailed in the TC/TG/TRG/MTG Manual of Procedures
  - 1.2.1. MTGs are expected to have a finite term within which to complete their assigned task. MTG Chairs and Vice Chairs are reappointed each year and there is no limit on the consecutive terms served, but the reappointment should only be made if it serves the best interest of the Society and the member is willing to serve. Why in Reference Manual versus the TAC MOP?
  - 1.2.2. Voting members of an MTG shall be reappointed each year if willing to serve and endorsed by the chair/leader of the TC or non-TC group they represent, and there is no limit on the consecutive terms served. The reappointment, however, should only be made if it serves the best interest of the Society and the TC or non-TC group represented.
- 1.3. With the assistance of the Manager of ~~Research and~~ Technical Services (~~MORTS~~ Is this still the correct title?), the Chair prepares and submits to the Technology Council and the Board of Directors, through the Executive Vice President, a semi-annual report, an annual report, and such other reports as are required to be submitted to the Board.
  - 1.3.1. The Chair submits a written or an oral report at the fall meeting of Technology Council.
- 1.4. The Chair is responsible for providing information to Society members to publicize the activities of the Technical Committees, Task Groups, Multidisciplinary Task Groups, and Technical Resource Groups; and other items of current significant interest concerning the operation of TAC. The chair normally works with the ~~MORTS~~ to prepare and distribute relevant information. This is done at least 2 times per year in advance of the winter and annual meetings.

A status report on the objectives is included in the semi-annual report submitted to the Technology Council at the Society Winter meeting. A final report of the objectives is included in the annual report submitted to the Technology Council at the Society Annual meeting.

Commented [MBH1]: Do we change this?

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1.5. Thank retiring TC/TG/TRG/MTG Chairs for their services.

## 2. Vice Chair Responsibilities

- 2.1. Responsible for seeing that the budget of TAC is prepared. Details of the budgeting process are in **Appendix C** (Calendar/Process for Budget/Four-Year Plan) of the Technology Council MOP.
  - 2.1.1. Periodically, the Vice Chair reviews, with the Manager of ~~Research and~~ Technical Services, expenditures and budget allocations and takes any action deemed necessary, in cooperation with the Executive Vice President and the director of Technology, to stay within the established budget.
- 2.2. Appoint mentors for all incoming TAC members and oversee the mentoring of new members according to the guidelines given in **Appendix A**.
- 2.3. No later than 30 days prior to the Annual and Winter Society meetings, prepare and distribute a draft list of reminders about upcoming activity deadlines and deliverables to Section Heads to edit and then distribute to TC, TG, MTG, and TRG Chairs.
- 2.4. Within 30 days after the Annual and Winter Society meetings, with assistance from Section Heads and TAC ExCom, prepares and distributes a TC Activities Summary Report to TAC members.
- 2.5. Perform other duties that may be assigned by the Chair.
- 2.6. Prior to the Society Annual meeting, prepare objectives for the committee for the next year using the format given in **Appendix B** and present these objectives to TAC for review and approval at the Society Annual meeting.
  - 2.6.1. Each objective should be measurable and should include a projected completion date, fiscal impact, and other information that would clarify the intent of the objective.
  - 2.6.2. The objectives will be included in the TAC annual report to the Technology Council at the Society Annual meeting as an information item, and a copy of the objectives will be sent to headquarters staff (Assistant to the BOD).
  - 2.6.3. Staff (Assistant to the BOD) will send copies of objectives to the BOD Ex Officio, TAC staff liaison and Technology Council staff liaison. Staff liaisons will send objectives to TAC and Technology Council members.

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## EXECUTIVE COMMITTEE (TAC EXCOM)

### 3. Membership

- 3.1. The members of the Technical Activities Executive Committee are detailed in the TAC MOP.
- 3.2. The following Ex-Officio members of the Technical Activities Executive Committee may participate in the discussions but are not eligible to vote:
  - 3.2.1. Manager of ~~Research and~~ Technical Services (MORTS)
  - 3.2.2. Director of Technology
  - 3.2.3. Board Ex Officio
  - 3.2.4. Coordinating Officer

### 4. Meetings

- 4.1. The Technical Activities Executive Committee meets before the first scheduled meetings of TAC at the Annual and Winter Meetings of the Society.
  - 4.1.1. The Chair determines the time of meeting with consideration for the responsibilities and convenience of the members.
  - 4.1.2. The meeting may be held at the same location as the meeting of TAC or may be an electronic meeting held prior at the discretion of the Chair.
- 4.2. Executive Committee meetings are open to all members of TAC, all Society members, all registered guests at scheduled Society meetings, and those invited by the Chair and subject to Robert's Rules of Order. If an official 'Executive Session' is required, only members of the Executive Committee are allowed in the meeting and all others shall be asked to leave by the Chair for the duration of that portion of the meeting.
- 4.3. Meetings of the TAC Executive Committee are called by the Chair whenever appropriate to conduct the business of the committee between the winter and annual meetings.
  - 4.3.1. Special face-to-face meetings of ExCom involving travel require approval from the President or the committee's Coordinating Officer when, in their opinion, an urgent action is required.
  - 4.3.2. The Chair designates the time and place of special meetings in coordination with MORTS.
  - 4.3.3. The Chair should consider 'wrap-up' meetings within 30 days of the winter and annual meetings to review the assigned action items and issues that need immediate attention.
- 4.4. The Chair is responsible for ensuring that a written notice of a meeting is sent to all members, ex-officio members, members of TAC and invited individuals and that proper notification is provided according to the rules for open meetings unless an executive session is specifically called. [- What is the process for announcing interim meetings for TAC/TCs?]

**Commented [HS2]:** TCs may wish to utilize listservs to notify members and any interested parties of interim meetings.

**Commented [HS3R2]:** From TC MOP:  
5.2.6 Notice of meetings

- a) Committee Chair must advise the full committee roster and the MOTS of all committee and subcommittee meetings, web meetings or teleconferences that take place between Society Meetings.
- b) The MOTS must be notified at least 30 days before in-person meetings and 14 days before web meetings and teleconferences to permit the MOTS time to notify interested persons who may want to participate.
- c) Information provided should include the date, time, location, principal purpose of the meeting, and the person to contact for further information.

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- 4.5. The Chair shall report actions and recommendations of the Executive Committee at the next meeting of TAC.

## COORDINATORS

### 5. Coordinator Selection

- 5.1. The TAC Chair currently appoints the following coordinators: Operations, Membership, and Training . To improve succession planning and continuity, do we make Operations Coordinator, "Operations Vice Chair" and they would become next TAC chair after the Vice Chair?
- 5.2. If a member's term of service on TAC continues into the next Society year, they may be reappointed by the incoming Chair.
- 5.2.1. Coordinators are members of TAC, however, the Chair may appoint Consultants to a Coordinator position when there is a need for members who have expertise and experience in certain areas that are of immediate importance and not available from TAC members.

### 6. Operations Coordinator (OC) Responsibilities

- 6.1. The TAC MOP and Reference manual have been extensively revised to bring them up to date with current practice. Items have been moved from the MOP to the Reference manual as appropriate and duplication between documents eliminated where possible.
- 6.1.1. Standards Committee
- 6.1.2. Electronic Communications Committee
- 6.1.3. Handbook Committee
- 6.1.4. Chapter Technology Transfer Committee
- 6.1.5. Research Administration Committee
- 6.1.6. Any councils? PubC – this is mostly Hbk, MemberC –mostly CTTC, TechC – covered by Chair. Probably these should be by specific invitation only when requested by the Council.
- 6.2. Prior to each Wwinter and Annual Society meeting, provide a summary about TAC and its underlying committees with information that may be of interest to those committees and councils. Does this still happen?
- 6.3. Coordinate activities involving technology transfer from, TC/TG/TRG/MTGs to the rest of the Society and the HVAC industry through members designated by those committees or councils. A report summarizing these activities shall be submitted to TAC at the Annual Society meeting. – How to communicate technical information available eg. are ASHRAE conference program guides archived and available? How long? If restricted to members only, could contact info be included? CTTC?
- 6.4. Improve technology transfer from TCs to chapters through program, handbook, standards, research and other means as required.

**Commented [HS4]:** These are available to all on the Conference page of the ASHRAE website. [www.ashrae.org/conferences](http://www.ashrae.org/conferences)

A direct link - [www.ashrae.org/conferences/conference-resources/past-ashrae-conferences](http://www.ashrae.org/conferences/conference-resources/past-ashrae-conferences) (includes programs through June 2008)

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- 6.5. Research continued improvements to electronic communications such as website enhancements and collaboration tools. With Electronic Communications Committee advice, review, recommend to TAC and oversee implementation of methods for improving the conduct of the business of TAC, TC/TG/TRG/MTGs and the dissemination of information about their activities.
- 6.6. Review, recommend and oversee implementation of periodic updates and changes to the TC/TG/TRG website template
- 6.7. Annually review and recommend changes to ASHRAE website policies that apply to TAC and TC/TG/TRG/MTGs for the Electronic Communications Committee consideration and implementation.
- 6.8. Coordinate the identification, development, and maintenance of other resources as needed to assist TAC members and TC/TG/TRG/MTG Chairs in carrying out their responsibilities.
- 6.9. Review and propose changes to the TAC MOP, Reference Manual and ROB as directed.
  - 6.9.1. Maintain the reference manual procedures as described in the TAC MOP

## 7. Training Coordinator (TrC) Responsibilities

- 7.1. Work with ASHRAE staff to implement approaches which improve access to TC training
- 7.2. Develop and present training for incoming TAC members
- 7.3. The content of and material used for the training session is prepared by the TrC in cooperation with the OC and shall be reviewed by TAC
- 7.4. Identify training needs to support successful TC operations and conduct training sessions at the Annual and/or winter meetings for TC/TG/TRG/MTG Chairs and Vice Chairs.
- 7.5. The TrC or an individual appointed by the TrC leads the training sessions.
- 7.6. In cooperation with the Operations Coordinator and the affected committees, prepare information suitable for technology transfer.
- 7.7. Continued expansion and maintenance of new On-line training portfolio
- 7.8. In cooperation with the Director of Marketing and as appropriate, work with liaisons of other committees (and Operations Coordinator) to develop, maintain, and disseminate presentation material that describe the functions and responsibilities of the technical committees and addresses technical issues in response to inquiries by Society members and the public.
- 7.9. Coordinate the maintenance of the TAC website with the Manager of ~~Research and~~ Technical Services. Does this happen?

**Commented [HS5]:** Looks like that hasn't been done too frequently in the past. I'll maintain more frequently going forward  
[www.ashrae.org/communities/committees/standing-committees/technical-activities-committee](http://www.ashrae.org/communities/committees/standing-committees/technical-activities-committee)

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## 8. Membership Coordinator (MC) Responsibilities

- 8.1. Identify and assist TC/TG/TRGs with difficulty getting/retaining membership to improve their breadth of membership and committee operation.
- 8.2. Assist TC/TGs in finding volunteers or groups to help maintain/update Handbook volume chapters that are not being properly maintained.
- 8.3. Monitor, evaluate and develop improvements to coordinate the annual TC/TG/TRG/MTG roster update process and improvements thereto. Testing and Roll-out of New On-line roster update system.
- 8.4. Identify and implement activities that improve the ability of TCs to attract and develop new membership not just recycle the old ones.
- 8.5. Maintain and refine the criteria and forms for the outstanding TC award so that they help the TCs to become better. Review the results in cooperation with the Section Head to identify and improve the performance of all committees under TAC purview.
- 8.6. Oversee improved quality, process efficiency, and expansion of RPMs (Remote Participation in Meetings) ~~Do they call RPMs something different now?~~ Opens
- 8.7. Liaison with Conferences and Expositions Committee (CEC) to coordinate improvements between the TC/TG/TRG/MTGs and CEC
- 8.8. Coordinate the maintenance/development of criteria and yearly award selection for the George B. Hightower Technical Achievement Award based on the procedures described in **Appendix E**.
- 8.9. Coordinate the development and application of procedures for reviewing technical content in Society publications in cooperation with other committees as appropriate.
- 8.10. On a regular basis, work with staff to quantify the impact that TCs have had within ASHRAE and to society as a whole by quantifying, for example, the amount of volunteer time that is devoted to TC work each year. Convert those estimates into a dollar amount when practical. Do we still do this?

Commented [HS6]: still RPMs

## 9. Other Responsibilities for All Coordinators

- 9.1. The Coordinators report their activities and make recommendations for action as needed at the appropriate point in the agenda of the TAC meeting.

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- 9.2. Before each meeting, in cooperation with the Operations coordinator, staff will provide each liaison to TAC from another committee and all section heads a copy of the “Liaison speaking guidelines” found in **Appendix D.**

**SECTION HEADS – Do we update based on Dustin’s document? Include the “What’s” here. Dustin’s doc would focus more on the “How’s”**

**10. Organization**

- 10.1. Sections are groups of TCs, TGs, MTGs, and TRGs that have been formed and organized by TAC according to fields of interest or for administrative purposes.
- 10.2. The TCs, TGs, MTGs, and TRGs are currently grouped into eleven (11) Sections based on their technical scopes as follows:
- SECTION 1.0, FUNDAMENTALS AND GENERAL
  - SECTION 2.0, ENVIRONMENTAL QUALITY
  - SECTION 3.0, MATERIALS AND PROCESSES
  - SECTION 4.0, LOAD CALCULATIONS AND ENERGY REQUIREMENTS
  - SECTION 5.0, VENTILATION AND AIR DISTRIBUTION
  - SECTION 6.0, HEATING EQUIPMENT, HEATING AND COOLING SYSTEMS AND APPLICATIONS
  - SECTION 7.0, BUILDING PERFORMANCE
  - SECTION 8.0, AIR-CONDITIONING AND REFRIGERATION SYSTEM COMPONENTS
  - SECTION 9.0, BUILDING APPLICATIONS
  - SECTION 10.0, REFRIGERATION SYSTEMS
  - SECTION MTG, MULTIDISCIPLINARY TASK GROUPS

**11. General Responsibilities**

- 11.1. Coordination and liaison
- 11.1.1. The Section Head advises TC/TG/TRG/MTG Chairs of operating policies and procedures of the Society and/or TAC as described in the Manual of Procedures for Technical Committees, Task Groups, Multidisciplinary Task Groups, and Technical Resource Groups.
  - 11.1.2. The MTG Section Head is responsible for the coordination and development of the activities of the MTGs within their Section and shall provide liaison between them and TAC. The MTG scope may also involve interactions with other Standing Committees and Councils, and those interaction activities shall be managed by the MTG Section Head and reported through TAC to Technology Council.
  - 11.1.3. The Section Head represents the interest of their Section to TAC and is responsible for ensuring that their opinions and views are made known.
  - 11.1.4. The Section Head arranges for spokespersons, when requested, to represent TC/TG/TRG/MTGs before TAC. Try to do this more?

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- 11.1.5. The Section Head establishes and maintains contact with liaisons assigned by standing committees of the Society to the committees in their Section in order to strengthen and develop the TC/TG/TRG/MTGs.
- 11.1.6. The Section Head requires each TC/TG/TRG in their Section to have, as a minimum, subcommittees and subcommittee chairs on Research, Program, Handbook, and Standards. MTGs are excluded from this requirement, unless their scope specifically includes one of these responsibilities.
- 11.1.7. Prior to August 1 of each Society Year, each Section Head should furnish the TAC Chair with a list of individuals that they recommend to be considered for appointment to TAC.

## 12. Specific Responsibilities

- 12.1. The MTG Section Head promotes interaction between identified technical groups outside ASHRAE and ASHRAE TC/TG/TRG/MTGs through members designated by those organizations. Attends meetings of these organizations at the Winter and Annual Society meetings when possible.
  - 12.1.1. A list of organizations outside ASHRAE that we maintain contact with is kept by ~~MO~~~~RTS~~. Some of them are:
    - 12.1.1.1. USNC/IIR
    - 12.1.1.2. Nuclear HVAC Users Group
    - 12.1.1.3. Building Smart Alliance
  - 12.1.2. Prior to each Winter and Annual Society meeting, provide a summary of TAC and its underlying committees with information that may be of interest to the organizations.
- 12.2. As needed, the Section Head assists the TC/TG/TRG/MTG Chairs in their Section to carry out their assigned responsibilities.
- 12.3. No later than February 28 each year, using the roster update process described in the TC/TG/TRG/MTG MOP, the Section Head furnishes the Administrative Assistant for Research and Technical Services with a list of individuals that they recommend to be appointed as members of the TC/TG/TRG/MTGs in their Section.
  - 12.3.1. Each Section Head, before finalizing their recommendations, considers all the factors associated with the position of member of a TC/TG/TRG/MTG to ensure that the persons they recommend will serve in the best interest of the Society. The MTG Section Head will also consult with the chairs/leaders of the TCs and TGs and non-TC groups that are represented on the MTG to confirm that the TC, TG or non-TC group endorses their designated representatives on the MTG.
- 12.4. Each year, the Section Head reviews rosters prepared by TC/TG/TRG/MTG Chairs in their section to verify that the rosters comply with the provisions of the TC/TG/TRG/MTG MOP. The importance of a correct roster cannot be overemphasized: no official committee work can be carried out without a roster, and

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much committee work could be invalidated if voted on by an improperly constituted committee. The roster update procedure is as follows:

- 12.4.1. Each year prior to the Winter Meeting, staff sends a "Roster Update Form" to each TC/TG/TRG/MTG Chair. The forms are to be completed and e-mailed to the Section Heads not later than 9:00 PM on Tuesday of the Winter Meeting.
- 12.4.2. The Section Head reviews the forms submitted by each Chair in their Section to ensure that the conditions for TC/TG/TRG/MTG membership given in the TC/TG/TRG/MTG MOP are met. If changes are required, the Section Head works with the TC/TG/TRG/MTG Chair to correct the information on the forms until both the TC/TG/TRG/MTG Chair and Section Head approve the information. The Section Head then sends the approved forms to the Administrative Assistant for Research and Technical Services no later than February 28.
- 12.4.3. Staff creates the rosters for the next Society year and send a first draft to the Section Head. The Section Head reviews the draft roster against the input that was provided in the approved Roster Update Form. Corrections are sent to staff within two weeks. If no changes are necessary, the Section Head must so indicate. These procedures are repeated until each Section Head has indicated that no further changes are necessary.
- 12.4.4. After each Section Head has indicated to staff that the roster has the correct information staff sends out appointment letters to each TC/TG/TRG/MTG member with a copy of the roster for the upcoming Society year. Roster changes after this time must be made using the Emergency Roster Change Procedures and be approved by the Section Head.
- 12.5. No later than 30 days prior to the Technology Weekend (??) meeting of TAC, the Section Head reviews the title, scope, and activities of each TC, TG, MTG and TRG within their section and makes recommendations to TAC on continuing, merging, or disbanding existing committees, forming new committees, or altering scopes to fulfill the needs of the Society in the areas of responsibility of their Section.
- 12.6. For each TAC meeting, the Section Head prepares a written and oral Section Head report of actions, problems, and concerns from the TC/TG/TRG/MTGs in their Section to be included in the TAC meeting minutes.
- 12.7. The Section Head or designee presides over their Section meeting with TC/TG/TRG/MTG Chairs and Vice Chairs at the Annual and Winter Society meetings. The Section Head contacts the TC/TG/TRG/MTG Chairs and Vice Chairs at least 30 days before the Section meeting to remind them to attend. (Guidelines for conducting the Section Meetings are given in **Appendix C**). [Confirm included in Dustin's document.](#)
- 12.8. The Section Head ensures that each TG/TG/MTG/TRG in their Section distributes its meeting agenda at least 30 days before each Annual and winter meeting, and that the minutes are distributed within 60 days following each meeting. [Confirm included in Dustin's document.](#)

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- 12.9. The Section Head periodically reviews TC/TG/TRG websites in their Section for violations of ASHRAE website policies and to ensure that the websites reflect current activities. The Section Head communicates website violations and needs for improvement to the TC/TG/TRG Chair.
- 12.10. Information on the current activities of MTGs will be posted to a section of the ASHRAE website and will be reviewed periodically by the MTG Section Head to ensure the information is up-to-date, accurate, and complete.
- 12.11. The Section Head presents a certificate of appreciation to each retiring TC/TG/TRG/MTG Chair in their Section at the Annual meeting. (see B2.6.2)
- 12.12. Each Section Head informs their committees and solicit nominations for the Hightower Award following the Annual meeting to be submitted to TAC for consideration before September 1 of each year as described in **Appendix E**.

### **ANCILLARY RESPONSIBILITIES**

#### **13. Review of Awards**

TAC reviews all requests or suggestions for new awards, revisions to current awards, or award deletions according to the guidelines for awards outlined Appendix F. In order to minimize the entire committee time, it is suggested that a subcommittee of one or more TAC members be established by the TAC Chair to consider the request and report to TAC for a formal disposition of the request.

#### **14. Broad Peer Review of Special Publications**

- 14.1. When the publication requires a broader peer review by members of other TC/TG/TRG/MTGs per the broad peer review procedure described in Appendix F of the TC/TG/TRG/MTG MOP, the TAC Chair shall:
  - 14.1.1. Ensure that all committees and members under TAC's purview are notified of the proposed publication through staff action.
  - 14.1.2. In consultation with the Section Heads, shall identify one or more TC/TG/TRG/MTGs who should participate and assign participation/review responsibilities to them if necessary.
  - 14.1.3. Arrange for a TAC vote on the proposed publication if recommended by the working group and the review committee.
- 14.2. The Section Head(s) involved work with the identified committees to obtain representation on the special publication working group from each identified committee.
- 14.3. The Section Head of the sponsoring committee works with the Chair of that committee to appoint the members of the working group from those identified.

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## APPENDIX A Mentoring Program

### Based on ROB Mentoring program

Before or during the final meeting of the Fiscal Year (Annual meeting), the TAC Vice Chair:

1. Assigns an incumbent TAC mentor to each incoming new member prior to the first meeting.
2. Assures that time is allotted at the beginning of the first meeting sufficient for proper introduction of the new member by the assigned mentor.
3. Before the Annual meeting and in cooperation with the Chair, assesses effectiveness of the mentor/new member relationship and suggest changes and improvements.
4. Provides assistance that enhances the mentor/new member relationship.

#### The mentor has the following responsibilities:

- Insure that the new member has received a copy of the group Rules of the Board (ROB), Manual of Procedures (MOP), and a copy of the most recent meeting minutes to acquaint them with the functions and focus of the group.
- Contact their assigned new TAC member before the next Committee Meeting to introduce themselves and explain the relationship and its purpose.
- The mentor should make every effort to update the new member on:
  - ✓ Committee functions, focus and objectives.
  - ✓ Review the appropriate Rules of the Board and Manual of Procedures (MOP) with the new member.
  - ✓ Discuss the typical meeting format and member duties and responsibilities.
- The mentor should meet the new member before the respective meeting is scheduled to start.
- The new member should be encouraged to develop rapport with other members to effectively work with fellow members and maximize productivity.
- Since the new member will replace an existing section head or coordinator, help them to contact the outgoing member to insure that the new member is current on the activities and challenges of the position they will be representing.

The relationship terminates at the end of the new member's first year as a member of TAC.

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## APPENDIX B – Management by Objectives (MBOs)

The objectives are shown on an MS Word document that is provided to the Committee Chair and Vice Chair. The following is an example of the information currently required.

TAC MBOs      Technical Activities Committee MBOs 2015-2016  
Tom Lawrence, Chair   1/23/2016

Item #	MBO	Status	Date Due	Assigned To	Applicable Strategy #	MBO Comments	Strategic Direction Specific Comments	Fiscal Impact
--------	-----	--------	----------	-------------	-----------------------	--------------	---------------------------------------	---------------

- List objectives, **not action items or ongoing committee activities** such as updating the committee's MOP.
- State objectives in clear, concise, measurable language. If necessary, cite sub-tasks and interim steps as a means of measuring objective completion.
- Cite both the completion dates for the overall objective as well as individual sub-tasks.
- State fiscal impact in dollars, man-hours, or man-trips. State whether the program has been approved by the council and whether it is cost has been included in the budget.
- State the primary responsible individual, subcommittee, or body.
- Report a brief but complete statement of status. Cite completion date if objective is fulfilled.

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## APPENDIX C - OPERATIONAL GUIDELINES FOR SECTION MEETINGS

1. Each TC/TG/TRG/MTG chair and Vice Chair meets with their Section Head at each Annual and winter meeting. The meeting rooms are listed in the program, and are usually held from 6:30 AM to 8 AM on Sundays. – New Joint Breakfast
2. The purpose of the Section meeting is to provide an opportunity for personal communication between the TC/TG/TRG/MTG Chairs and their Section Head on technical and administrative issues facing their section and/or the Society. Liaison members of other standing general committees need an opportunity to distribute written announcements to address administrative matters relating to TC/TG/TRG/MTG activities.  
  
Liaisons wishing to speak at the meeting may do so at the invitation of the Section Head and in accordance with the **Liaison Speaking Guidelines** (See Appendix D.).
3. The Section Head invites the TC/TG/TRG/MTG Chairs and Vice Chairs to the meeting.
4. The Section Head conducts the meeting in the same way that they would conduct a TC meeting, with the Section Head serving as Chair.
5. The Section Head sends out the Section meeting agenda at least 30 days before each Annual and Winter meeting, and the minutes (with attachments) within 60 days following each meeting. Keep or delete this?
6. The Section Head, in collaboration with the TC/TG/TRG/MTG Chairs and Vice Chairs, identifies Section MBOs for the upcoming year and introduced them at the Annual meeting. Do/should we do this?
7. Suggested agenda: Modify for joint breakfast? Do we still need?  
(The agenda and times estimated are for guidance only and should be modified to be sure the most important information is discussed and that there is adequate time to discuss things important to the committee chairs. Note that the time estimates shown allow for other important business to be conducted within the time frame allotted.)
  - a) Introduction of TC/TG/TRG/MTG Chairs, Vice Chairs, and guests (5 minutes).
  - b) Review and approval of agenda (2 minutes). (Note that you might want to solicit additions and corrections at the time the draft agenda is sent to the TC Chairs – it is almost impossible to do anything in only 2 minutes)
  - c) Review and approval of minutes (3 minutes).
  - d) Summarize discussion from last meeting and status of actions assigned (5 minutes).

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- e) Liaisons from other committees should each be given a chance to speak and distribute information pertinent to the section from their committee. An effort should be made to accommodate their schedules without major disruption of the Section meeting (15 Minutes).
  - a. Research Administration
  - b. Conference and Exposition Committee (CEC)
  - c. Handbook
  - d. Other Standing Committees
- f) Discuss the MBOs set for the year and how the section can work together to address them (10 minutes).
- g) Review summary report for the Section prepared from the TC/TG activity database and TAC (15 minutes).
  - a. Section activities and trends will be discussed relating to membership, research, programs, publications and new communication tools and services.
  - b. Identify shared opportunities and challenges for section (10 minutes).
  - c. Adjourn.

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## APPENDIX D - Liaison speaking guidelines.

Liaisons,

[Modify for joint breakfast?](#)

Whether you are attending a TAC Section Breakfast or a Technical Committee meeting, your primary task is to be sure that the committee understands what the most important information your committee wants this committee to know and to do it in the most effective way possible. The following guidelines will insure that you are successful and that you continue to have a cordial relationship.

1. INFORM the Section Head or Committee Chair in advance (if possible) that you will be attending and if you have specific time limitations for attending (such as you need to leave by XX:XX).
2. Before the meeting starts, BE SURE YOU TELL the Section Head or Committee Chair who you are, that you are available, wish to speak (if you do) and other responsibilities during the same time frame so that you can be recognized appropriately without interrupting the meeting as agendas are usually tight during the meeting. Committee Chairs recognize that you probably have other meetings you attend at the same time and they are always willing to make as much accommodation as they can without totally disrupting the meeting. However, you are probably not the most important thing on the agenda or your presence would have been requested in advance.
3. PROVIDE an electronic copy of the written material to the Committee Chair(s) and/or Secretary so that your information can be included in their documentation. You may also bring the written material to the breakfast or committee meeting.
4. DO NOT READ any written material you bring. All of our committee members can read.
5. BE PREPARED to summarize the **3** most important points. The rest can be read when the committee member gets a chance. This will keep your presentation brief, efficient and highlight the most important things you need to be sure everyone hears.
6. PLAN on your presentation taking no longer than 2 – 4 minutes exclusive of discussion or questions by the group. If the Section Head or Committee Chair wants to entertain discussion or questions, it is their choice.
7. If you are a new liaison to the section or committee, leave your contact information with the Section Head and Committee Chair(s) or Secretary.
8. Sign the attendance sheet.

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## **APPENDIX E - PROCEDURE FOR GEORGE B. HIGHTOWER TECHNICAL ACHIEVEMENT AWARD**

### **1. PURPOSE.**

The purpose of the George B. Hightower Technical Achievement Award is to recognize annually an individual for excellence in volunteer service in the area of TC/TG/TRG technical leadership and contribution, which includes all TC, TG MTG, and TRG activities except for research and standards. The award will serve to heighten general membership awareness of, and interest in, Society activities at the TC/TG/TRG level.

George B. Hightower was an exceptional ASHRAE member. A member since 1938, he regularly attended Society meetings until his health began to fail. No other person has received more Society level awards than George B. Hightower. He received the ASHRAE-Alco Medal for Distinguished Public Service in 1974; became an ASHRAE Fellow in 1977; received the Distinguished Service Award in 1984; the Distinguished 50-Year Member Award in 1988; the Andrew T. Boggs Service Award in 1997; and the Louise and Bill Holladay Distinguished Fellow Award in 2000.

### **2. AWARD PRESENTATION.**

The George B. Hightower Technical Achievement Award is presented annually but may be omitted if a suitable candidate is not identified. The award will consist of an acrylic trophy with the recipient's name and the year of the award etched into the face of the trophy. The award will be donated by the Atlanta Chapter, to which Mr. Hightower belonged.

### **3. ELIGIBILITY.**

The award is open to ASHRAE TC/TG/TRG voting and corresponding members who meet the minimum point requirement detailed in Section 7. Technical Activities Committee (TAC) and Technology Council members or current TC and TG chairs of the nominating committee(s) are not eligible for receipt of the George B. Hightower Technical Achievement Award during the terms they serve on the respective committees, or positions. Past recipients of the award are not eligible.

MTGs participate in the George B. Hightower award through one or more of the TCs/TGs that comprise the MTG.

### **4. NOMINATION.**

A nomination for the George B. Hightower Technical Achievement Award is made by a TC/TG/TRG chair completing a nomination form that confirms the eligibility and outlines the special contribution that the nominee has made to the work of the nominating committee(s) during the most recent four years.

The chair submits the nomination to the lead nominating committee's TAC Section Head by September 1.

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## 5. JUDGING

The TAC Section Head reviews all nominations received from their Section and forwards eligible nominees from that Section to TAC for its consideration at their Fall Meeting. Prior to the ASHRAE Winter Meeting, TAC shall recommend a candidate to the Honors and Awards Committee. The recommended candidate shall be chosen from all nominations that meet eligibility requirements as outlined under Section 7 Criteria for Selecting Recipients and approved by TAC. TAC shall consider award points and the explanation provided by the nominating TC/TG in its deliberations. TAC should also review the candidate's ASHRAE online bio for verification of points.

Because it is a 'pass through award', TAC reports the name of the recipient to Technology Council as an information item and sends the recommendation to H&A who in turn recommends the name to Members Council for approval.

**All** nominators (not just the winning nomination) are to be apprised of the person selected by the TAC chair no later than 60 days after the selection process has been completed.

## 6. PRESENTATION

At the ASHRAE Annual Meeting, the George B. Hightower Technical Achievement Award is presented during the recipient's TC/TG/TRG meeting.

## 7. PART I - ELIGIBILITY REQUIREMENTS

7.1 Nominees must have earned a minimum of 10 points **during their career** on TC/TG/TRG/MTGs as defined below to be eligible for the award.

7.2 If eligible, the award is given **based only on the most recent four years of service** on TC/TG/TRG/MTGs. This service must be detailed in the explanation for it to be considered and is the actual basis for receiving of the award.

Eligibility points are defined as follows:

A "tour" is an appointment for 1 year. Assignment to the same position for multiple years each count as a separate tour.

A. Program Subcommittee		
1.	Forum Moderator	½ point per forum
2.	Seminar Chair	1 point per seminar
3.	Conference Chair	2 points per session
4.	Technical Chair	3 points per sympos
5.	Subcommittee member	1 point per tour
6.	Subcommittee Chair	2 points per tour
B. Handbook Subcommittee		
1.	Chapter contributor/reviewer	1 point per chapter
2.	Chapter author	3 points per chapter
3.	Subcommittee member	1 point per tour
4.	Subcommittee Chair	2 points per tour

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C.	Technical Inquiries	
	1. Respond to Question from Headquarters	1/4 point per question
	2. Author Frequently Asked Question	1 point per question
D.	Accept Special Assignment from Chair assignment at Chair's discretion.	Up to 3 points per
E.	TC/TG/MTG/TRG Officers	
	1. ALI Coordinator	2 points per tour
	2. Webmaster	2 points per tour
	4. Secretary	2 point per tour
	5. Vice-Chair	2 point per tour
	7. Chair	3 points per tour
F.	MTG member	1 point per tour
G.	Inter-Society Liaison Appointed by TAC	1 point per tour

#### 8. PART II – TECHNICAL LEADERSHIP AND CONTRIBUTION

**This part determines the actual award winner.**

Provide a one page explanation of the nominee's outstanding technical leadership and contributions to the committee(s) **during the past four years** including details on why you think this person deserves the award. (Research and standards activities are NOT to be considered even if done as part of a committee assignment.)

#### SUBMIT NOMINATION FORM TO SECTION HEAD BY SEPTEMBER 1.

The form (ASHRAE GEORGE B. HIGHTOWER TECHNICAL ACHIEVEMENT AWARD NOMINATION FORM) can be found on the ASHRAE website at <https://www.ashrae.org/TCs> under the heading "Procedures, Forms & Information for TCs/TGs/MTGs and TRGs"

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## **APPENDIX F - GUIDELINES FOR AWARDS**

All requests or suggestions for new awards, revisions to current awards, or award deletions shall be forwarded to the Honors and Awards Committee for review and recommendation before being forwarded to the BOD for review and approval.

ASHRAE awards are grouped into the following categories, each of which has their defined forms of award:

1. Personal Honors
2. Personal Awards for General Society Activities
3. Personal Awards for Specific Society Activities
4. Paper Awards
5. Society Awards to Groups or Chapters

Awards will normally carry the name of an ASHRAE activity (e.g., Distinguished Service Award, Fellow, Journal Papers Award) No business, product, or commercial name shall be used for an award. Only in very exceptional instances may consideration be given to naming the award for an individual member.

Proposers of awards shall submit a detailed description, including the name of the award, the suggested category for the award, the reason for establishing the award, and the proposed selection and awarding process to the Honors and Awards Committee.

Proliferation of awards that would tend to detract from the worth of existing awards must be avoided. The award must first be considered as applying to an important field of ASHRAE related activity; the name of the award would then add prestige.

The committee shall include in their supporting material for candidates only information pertinent to the requirements for the particular award for which the candidate is being recommended. (70-07-01-11)

It is the policy of the Society not to consider for approval any Society honors or awards posthumously, other than the Hall of Fame

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**APPENDIX G - ASHRAE Outstanding Technical Committee Award  
(OBSOLETE)**

IT WAS DECIDED THAT THIS AWARD IS SERVING NO REAL PURPOSE AND THE  
OPERATIONS COORDINATOR WAS ASKED TO REMOVE IT. – KWC June 2017

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## **Appendix H - REVISIONS TO RULES AND PROCEDURES**

**(This section is for informational purposes only and revisers should always look at the current information)**

### **Part 1 Revisions to Rules of the Board (ROBs)**

Proposed changes to Rules of the Board (ROBs) may be submitted by committees, councils, and Board members. Changes proposed by a committee shall be submitted through the body to which it reports; councils and Board members may submit proposed changes directly to the Board of Directors.

#### **To propose a change to an existing ROB:**

Present a two-column comparison showing the current ROB number and wording and the proposed ROB wording. A proposed change, at a minimum, shall include the ROB number the proposed change, and the reasons for the change.

#### **To propose a new ROB:**

Present the wording for the new rule and include a statement indicating a recommended placement of the new rule within the ROB framework. Examples:

*It is recommended that this rule be placed in ROB, Book II, Publishing Council ROB.*

*It is recommended that this rule be placed in ROB, Book I, Section 300, Meetings of Members.*

To propose rescinding an existing ROB, include in the recommendation the ROB book in which the rule is located, the rule number or other identification code, and the wording of the rule.

Appendices to the ROB are considered part of the ROBs; therefore, revisions to appendices shall follow the same procedure as revisions to ROBs.

Proposed changes to Society-wide policies and procedures (e.g., Travel Reimbursement Policy, Election and Appointment Procedures) shall follow the same procedure as for changes to ROBs.

### **Part 2 Revisions to Manual of Procedures**

Revisions to the Manual of Procedures must be approved by the Technology Council or designated council subcommittee.

Revisions and additions to the TAC Reference Manual are made by the Operations Coordinator as suggested by TAC members and maintained by staff. TAC members shall be informed about additions, changes and revisions as described in the TAC MOP.