MINUTES

TECHNICAL ACTIVITIES COMMITTEE

2019 Winter Meeting

December 12, 2018 (Web/Conference Call)
January 12 & January 16, 2019

Note: These draft minutes have not been approved and are not the official, approved record until approved by the Technical Activities Committee.
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TECHNICAL ACTIVITIES COMMITTEE  
December 12, 2018,  
January 12 & January 16, 2019

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<td>ADJOURN</td>
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# PRINCIPAL MOTIONS

**TECHNICAL ACTIVITIES COMMITTEE**

**December 12, 2018,**  
**January 12 & January 16, 2019**

<table>
<thead>
<tr>
<th>No.</th>
<th>Motion</th>
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<tbody>
<tr>
<td>1</td>
<td>minutes of the TAC 2018 Fall Meeting be approved as drafted</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>section 7.4 of the TC manual of procedures (MOP) be rewritten as outlined in Attachment A</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>the word “standing” be removed from section 1.2.1 of the TC manual of procedures (MOP)</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>MTG.BD, Building Dampness be disbanded</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>the current MTG structure will continue as documented in the TC Scope</td>
<td>6</td>
</tr>
<tr>
<td>6</td>
<td>the term of outgoing TAC members should be extended for one additional year due to ongoing efforts being made to reorganize TC</td>
<td>7</td>
</tr>
</tbody>
</table>

* * * * *
## NEW ACTION ITEMS
### TECHNICAL ACTIVITIES COMMITTEE
#### December 12, 2018, January 12 & January 16, 2019

<table>
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<tr>
<th>Action No.</th>
<th>Responsibility</th>
<th>Summary of Action Items</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Maston</td>
<td>Provide slides and letters on TC ReOrg Efforts to Section Heads</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>Smith/Goldschmidt/Tauby</td>
<td>Review TC MOP in relation to the ROB and report back by the Annual Meeting</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>Staff</td>
<td>Include updates to the online tool in preparation for release during the annual meeting in Kansas City</td>
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<td>4</td>
<td>Smith</td>
<td>Continue to work with TC 5.2 on revised scope changes that are not as controversial</td>
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<tr>
<td>5</td>
<td>Justice/Kohler/Vaughn/Hammling</td>
<td>Continue to meet via conference calls monthly to keep each other updated on TAC activities. The full committee will also continue with web meetings prior to the Annual Meeting</td>
<td>7</td>
</tr>
<tr>
<td>6</td>
<td>Justice/Kohler</td>
<td>Continue to meet with CTTC and CEC regarding updates to the Commercialism Policy</td>
<td>7</td>
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</table>

## CARRYOVER-ACTION ITEMS
### Fall Conference/Web Meeting – September 28, 2019

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Justice</td>
<td>Work with Goldschmidt regarding ongoing action items and TC training issues</td>
<td>Ongoing</td>
</tr>
<tr>
<td>4</td>
<td>Section Heads</td>
<td>Send out new Activity form to ALL TCs in Section this month and again before Winter meeting</td>
<td>Ongoing</td>
</tr>
<tr>
<td>5</td>
<td>Staff</td>
<td>Replace old activity form on website with new version.</td>
<td>Complete</td>
</tr>
<tr>
<td>12</td>
<td>Goldschmidt</td>
<td>Compare TAC MOP against latest version of ROB for consistency</td>
<td>Complete 1/9/2019</td>
</tr>
</tbody>
</table>
### Annual Meeting – June 23 & 27, 2018

<table>
<thead>
<tr>
<th>Action No.</th>
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<tbody>
<tr>
<td>1</td>
<td>Todorovic</td>
<td>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. Some TCs are recording and posting such presentations to YouTube now, which can then be modified by others without any control from ASHRAE.</td>
<td>On-going</td>
</tr>
<tr>
<td>3</td>
<td>Maston</td>
<td>Update on efforts to form CEC/TAC Working Group to develop better documentation of CEC process / procedures and to make finding information on the submission process easier to find on the website.</td>
<td>On-going</td>
</tr>
<tr>
<td>14</td>
<td>MTG.SH &amp; MORTS</td>
<td>Develop MTG activity form based on TC activity form, but focused on MTG activities instead.</td>
<td>On-going</td>
</tr>
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</table>

### Spring Meeting – April 19, 2018

<table>
<thead>
<tr>
<th>Action No.</th>
<th>Responsibility</th>
<th>Summary of Action Items</th>
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</tr>
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<tbody>
<tr>
<td>2</td>
<td>Goldschmidt/Smith/Tauby/Kohler</td>
<td>Review the current training materials and make recommendations in Houston</td>
<td>Complete 1/9/2019</td>
</tr>
</tbody>
</table>

### Winter Meeting - January 20 & January 24, 2018

<table>
<thead>
<tr>
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<th>Responsibility</th>
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<tr>
<td>1</td>
<td>Staff/Justice</td>
<td>Work with IT (Chris Walters) to gather input on the best way to distribute this new section head report to TCs &amp; Section Heads.</td>
<td>On-going</td>
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</tbody>
</table>
LIST OF ATTACHMENTS

ATTACHMENT A: TAC Manual Of Procedures
ATTACHMENT B: TAC Response to ASHRAE Strategic Plan
ATTACHMENT C: TAC 18-19 MBOs
ATTACHMENT D: BOD EX-O Presentation
ATTACHMENT E: Online Activity Form
MEMBERS PRESENT:
Thomas Justice, Chair
Jay Kohler, Vice Chair
Amir Jokar, Section 1
Elbert Phillips, Section 2
Barbara Minor, Section 3
Dennis Wessel, Section 4
Larry Smith, Section 5
Dawen Lu, Section 6
Craig Messmer, Section 7
Dustin Meredith, Section 8
James Tauby, Section 10
Carl Huber, Section MTG
Marija Todorovic, Operations Coord.
Sarah Maston, Membership Coordinator/CEC Liaison
Victor Goldschmidt, Training Coordinator
Krishnan Gowri, Consultant
Michael Schwedler, Coordinating Officer
Thomas Lawrence, BOD Ex-O

MEMBERS ABSENT:
Vance Payne, Section 9

ASHRAE STAFF:
Mike Vaughn, MORTS
Tara Thomas, TC Staff

GUEST:
Dennis Knight
Jane Miller, TC 5.9
Bob Snow
Jane Miller
Clayton Miller
Chris Balbach

A. CALL TO ORDER & INTRODUCTIONS
Chair, Tom Justice, called the meeting to order at 11:00 am, EST on Wednesday, December 12, 2018. Members and staff attended as recorded above.

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: https://www.ashrae.org/about-ashrae/ashrae-code-of-ethics )

B. ADDITIONS AND/OR CHANGES TO THE AGENDA
No additions to the agenda

C. APPROVAL OF MINUTES
It was moved and seconded that,

(1) minutes of the TAC 2018 Annual Meeting be approved as drafted

MOTION #1 – PASSED 12-0-0 CNV
D. APPROVAL OF REVISED TC MOP
   a) Issues Addressed:
      1. Communications between TC/TG/MTG/TRG and other organizations
      2. Technical Bulletins removed
      3. Update to Stds. & Gdl. section for better clarity and agreement with PASA

   It was moved and seconded,
   (2) section 7.4 of the TAC manual of procedures (MOP) be rewritten as outlined in Attachment A.

   MOTION #2 PASSED: 12-0-0, CNV

   It was moved and seconded that,
   (3) the word “standing” be removed from section 1.2.1 of the TAC manual of procedures (MOP).

   MOTION #3 PASSED: 12-0-0, CNV

E. CHAIR'S REPORT #1 (Justice)
   a) Disposition of Motions from Last Meeting Requiring Higher Body Approval – TAC submitted two motions to TechC following the fall meeting. The motion to change “technical committee” to “TC/TG/TRG or MTG” Passed. The Motion to add “Staff Liaison” to the list of Non-Voting members Failed.
   b) New or Carryover Action Items Assigned to TAC by Tech. Council – No new or carryover action items at this time
   c) Update on TC ReOrg Subc. Efforts – TC reorganization draft plan was rolled out here in Atlanta, during the TC breakfast meeting. We have started to receive feedback from the TCs. The goal is to receive all feedback within the next 30 days.
   d) TAC Response to ASHRAE Strategic Plan Gap Analysis Feedback Form for Initiative 2b – Maston – TAC Responses are summarized in Attachment B
   e) Review & Status Action Items from TAC Fall Meeting

   STATUS-ACTION ITEMS
   Fall Conference/Web Meeting – September 28, 2019

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<td>2</td>
<td>Justice</td>
<td>Send Maston copy of ASHRAE Strategic Plan Gap Analysis Feedback for Initiative 2b so she can complete before Friday 9/21</td>
<td>Complete</td>
</tr>
<tr>
<td>3</td>
<td>Meredith /MORTS</td>
<td>Make sure TC 8.6 has been asked to withdraw improper TC letter to ASME</td>
<td>Complete</td>
</tr>
<tr>
<td>4</td>
<td>Section Heads</td>
<td>Send out new Activity form to ALL TCs in Section this month and again before Winter meeting</td>
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<td>to find on the website.</td>
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<td>9</td>
<td>Justice</td>
<td>Suggest to ECC Chair that ECC develop a short training webinar or 1 page cheat sheet</td>
<td>Complete</td>
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<td></td>
<td>on how to efficiently use Basecamp 3 at TC level.</td>
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<td>MTG.SH &amp; MORTS</td>
<td>Develop MTG activity form based on TC activity form, but focused on MTG activities</td>
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<td>instead.</td>
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### Spring Meeting – April 19th, 2018

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***

f) Review TAC 18-19 MBOs - See Attachment C

g) New & On-going Council Referrals to TAC:
   1. PEC O&M initiatives referral to TAC & TC 7.3 – Status: Tech.C. leadership agreed we could close this referral based upon our response to date to PEC.
   2. MC VRF sensible & latent capacities at part load conditions in hot & humid climates – TC 8.7 – Status: Ongoing
   3. MC new HDBK Chapter on Ventilation for textile & garment industries – TC 9.2 – Status: Ongoing

h) New Information Items:
   1. Folders have been added to TAC Basecamp so that we can begin to archive completed TC Activity forms received for each meeting by section going forward – This will aide in trend graph development effort - Justice
   2. Update on plans for TAC support of YEA/Student Activities Mixer in Atlanta – Kohler
   3. Update on TC 6.6 Handbook Chapter Issue – Lu
   4. Update on the Kaggle “Great Predictor Shootout 3” – Gowri
   5. TC Chair Training Plans for Atlanta - Goldschmidt
   6. Update on set-up of new MTG.HWBE - Huber

**RECESS**
The TAC Meeting is scheduled to reconvene on Saturday, January 12th during the 2019 Winter Meeting.

***

**F. CALL TO ORDER & INTRODUCTIONS**

Chair, Tom Justice, called the meeting to order at 8:00 am, EST on Saturday, January 12, 2019. Members and staff attended as recorded above.

**G. ADDITIONS AND/OR CHANGES TO THE AGENDA**

a) 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: https://www.ashrae.org/about-ashrae/ashrae-code-of-ethics)

H. CHAIR’S REPORT #2 (Justice)

a) Disposition of Motions from Last Meeting Requiring Higher Body Approval – None
b) New or Carryover Action Items Assigned to TAC by Tech. Council – None
c) Review & Status Action Items from TAC Pre-Winter Web Meeting - None
d) New & On-going Council Referrals to TAC:
   1. MC VRF sensible & latent capacities at part load conditions in hot & humid climates – TC 8.7 – Status: SH 8 get update from TC 8.7 in Atlanta
   2. MC new HDBK Chapter on Ventilation for textile & garment industries – TC 9.2 – Status: SH 9 get update from TC 9.2 in Atlanta

e) New Information Items:
   1. 1st use of new TC Activity Form and Section Tracking Tool Update in ATL – TAC decided to release the first draft of this form to a selected group of committees.
   2. Final plans for TAC support of YEA/Student Activities Mixer in Atlanta – Kohler TAC Section Heads and TC Chairs combined efforts during the Student Welcome event with YEA to introduce students to technical committees. The event was well received. We intend to make this an annual event at the winter meetings.
   3. Additional discussion on TC ReOrg Effort – Maston TC reorganization draft plan was rolled in Atlanta, during the TC breakfast meeting. We have started to receive feedback from the TCs. The goal is to receive all feedback within the next 30 days.
      a. Letter to Section Heads
      b. Draft Letter to TC chairs
      c. Spreadsheet of TC members on multiple TCs

Action Item 1 <Maston> Provide slides and letters on TC ReOrg Efforts to Section Heads

I. BOD EX-OFFICIO & COORDINATING OFFICER (Lawrence & Schwedler)
Mr. Lawrence reviewed the BOD EX-O report to TAC. A PowerPoint summary is of this report is included as ATTACHMENT D.

J. VICE CHAIR’S REPORT (Kohler)

a) Other Proposed MOPs, ROB and Reference Manual Changes? – Updated TC MOP

Action Item 2 <Smith/Goldschmidt/Tauby> Review TC MOP in relation to the ROB and report back by the Annual Meeting

b) Status on New Template for Section Head reports – A draft version of the new online activity form was tested by 10 technical committees during the Winter Meeting. This form is included as ATTACHMENT E. Efforts to improve the form and reporting tool will conclude based on feedback received after the Winter Meeting.

Action Item 3 <Staff> Include updates to the online tool in preparation for release during the annual meeting in Kansas City.

K. OPERATIONS COORDINATOR (Todorovic)

a. 18-19 Hightower Award Presentation to David Moss, TC 9.9 in ATL – TAC’s Vice Chair, Jay Kohler and ASHRAE Staff attended the first part of TC 9.9 main meeting. A brief description of the George B Hightower Award and details of David Moss committee contributions was summarized during the presentation. The summary is also included below:
Mr. David Moss contributions to ASHRAE & TC 9.9 in the past four years is impressive and includes the following: Lead author and technical editor of the 2016 ASHRAE Datacom Book “IT Equipment Design Impact on data Center Solutions”, Book #13. Major contributor to three other Datacom Book Series Books (Book #1 4th edition, Book #13 and Book #14) Seminar #5 presenter at 2014 annual meeting. Seminar # 42 presenter in 2017 at winter meeting. Led the ASHRAE IT subcommittee team effort in 2016 to reverse the change to IEC 62368-1 standard. David’s willingness to take on hard tasks for the TC and ASHRAE makes him a well-qualified recipient for this award.

b. Briefing document on need for updated TC procedures for presentations in TC meetings and on posting such presentation recordings to YouTube – AI# 1 A18

L. MULTIDISCIPLINARY TASK GROUP SECTION REPORT – (Huber)
   a. Proposed new MTGs – None
   b. Update on efforts to launch new MTG.HWBE? – AI#11 A18 Carl help to get fast start
   c. Any Issues with Current MTGs?

It was moved and seconded that,

(4) MTG.BD, Building Dampness be disbanded

Motion #4 – PASSED: 13-0-0, CNV

It was moved and seconded that,

(5) The current MTG structure will continue as documented in the TC Scope

Motion #5 – PASSED: 13-0-0, CNV

M. MEMBERSHIP COORDINATOR / CEC LIAISON – (Maston)
   a. Status on Improvements to Roster Update Process - Membership Database has now been updated to latest operating version – Progress on automating process further? (Maston, Staff)
   b. Goals & Deadlines for 19-20 Rosters - (Maston, Section Heads, Staff)
   c. 18-19 Roster Issues?
   d. TAC Member Feedback on CEC Program Review Experience for Atlanta Meeting – List of track assignments are ready for Wednesday meeting

N. TRAINING COORDINATOR - (Goldschmidt)
   a. Roster Update Webinars for TC chairs & Section Heads using New System (Thomas) - A training presentation is posted on our website at https://www.ashrae.org/technical-resources/technical-committees/tc-training-and-presentations
   b. TAC New Member Training – General duties /Mentors
   c. Training plans for Kansas City – TAC will be conducting a combined chairs breakfast similar to RAC liaison breakfast at the Annual Meeting in Kansas City.

O. SECTION HEAD REPORTS

Action Item 4 <Smith> Continue to work with TC 5.2 on revised scope changes that are not as controversial

   a. Proposal from MTG.OBB to become TC 1.14 – tabled in Houston – Huber & Jokar Lead
   b. Proposed Title and Scope change for TC 9.8 – AI#10 A18 – Payne Lead
   c. TC 6.6 Handbook Chapter Issue & TC 6.10 Proposed Scope Change to address Biomass – Lu lead
Section Heads reported feedback received during the section breakfast of the proposed TC mergers.

**Action Item 5**  
<Justice/Kohler/Vaughn/Hammerling> Continue to meet via conference calls monthly to keep each other updated on TAC activities. The full committee will also continue with web meetings prior to the Annual Meeting.

**Action Item 6**  
<Justice/Kohler> Continue to meet with CTTC and CEC regarding updates to the Commercialism Policy.

**P. ADDITIONAL DISCUSSION ON TC ReORG EFFORTS**

It was moved and seconded that,

(6) the term of outgoing TAC members should be extended for one additional year due to ongoing efforts being made to reorganize TC.

**Motion #6 – PASSED: 11-0-2, CNV**

Note: Above TAC motion was not actionable because ASHRAE BOD had already elected in December new members to TAC. Instead, TAC members rolling-off will be asked to serve informally as a mentor to new members for their section.

**Q. REVIEW NEW ACTION**

**ADJOURN**

MANUAL OF PROCEDURES (MOP)

For ASHRAE

TECHNICAL COMMITTEES (TC),
TASK GROUPS (TG),
MULTIDISCIPLINARY TASK GROUPS (MTG)
AND
TECHNICAL RESOURCE GROUPS (TRG)

Approved 20160625
Revised 20170128
Revised 20181019
Draft 20181212
Foreword

ASHRAE Technical Committees (TC), Task Groups (TG), Multidisciplinary Task Groups (MTG) or Technical Resource Groups (TRG) are committees that report to the Technical Activities Committee (TAC).

This Manual of Procedures (MOP) describes the methods and procedures by which the committees accomplish the duties and responsibilities assigned.

Other Society documents, including the reference appendices in this document such as the RAC Research Manual, are available for guidance as noted.

This Manual of Procedure supplements, but does not supersede the governing documents of ASHRAE such as the Certificate of Consolidation, Society Bylaws, Rules of the Board, and also higher level Manuals of Procedures for TAC and Technology Council.

Revision History
June 25, 2016 – Initial Release
January 28, 2017 – Spanish version created
October 19, 2018 – Revised to remove all references to Technical Bulletins and updated the Standards and Guidelines section for better clarity and agreement with PASA.
December 2018 Draft – Proposed addition of Section 7.4 Communications between TC/TG/MTG/TRG and other organizations.

ACRONYMS:

BOD = Board of Directors
CEC = Conferences and Expositions Committee
CTTC = Chapter Technology Transfer Committee
DOT = Director of Technology
FAQ = Frequently Asked Question
MORTS = Manager of Research and Technical Services
MOS = Manager of Standards
MTG = Multidisciplinary Task Groups
PASA = Procedures for ASHRAE Standards Actions
PDC = Professional Development Committee
PES = Proposal Evaluation Subcommittee
PMS = Project Monitoring Subcommittee
PUB = Publication Committee
StdC = Standards Committee
RAC = Research Activities Committee
ROB = Rule of Board
RTAR = Research Topic Acceptance Request
TAC = Technical Activities Committee
TC = Technical Committee
TG = Task Group
TRG = Technical Resource Group
TRP = Tentative Research Project
WS = Work Statement
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1. **General – Technical Committees**

1.1. **Committees**

1.1.1. The Technical Activities Committee (TAC) shall authorize the formation of Technical Committees (TC), Task Groups (TG), Technical Resource Groups (TRG) and Multidisciplinary Task Groups (MTG). All such committees shall be:

a) under the administrative direction of TAC
b) assigned to a Section Head

1.1.2. New Committees may be proposed to TAC using the procedure found in Appendix A.

1.2. **Purpose**

1.2.1. A TC is a committee with a defined scope of activity which is constituted to provide the Society with technical expertise on subjects within that scope of activity. TC functions may include:

a) Handbook Content Development
b) Program Development
c) Development of Publications
d) Research
e) Standards Development

1.2.2. A TG is formed when a field of interest is not covered in the scopes of existing TCs or when the field of interest encompasses the interests of more than one TC within the same Section. As required, TG functions include:

a) Handbook Development
b) Program Development
c) Development of Publications
d) Research
e) Standards Development

1.2.3. A TRG is formed when ASHRAE or its members have identified a special purpose need of the Society or the industry as a whole. The principal activities of the group are generally limited to the preparation, review, or revision of technical material. Such materials may include:

f) Handbook Development
g) Program Development
h) Development of Publications
i) Standards Development

1.2.4. An MTG is formed when the Society has determined a need for a specific activity in a field of interest to the Society.

a) It encompasses the expertise of TCs and is made up of members from two or more sections and/or from non-TC groups such as Standing Standards Project Committees (SSPC) or outside organizations.
b) Each participating TC, whose field of interest falls within the MTG defined scope, and participating non-TC group shall have a voting representative on the MTG.
c) The customary function of the MTG is to coordinate activities between the TCs and TGs represented on the MTG. However, as required by their specific charge, the functions of an MTG may include:

i) Handbook Development
ii) Program Development
iii) Development of Publications
iv) Research
v) Standards Development
d) When the MTG scope involves interactions with other Councils, those interaction activities shall be managed by the MTG Section Head and reported through TAC to Technology Council.

1.3. **Scope**
1.3.1. The scope of each TC/TG/MTG/TRG is defined generally by its title but a detailed scope shall be developed by the committee and submitted to TAC for approval. Each committee shall be responsible for monitoring of their title and scope and suggesting changes for approval.

1.3.2. An MTG scope shall also identify the purpose for which the committee was formed and its specific responsibilities with regard to the underlying committees

1.3.3. Approved scopes shall be posted on the committee website and on the ASHRAE website

1.4. Committee Organization

1.4.1. Each committee shall have a Chair and Vice Chair

1.4.2. TC 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.

1.4.3. TG, TRG and MTG committee composition shall be approved by TAC based on the group’s defined title, purpose and scope.

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

1.6. Reimbursement

1.6.1. TC/TG/TRG/MTG members are expected pay their own expenses to attend meetings, unless agreed to by ASHRAE under special arrangements

2. Members

2.1. TC/TG/MTG Chair
   a) Appointed by the TAC Chair after consultation with the Section Head
   b) Must be an ASHRAE Associate Member grade or higher for a TC or TG (but not TRG)
   c) Shall preferably have served at least one term as Vice Chair and Secretary
   d) May be appointed for one or more one-year terms, but not normally to exceed two consecutive terms.
   e) An exception for additional consecutive terms may be granted by the TAC Chair provided the committee makes a written request with justification and that request is approved by the Section Head. Such an exception will be only approved if it serves the best interest of the Society.

2.2. MTG Chair
   a) Appointed by the TAC Chair after consultation with the MTG Coordinator and the interested parties
   b) Reappointed each year
   c) No limit on the consecutive terms served
2.2.4. Reappointment only made if the member is willing to serve and it serves the best interest of the Society
2.2.5. Has voting rights

2.3. TC/TG/TRG/MTG Vice Chair
2.3.1. Is appointed by the TAC Chair from nominations made by the current TC/TG/MTG/TRG Chair and endorsed by the Section Head.
2.3.2. Must be an ASHRAE Associate Member grade or higher for a TC or TGTC/TG/TRG Vice Chair may be a corresponding member or may be a voting member
2.3.3. MTG Vice Chair has voting rights

2.4. Members
2.4.1. For a TC/TG/TRG, members are appointed as individuals and NOT as representatives of any group, organization, or employer
2.4.2. An MTG shall consist of a Voting Member for each TC, TG or non-TC group represented on the MTG
2.4.3. Members shall be willing to attend meetings of the committee at no expense to the Society unless specific other arrangements are made in the case of representative from organizations outside of ASHRAE
2.4.4. Members shall be appointed by the TAC Chair from nominations made by the current TC/TG/MTG/TRG Chair and endorsed by the Section Head. See Appendix B for the procedure
2.4.5. Each Voting Member, Corresponding Member and Provisional Corresponding Member may be assigned to a Subcommittee of the Committee and shall perform the duties that may be assigned by the Subcommittee Chair.

3. Membership Categories
3.1. General
3.1.1. Prospective Committee members shall complete an online biographical record (available at http://www.ashrae.org/).
3.1.2. A TC/TG/TRG shall consist of approximately 12 Voting Members, with a minimum of six (6) and a maximum of eighteen (18).
   a) If the committee would have only 5 Voting Members (VM), one Voting Member – Non Quorum (VMNQ) may be counted as a Voting Member in establishing the minimum number of voting members (see section 3.2.7)
3.2. TC/TG/TRG Voting Members
3.2.1. Have full voting privileges
3.2.2. Other than the TC/TG/TRG Chair, shall be appointed annually for not more than four consecutive one-year terms.
3.2.3. An exception for additional consecutive terms may be granted by the TAC Chair if the TC/TG/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.
3.2.4. Only one person from any employer, organization, university, or specific government agency may serve as a Voting Member on the same TC/TG/TRG at one time
   a) A consultant to any category in this subsection who is contracted to that organization is considered to be an employee for the purposes of determining voting status on the TC/TG/TRG if the contract provides substantially all of their consulting activity.
3.2.5. Voting Members should serve at least one term previously as an active Corresponding Member. This does not apply to voting members who have previously served as a Voting Member of this same committee
3.2.6. While there may be circumstances when a Voting Member may be appointed without previously having served on the committee, preference should be given to those who have served on the committee in a prior year as a corresponding member of that committee.
3.2.7. Voting Members have two subcategories
a) Voting Member - Quorum (VM)
   i) Regular member and always counts towards the determination of quorum for a committee meeting.
   ii) Includes all Voting Members of the committee other than those in the Voting Member - Non-Quorum category in 3.2.7 b).

b) Voting Member - Non-Quorum (VMNQ) is a special category for TC/TG/TRG members who are not able to attend every meeting due to travel costs and constraints.
   i) No more than two non-quorum voting members are allowed in each TC/TG/TRG.
   ii) A Voting Member-Non Quorum has identical responsibilities, privileges, and constraints as a Voting Member-quorum with two exceptions:
       01) A Voting Member-non-quorum is not counted against the maximum number of Voting Members cited in Paragraph 3.1.2
       02) The absence of a Voting Member-non-quorum does not affect the determination of quorum as described in section 5.

3.3. TC/TG TRG Corresponding Members
   3.3.1. Nominated by the TC/TG/TRG Chair
   3.3.2. No restrictions on the number or affiliations of nominees
   3.3.3. Expected to participate in TC/TG/TRG activities and attend meetings when possible
   3.3.4. May not vote on TC/TG/TRG business
   3.3.5. May serve on and chair TC/TG/TRG subcommittees, including Proposal Evaluation and Project Monitoring Subcommittees
   3.3.6. May vote at the subcommittee level subject to voting restrictions in Section 5
   3.3.7. May serve as Vice Chair or Secretary of a TC/TG/TRG as approved by the Chair and if they attend meetings regularly.

3.4. TC/TG TRG Provisional Corresponding Members
   3.4.1. Temporary additions to the TC/TG/TRG roster made by ASHRAE staff between roster update cycles, usually at the request of someone wanting to participate in the technical committee activities.
   3.4.2. The TC/TG/TRG Chair shall decide whether to add Provisional Corresponding Members to the roster as one of the other member categories.
   3.4.3. If the Chair takes no action on a Provisional Corresponding Member, they are dropped from the roster after two years.
   3.4.4. For purposes of committee assignments and other work “Provisional” status does not limit an individual’s active involvement in the work of the committee
   3.4.5. Have the same voting privileges as a regular Corresponding Member (Section 3.3)

3.5. MTG General
   3.5.1. TCs and Non-TC groups may be added after the MTG formation if their area of interest is later determined to also be covered by the MTG scope.
   3.5.2. The MTG Section Head will consult annually with the Chairs of the groups that are represented on the MTG to confirm that they endorse their designated representatives on the MTG

3.6. MTG Voting Members
   3.6.1. Only one person from a TC, TG or non-TC group may serve as a Voting Member representing that particular TC, TG or non-TC group on the MTG at one time
   3.6.2. Shall be reappointed each year if willing to serve and endorsed by the chair/leader of the TC or non-TC group they represent via the Society’s annual roster update process and there is no limit to 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.
   3.6.3. Outside groups wishing to be represented on an MTG with a Voting Member must provide a formal Letter of Introduction to TAC for that member to be added to the roster and shall notify ASHRAE staff when this assignment must change.
3.6.4. TC, TG, or non-TC groups shall designate their MTG Voting Member on their roster by position title; e.g., MTG.XYZ LIAISON

3.7. MTG Alternate Members
3.7.1. Are expected to participate in MTG activities and attend meetings when possible
3.7.2. May serve on and chair MTG subcommittees as defined in Section 1.2.4 and may vote at the subcommittee level as defined
3.7.3. Only have voting privileges in the main committee in the absence of the MTG Voting representative for their TC or organization
3.7.4. Nominated by the chair/leader of the TC or non-TC group they represent via the annual roster member update process
3.7.5. No restrictions on the number of alternates, however, only one person from any employer, organization, university, or specific government agency may serve as an alternate member from the same TC/TG/TRG or non-TC group at one time
3.7.6. TC, TG or non-TC groups that designate more than one alternate for an MTG will indicate on their roster the succession order of their alternates by position title; e.g., MTG.XYZ Alternate #1, #2,

3.8. Ex Officio. The following are all ex-officio members of all TC/TG/MTG/TRGs.
3.8.1. Chair of TAC
3.8.2. Section Head
3.8.3. Manager or Research and Technical Services (MORTS)
3.8.4. An ASHRAE standing committee member with duties related to the TC/TG/TRG/MTG (eg. Conferences and Expositions Committee), selected by the Chair of the standing committee
3.8.5. Ex-officio members may participate in discussions of the TC/TG/TRG/MTG but do not have voting rights

4. Responsibilities of Committee Leadership
4.1. Chair
4.1.1. Agenda
   a) At least 30 days in advance of any official meeting, prepare an agenda of the business to be conducted at the meeting and distribute a copy to those receiving a notice of the meeting
4.1.2. Minutes
   a) Ensure that draft minutes are distributed to all Committee members, guests, Section Head and MORTS no later than 60 days following any meeting. Minutes may be physical or electronic, and must be distributed whether there is a quorum or not and may be distributed by mail, email, electronic means or posting the minutes to the appropriate website or webpage and notifying all applicable parties
   b) All draft minutes distributed 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.”
4.1.3. Committee membership
   a) Recommend members according to Appendix B
   b) Develop and maintain list of prospective committee members who have indicated willingness to serve if appointed.
4.1.4. Attend Section Meeting and training sessions sponsored by TAC
4.1.5. Assign duties to Vice Chair and committee members as appropriate
4.1.6. Chair and member subcommittee appointments (Examples: Handbook, Research, Program)
4.1.7. Is the initial contact for Committee and shall have an ASHRAE email alias provided by the MORTS
4.1.8. Activities Report
a) Prepare and submit to the Section Head electronically by 9:00 pm on Tuesday at the Annual and Winter Society meetings
b) Use spreadsheet distributed by Section Head prior to meeting

4.1.9. Additional Responsibilities as required
   a) Each year prepare and transmit a list of members that can normally serve as technical reviewers grouped by technical specialty
   b) Recommend names for Awards as instructed by TAC (Appendix C)
   c) Committee objectives (5.1) as appropriate

4.2. Vice Chair
   4.2.1. In the absence of the Chair, assume the Chair at any scheduled or called meeting of the committee
   4.2.2. A vice chair, who is a corresponding member, does NOT assume the chair’s voting rights when they assume the chair position
         a) The vice chair runs the meeting only and cannot vote on motions.
         b) Tie votes or quorum problems are handled by letter or electronic ballot votes after the meeting (Section 6).
   4.2.3. At least 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 committee members.
   4.2.4. Attend Section Meetings and training sessions sponsored by TAC
   4.2.5. Committee objectives (5.1) as appropriate.

4.3. Subcommittee Chairs
   4.3.1. Chairs or their representatives, in addition to their subcommittee responsibilities, shall attend training and information meetings sponsored by related standing committees (Handbook, Program-CEC, Research, and Standards) at the ASHRAE Winter and Annual meetings

5. Committee Task Requirements
   5.1. Committee Objectives
       5.1.1. Prepared by next year’s Committee Chair and included as an attachment to the Committee Activities Report to the Section Head at the Annual Meeting
       5.1.2. Objectives should be within the committee scope and derived from:
               a) The assignments and requests referred to it by authorized committees and individuals
               b) The needs of the Society, as made known to them by other committees, officers of the Society, chapters, the current society strategic plan, and members in general
               c) Investigations and deliberations of the Committee itself.
       5.1.3. Each objective should be measurable and should include a projected completion date and other information that would clarify the intent of the objective.
   5.2. Meetings
       5.2.1. TC/TGs shall hold a meeting at the Society’s Annual and Winter meetings each year, unless granted an exception by their Section Head.
               a) TC/TG/TRG meetings held during Society meetings will usually be scheduled in the same time slot as the previous Society meeting, if one was scheduled for the prior meeting.
               b) Subcommittee meetings will not be automatically scheduled and meeting room assignments must be requested every meeting.
       5.2.2. Meeting room assignments except as noted in 5.2.1 must be requested of the ASHRAE Meetings Department at least 90 days in advance of that meeting.
       5.2.3. TRG meetings shall be held at the discretion of the Chair.
       5.2.4. MTGs should meet at least four times per year (preferably just before and after the Society Annual and Winter meetings).
Meetings can take place via conference call and/or the web with assistance from ASHRAE staff so that MTG members are free to attend their respective TC/TG meetings to discuss MTG coordination plans for feedback and direction.

5.2.5. Attendance at Committee and subcommittee meetings, except as allowed for by executive session procedures, is open, on a space-available basis, for observation by directly and materially interested persons who are not members of the committee.
   a) Executive session may be invoked after a request to do so from a committee (or subcommittee) member is made in an open session, and approved by a majority vote.
   b) Any member or guest who is the principal investigator, or whose institution, organization, or company is the research agency for a proposed project shall be absent during the final deliberations and voting on that proposal or on other proposals which are in direct competition.

5.2.6. Interim meetings may be held outside of the two Society meetings at the discretion of the Chair.
   j) Subcommittees are encouraged to have interim meetings as needed subject to the same rules and constraints.

5.2.7. Notice of meetings
   a) Committee Chair must advise the full committee roster and the MORTS of all committee and subcommittee meetings, web meetings or teleconferences that take place between Society Meetings.
   b) The MORTS must be notified at least 30 days before in-person meetings and 14 days before web meetings and teleconferences to permit the MORTS 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.

5.2.8. If it is not possible to schedule meetings during Society meetings, the Chair is permitted to call meetings, with the permission of the Section Head, at other times and places.
   a) Any expense for meeting rooms provided at times other than Society meetings must be borne by the members unless authorized by TAC or the Director of Technology (DOT).
   b) TC/TG/MTGs that make a practice of holding their meetings at times other than Society meetings shall provide representation during the Society meetings at functions as requested by the Section Head.

5.2.9. Research projects consideration, either solicited or unsolicited, at regular Committee meetings
   a) Each proposer present should be allowed to speak on behalf of his proposal, if they desire.
   b) The time allotted for such presentations shall be at the discretion of the Committee Chair.

5.3. Minutes of official meetings
   5.3.1. Must include votes and results of all motions in areas of responsibility.
   5.3.2. Negative voters shall be given a chance to explain their negative votes and have them included in the minutes.
   5.3.3. Generally, do not include detailed discussion of topics but include decisions and action items.
   5.3.4. Subcommittee minutes and reports may be included in the main committee minutes or may be separate at the discretion of the committee secretary.

5.4. Technical Responsibility
   5.4.1. To advise, assist, and carry out assignments from TAC on technical matters and emerging technologies related to its scope.
   5.4.2. Respond to requests for assistance with technical matters, review technical papers, develop information, or prepare technical material or special publications by any of:
   a) Research Administration Committee (RAC)
b) Handbook Committee
c) Standards Committee (StdC)
d) Conferences and Expositions Committee (CEC)
e) Chapter Technology Transfer Committee (CTTC)
f) Publications Committee (PUB)
g) Director of Technology (DOT)
h) Manager of Research and Technical Services (MORTS)
i) Manager of Standards (MOS)

5.4.3. Technical inquiries shall be handled expeditiously.

5.5. Handbook

5.5.1. Each TC/TG/TRG is charged with the responsibility of reviewing Handbook chapters within its field of interest and with making appropriate recommendations to the Handbook Committee and the responsible TC, TG, or TRG for a specific chapter(s).

5.5.2. The TC/TG/TRGs are responsible for the technical content of these chapters, but review and revision must be coordinated with the publication schedule established by the Handbook Committee. The most authoritative reference for TC/TG/TRG handbook responsibilities and procedures is the Handbook Authors and Reviser’s Guide.

5.5.3. MTGs review Handbook chapters within its field of interest and make appropriate recommendations if this responsibility is part of its scope.

5.6. Conferences and technical meetings

5.6.1. TC/TG/TRGs shall encourage the preparation and submission of technical materials for presentation at meetings.

5.6.2. TC/TG/TRGs shall propose to the Conferences and Expositions Committee suggestions for
   a) program tracks
   b) Specialty conferences
   c) if requested, shall assist in the development of such items
   d) subjects for technical and conference papers, seminars, forums and other programs

5.6.3. MTGs shall also make these suggestions if this responsibility is part of its scope.

5.7. Standards and Guidelines

5.7.1. TC/TG/TRGs may request the development of and support the need for a particular Standard or Guideline through the Standards Committee.

5.7.2. MTGs may request the development of and support the need for a particular Standard or Guideline through the Standards Committee, if this responsibility is part of its scope.

5.7.3. A TC/TG/TRG/MTG may recommend a potential Project Committee Chair of a new Standard or Guideline for consideration by Standard or Guideline Chair, if it is the cognizant TC/TG/TRG/MTG.

5.7.4. A TC/TG/TRG/MTG may recommend a potential Project Committee members of a new Standard or Guideline for consideration by Standard or Guideline Chair, if it is the cognizant TC/TG/TRG/MTG.

5.7.5. A TC/TG/TRG/MTG may recommend a potential non-voting TC/TG/TRG/MTG liaison to a Standard or Guideline Project Committee for consideration by the Chair of that Standard or Guideline Project Committee, if it is the cognizant TC/TG/TRG/MTG for that Standard or Guideline or if the TC/TG/TRG/MTG has relevant expertise in the subject matter.

5.7.6. During Advisory or Publication Public Review of a Standard or Guideline, a TC/TG/TRG/MTG may submit a review comment that it has developed and endorses.

5.7.7. A TC/TG/TRG/MTG may submit a change proposal to recommend changes to a Standard or Guideline on continuous maintenance.

5.7.8. The consensus body solely responsible for the technical content of a Standard or Guideline is the Standard or Guideline Project Committee. A TC/TG/TRG/MTG is not empowered to initiate a draft of a Standard or Guideline for the Society nor does it have the approval rights over the work done by Standards or Guideline Project Committees.
5.7.9. TC/TG/TRG/MTGs shall review and recommend Standards or Guidelines related actions stated in Section 6.2 when requested by the Manager of Standards. All other TC/TG/TRG/MTG actions that are related to Standards and Guidelines, as described in Sections 5.7.3 through Section 5.7.7, shall be approved by the TC/TG/TRG/MTG using a simple majority vote, as stated in Section 6.4.

5.7.10. The most authoritative reference for TC/TG/TRG/MTG Standard and Guideline responsibilities and procedures is the Procedures for ASHRAE Standards Actions (PASA).

5.8. Research

5.8.1. Responsibility
   a) TC/TGs shall, in general, be responsible for research arising or related to their respective areas of interest, including emerging technologies and shall develop and recommend to RAC specific topics for research within its scope that are needed to provide new information or to improve or expand existing information.
   b) TRGs shall report the need for research to the RAC Liaison assigned to their section.

5.8.2. Approval of Project Evaluation Subcommittee (PES) and Project Monitoring Subcommittee (PMS) as recommended by the Chair of the TC/TG and approved by the Section Research Liaison

5.8.3. The TC/TG must approve the project’s final report for publication by a 2/3 affirmative vote.
   a) Results of vote must be included in minutes for that meeting.

5.8.4. MTGs shall report the need for research and help coordinate the development of this research through the TCs and TGs that comprise the MTG, if the scope allows for this responsibility.

5.8.5. The most authoritative reference for TC/TG research responsibilities and procedures is the RAC Research Manual found on the ASHRAE Website under the “Research” tab. (See Appendix D for procedures overview and deadlines)

5.9. Chapter Technical Programs and Publications

5.9.1. Cooperate with local chapters in planning and developing chapter technical programs, and in developing Chapter Technical Publications when requested to do so by the Section Head.

5.9.2. MTGs shall support these types of requests through the TCs and TGs that comprise the MTG, if the scope of a MTG allows for this responsibility.

5.10. Written Material

5.10.1. Committees are responsible for all written material that results from activities carried out under its authority.

5.10.2. Review and evaluate submitted technical and conference papers in a timely manner upon request

5.10.3. When such material is distributed to individuals or committees, they shall be informed that the material is:
   a) The property of ASHRAE
   b) Not to be reproduced or otherwise used prior to publication
   c) To be returned upon request

5.10.4. Recommend to liaison (copy to Section Head) special publications where material is unsuited for Regular Society publications.

5.10.5. Include the statement in Appendix E on all draft documents including special publications, position documents, handbook chapters, technical papers, and research reports
5.10.6. A final copyright notice will be added to any documents offered for sale by the Publications Department.
5.10.7. Once a document has been published, the TC must destroy/delete any draft review versions.

5.11. Website
5.11.1 TC/TG/TRGs shall maintain current information about its activities on its website and is responsible for the content of all material on its website
5.11.2 TC/TG/TRGs/MTGs must ensure that all materials posted on their website meet the policy outlined in the ASHRAE document titled “ASHRAE Policy and Procedure for Format, Activity, and Content of Web Sites for ASHRAE Groups” that is posted on the Electronic Communications Committee website (https://www.ashrae.org/society-groups/committees/electronic-communications-committee). This policy covers all material that is posted on the committee website including presentations, papers and documents produced by the committee. This policy includes the directive: “Statements and presentations may not appear on web sites that state, purport, or imply that they present ASHRAE positions, policy, or opinions”.
5.11.3 Posting presentations
a) Seminar presentations that have previously been presented at ASHRAE meetings must be approved for website posting by a simple majority vote of the sponsoring committee
b) Seminar presentations shall not be posted until the TC/TG/TRG Chair receives written/electronic permission from the presentation author
5.11.4 MTGs shall report information about its current activities to ASHRAE staff for posting on a page of the ASHRAE website, if the scope of a MTG allows for this responsibility.

5.12 Frequently Asked Questions (FAQ)
5.12.1 As requested, members of a TC/TG/TRG shall compose answers to or review FAQ assigned to their committee.
5.12.2 Each FAQ should be annually reviewed to ensure that references and technologies are current

5.13 Special Publications
5.13.1 Broad based publications peer review is described in Appendix F

5.14 Professional Development Course
5.14.1 TC/TGs may contribute to the professional development activities of the Society through a TC/TG Professional Development Committee (PDC) Liaison appointed by the committee Chair
5.14.2 The duties of a PDC Liaison are described in Appendix G

6. Voting
6.1. Quorum
6.1.1. Physical meetings and Remote Participants in Meetings (RPM)s
a) When a Voting Member-Non Quorum is absent, their position is not included in the number of voting members when determining quorum.
b) A member must be actually or personally present in a Physical meeting or participating in a Remote meeting session (RPM) setup by the committee through ASHRAE for that meeting to vote or count towards quorum.
c) Quorum to conduct business at meetings is established when the number of voting members present is four (4) or exceeds 1/2 of the number of total voting members of the committee, whichever is larger, subject to the section 6.1.1.a exception.
6.1.2. Letter or Electronic Ballots
a) The number of voting members (quorum and non-quorum) responding must exceed one-half of the total number of voting members (quorum and non-quorum) and approvals shall be as described in the following sections.
b) Shall be distributed by the TC chair to all voting members and shall specify the response deadline, which must allow a reasonable time period for responses (1 week minimum – 2 weeks preferred).

6.1.3. Approval of Work Statements, Research Proposals, Final Reports, Handbook Chapters, Special Publications, and recommendations to the Standards Committee concerning the need to initiate reaffirmation, revision, (based on updated references or adding a second system of units to a standard, thereby making the standard useable in either SI or IP units) or withdrawal of an existing Standard or Guideline for which it is the cognizant TC/TG/TRG/MTG, or to request the development of a new Standard or Guideline.

6.1.4. The number of affirmative votes required for approval is four (4) or at least 2/3 of the voting members expressing a preference, whichever is larger (For or against the motion – Abstentions or non-responses don’t count.)

6.1.5. The motion and results of the vote shall be recorded in the minutes. If electronic ballot, results shall be reported and recorded at the next meeting of the committee.

6.1.6. The reasons for negative votes and abstentions on these types of motions shall be recorded and transmitted along with the motion to the next approving body (RAC, StdC) as part of the background information.

6.2. Parliamentary procedure motions:

6.2.1. The number of affirmative votes required for approval shall be based on the voting members expressing a preference (For or against the motion – Abstentions don’t count.) and the Parliamentary Motion Guide (Appendix H).

6.3. Other motions

6.3.1. The number of affirmative votes required for approval is three (3) or more than 1/2 of the voting members expressing a preference, whichever is larger (For or against the motion – Abstentions or non-responses don’t count.)

6.3.2. The motion and results of the vote shall be recorded in the minutes. If electronic ballot, results shall be reported and recorded at the next meeting of the committee

6.4. Conflict of interest

6.4.1. In the event a TC/TG/MTG/TRG is unable to meet voting requirements due to conflicts of interest, the issue shall be referred to TAC or another appropriate standing committee that has a direct interest in the matter (RAC, Handbook, Standards) for action.

6.5. Proxy votes

6.5.1. Absent voting member are not permitted to vote by proxy except for MTG voting members

6.6. Negative Letter/electronic ballot Committee and Subcommittee Votes

6.6.1. Members casting negative votes shall be requested to comment on reasons for their negative votes and if no reasons are provided the ballot is final.

6.6.2. If the ballot passes with one or more negative votes with comments

a) The results shall be held in abeyance until comments, Chair’s rebuttal (if any), and letter ballot results are transmitted to all eligible voters

b) Voters are given an opportunity, not to exceed two weeks, to change their votes or to vote for the first time. When this opportunity to vote has expired, the results shall be final.

c) The final letter ballot results and all negative vote comments received shall be provided to the voting members and included when submitting for subsequent approval steps.

6.7. Subcommittee vote

6.7.1. Any person can serve at the subcommittee level, but only one person from any employer, organization, university, or specific government agency is eligible to vote on the same TC/TG/TRG subcommittee at one time.

6.8. Guests

6.8.1. Guests may participate in the discussion at the discretion of the Chair, but none shall have voting rights
7. **Contacts outside the Society between ASHRAE and other organizations**

7.1. **Official Liaisons**

7.1.1. Official Liaison appointments to represent the Society in a specific technical area (except standards) shall be made by the TAC Chair with the advice of the TC/TG/MTG/TRG at interest, with the advice of the Director of Technology, and with the approval of the Coordinating Officer.

7.1.2. Official liaisons shall be known as TAC Inter-Society Liaisons. TAC Inter-Society Liaisons are required to submit a status report to the TAC Liaison Coordinator at least 30 days prior to the Annual meeting.

7.1.3. Instructions for voting as a TAC Intersociety Liaison shall be given to them by TAC and their committee with the proviso that, if there is a new activity, this will first be reported to TAC and 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 TAC and the committee involved to instruct the TAC Intersociety Liaison as to how to vote to accomplish this.

7.1.4. Procedures:

a) TC/TG/MTG/TRGs shall cooperate with the TAC Liaison Coordinator to make him/her aware of other organization activities, which are of interest to ASHRAE. When the TC/TG/MTG/TRG believes it is in the best interest of ASHRAE to liaise with another organization, the TC/TG/MTG/TRG shall recommend to the TAC Liaison Coordinator, that such an official liaison be established.

b) In cooperation with the TAC Liaison Coordinator, the TC/TG/MTG/TRG Chair shall recommend a liaison to another organization from the membership to the TAC chair for consideration.

c) The TC/TG/MTG/TRG shall identify in writing the organization and the TC/TG/MTG/TRG member who they recommend liaise with that other organization to the TAC Liaison Coordinator. The complete organization name and its location must be used to identify the organization.

d) Changes in participants may be made by the TC/TG/MTG/TRG Chair in consultation with the TAC Liaison Coordinator and approval of TAC chair and others noted above.

7.2. **Unofficial Liaison appointments**

7.2.1. May be made by a TC/TG/MTG/TRG, at its discretion, for one or more of its members to act as liaison to other organizations for the purpose of gathering and disseminating information between the two organizations.

7.2.2. **Duties and Responsibilities of Unofficial Liaisons**

a) The designated participant is an individual member of the TC/TG/MTG/TRG and, in this capacity, expresses individual opinion, not that of ASHRAE, TAC or the TC/TG/MTG/TRG.

b) The Liaison shall advise the organization, in writing, as follows:

“I have been appointed as the ASHRAE TC/TG/MTG/TRG Liaison to your organization. My participation will be based on my professional opinion and will not necessarily be reviewed by the Society or constitute a position or a standard in the matter being discussed.”

7.3. **Liaison Expense reimbursement**

7.3.1. Both Official and Unofficial Liaisons shall have cognizance of their particular subject areas and pay their own expenses.

7.4. **Communications between a TC/TG/MTG/TRG and other organizations**

7.4.1. Contacts between a TC/TG/MTG/TRG and organizations outside of ASHRAE, wherein an opinion or position is stated, and without Society endorsement must make it clear that the TC/TG/MTG/TRG is speaking on behalf of that TC/TG/MTG/TRG only. There shall not be any implication of Society endorsement. A disclaimer such as the following shall
be included: *This information is the consensus opinion of TC/TG/MTG/TRG only and does not represent an ASHRAE position.* No one person can speak on behalf of TC/TG/MTG/TRG without consensus of TC/TG/MTG/TRG. An ASHRAE letterhead shall *not* be used for such communications as it may imply Society endorsement. Your Section Head shall be copied on any such communication with other organizations.

**7.4.2.** If one or more TC/TG/MTG/TRG’s wish to communicate with organizations outside of ASHRAE, and imply ASHRAE Society endorsement or express an ASHRAE position that is not already covered in an ASHRAE approved position document, then ALL the following approvals are needed: TAC, TechC Doc. Review Subc., TechC, BOD ExCOM, and the ASHRAE President. Only the ASHRAE President speaks for ASHRAE.
7.4.3. Appendix A - Procedure for Proposing New Technical Committee or Multidisciplinary Task Group

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1. Complete the TAC TG/TRG Proposal Form or MTG Proposal Form
2. Return completed forms to the Manager of Research and Technical Services (MORTS).

The electronic forms may be downloaded from

https://www.ashrae.org/standards-research--technology/technical-committees/tc-forms-and-documents

MTGs may be proposed by the BOD or Technology Council to address a Society need.
1. TAC works in consultation to develop the MTG scope and roster.
Appendix B - Procedure for TC/TG/TRG Membership Update

(appendix back to Table of Contents)

1. **Roster Update Workbook**
   1.1. At least three weeks prior to the start of the Society Winter Meeting, the Administrative Assistant for Research and Technical Services sends each TAC Section Head a Roster Update Workbook for each committee in their section. The Section Head distributes them to each TC/TG/TRG Chair in the section.
   1.2. The Workbook contains information on all current members of the committee and leadership positions.
   1.3. The Committee Chair reviews the Workbook, making changes and additions as required (See Section 2 below).
   1.4. The updated Roster Update Workbook must be emailed to the appropriate Section Head.
      a. TC/TG/TRG - no later than 9:00 pm on Tuesday of the Winter Meeting.
      b. MTG - no later than May 15th
      c. An alternative submittal method may be used if approved by the Section Head in advance.

2. **Roster Update Workbook Review and Update**
   2.1. Instructions for updates and changes are included in the workbook. Please follow them and if you don’t understand something, contact your Section Head for help.
   2.2. Add new members and liaisons in the designated area
      a. Provide the name of the person and
      b. Either the person’s ASHRAE member number or complete address and telephone number
   2.3. Make changes and corrections to the current membership as required
      a. Officers Liaisons and subcommittee chairs
      b. Member voting status changes – mark the change as instructed
      c. Member deletions – mark the change as instructed, **do not delete** the name from the worksheet
   2.4. Approve the update by entering your name and date in the worksheet

3. **Section Head Approval**
   3.1. Review and approve the Roster Update Workbook or return it to the Committee Chair for corrections
      a. For MTG - ensure that the conditions for MTG membership described in the TC/TG/MTG/TRG MOP are met
      b. For MTG - confirming, with the help of staff, that each voting member is endorsed via the TC roster by the chair/leader of the TC or non-TC group they represent on the MTG.
      c. When correct, the Section Head approves the workbook by entering their name and date in the worksheet
   3.2. After approval, send the Roster Update Workbook to the Administrative Assistant for Research and Technical Services no later than February 28.

4. **Draft Roster for the next Society year**
   4.1. Staff creates the draft roster and sends a first draft to the Section Head.
   4.2. Section Head reviews the draft roster against the input that was provided in the approved Roster Update Workbook.
a. If no changes are necessary, the Section Head approves the draft and informs staff
b. Corrections shall be sent to staff within two weeks.
c. Repeat until the Section Head has approved the draft roster.

4.3. Roster changes after the final roster has been approved shall be made using the Emergency Roster Change Form (https://www.ashrae.org/standards-research--technology/technical-committees/tc-forms-and-documents) and are subject to approval by the Section Head.

5. Final Roster for the next Society year

5.1. Staff prepares the final roster for each committee in PDF and MS-Excel format.
5.2. The Section Head reviews the final roster.
5.3. Staff posts the documents as appropriate and distributes them to each committee member prior to July 1.

6. Roster distribution outside committee

6.1. Complete Roster information shall not be posted on publicly-accessible areas of TC/TG/TRG/MTG websites subject to items 6.2 and 6.3.
6.2. For more than the following information to be included on the TC/TG/TRG public website, the TC/TG/TRG Chair shall solicit and receive approval in writing from the affected member(s):
   a. Name
   b. Position on Committee
6.3. The Committee Chair must approve the distribution of any other roster information to anyone who is not listed on the roster of the TC/TG/TRG subject to the written permission of the affected member(s).
1. **THE RALPH G. NEVINS, JR. PHYSIOLOGY AND HUMAN ENVIRONMENT AWARD**

1.1. The award shall be presented for significant accomplishment in the general area of man’s response to the environment, which may include thermal, moisture, visual, acoustical, toxic, allergic, olfactory, vibrational, and microbiological effects on man’s health, comfort, and well-being.

1.2. The award shall be made to a promising investigator, preferably less than 40 years of age, whose accomplishments are represented by significant papers published by ASHRAE or by Journals of an ASHRAE International Associate for the five year period previous to the award.

1.3. The form of the award shall be a certificate and an honorarium of $300.00. The certificate shall be suitably inscribed with the awardee’s name, the area of accomplishment, and the name of the award.

1.4. Recommendation for a receipt of the award shall be made by a Selection Subcommittee of TC 2.1, Physiology and Human Environment, or its successor committee, approved by TC 2.1 and forwarded to the Honors and Awards Committee for final approval during the ASHRAE Winter Meeting. Presentation of the award shall be made once each year at the Plenary Session of the ASHRAE Annual Meeting if a qualified candidate is identified.

1.5. Soliciting funds for the award is the responsibility of TC 2.1. Income shall be the source, without use of the principal, to fund the award including the honorarium. The amount may be adjusted from time to time by TC 2.1 with the administrative approval of the Honors and Awards Committee.

2. **THE GEORGE B. HIGHTOWER AWARD**

2.1. The purpose of the award is to recognize each year an individual for his/her excellence in volunteer service to the area of TC/TG/MTG/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, technical activities at the TC/TG/MTG/TRG level.

2.2. Candidates for this award are nominated by a TC/TG/TRG in which they have demonstrated exceptional service excluding research and standards activities. TAC and Technology Council members, and TC/TG/TRG Chairs, are not eligible during the terms they serve on the respective committees. Past recipients of the award are not eligible.

2.3. Applications are due from TC/TG/TRG Chairs to their Section Head by September 1 each year. Details and an application form can be found on the ASHRAE website under the Technical Committees page. [https://www.ashrae.org/technical-resources/technical-committees/tc-forms-and-documents](https://www.ashrae.org/technical-resources/technical-committees/tc-forms-and-documents)

2.4. The recipient will be selected at the fall TAC meeting and the award will be presented at the Winter Meeting.

2.5. A MTG will participate in the George B. Hightower award through one or more TCs/TGs that comprise the MTG.

2.6. **ELIGIBILITY REQUIREMENTS**

2.6.1. Nominees must have earned a minimum of 10 points during their career on TC/TG/TRG/MTGs as defined to be eligible for the award.
2.6.2. 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.

3. **THE SERVICE TO ASHRAE RESEARCH AWARD**

3.1. The purpose of the award is to recognize each year an individual for his/her excellence in volunteer service to the area of Society research. The award will serve to heighten general membership awareness of, and interest in, research activities at the TC/TG level.

3.2. Candidates for this award are nominated by a TC/TG in which they have demonstrated exceptional service in the area of research. RAC members, TC/TG Chairs, and researchers on the project in question are not eligible.

3.3. Applications are due from TC/TG Chairs to their Research Liaison by September 30th each year. Additional details on the award and an application form can be found in the RAC MOP. [https://www.ashrae.org/technical-resources/research/research-grants-awards](https://www.ashrae.org/technical-resources/research/research-grants-awards)

3.4. The recipient will be selected at the fall RAC meeting and the award will be presented at the Winter Meeting.

3.5. A MTG will participate in the ASHRAE Research award through one or more TCs/TGs that comprise the MTG.

4. **THE STANDARDS ACHIEVEMENT AWARD**

4.1. The purpose of the award is to recognize excellence in volunteer service to the area of Standards. It will serve to heighten general membership awareness of, and interest in, standards activities.

4.2. The award is open to ASHRAE members who have demonstrated outstanding achievement in the ASHRAE standards development process. The nomination form can be found on the ASHRAE website at: [https://www.ashrae.org/membership/honors-and-awards](https://www.ashrae.org/membership/honors-and-awards). Standards Committee and Technology Council members are ineligible for receipt of the Standards Achievement Award during the terms they serve on the respective committees.

4.3. Nominations are solicited during the first half of the Society year. The Standards Committee will select the recipient and notify the Honors and Awards Committee of its selection at the ASHRAE Winter Meeting.

A typical award application will include a letter of nomination outlining eligibility and a nomination form. Additional details on the award and an application form can be found in the Standards Committee MOP.

A MTG will participate in the Standards Achievement award through one or more TCs/TGs that comprise the MTG.
Appendix D- Overview of Research procedures

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1. **Procedures, forms and evaluation criteria** are described in detail in the *Research Manual* found on the ASHRAE website (https://www.ashrae.org/standards-research--technology/research)

2. Seek guidance from the MORTS in the development and execution of a research project when needed

3. **Research Topic Acceptance Request (RTAR)**
   3.1. Must be submitted to the MORTS for consideration by RAC by:

<table>
<thead>
<tr>
<th>Approval To MORTS</th>
<th>RAC Consideration</th>
</tr>
</thead>
<tbody>
<tr>
<td>No later than March 15</td>
<td>Spring Meeting of RAC (usually in April)</td>
</tr>
<tr>
<td>No later than May 15</td>
<td>Saturday Meeting of RAC at Annual Meeting</td>
</tr>
<tr>
<td>No later than Aug. 15</td>
<td>Fall Meeting of RAC (usually early October)</td>
</tr>
<tr>
<td>No later than Dec. 15</td>
<td>Saturday Meeting of RAC at Winter Meeting</td>
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</table>

4. **Work Statements (WS)**
   4.1. Accepted and Prioritized RTARs are developed by the TC/TG/MTG into work statements. Prioritized RTARs should be developed as quickly as possible.
   4.2. New or revised work statements and coversheets for research projects recommended by a Committee must be submitted to the MORTS by:

<table>
<thead>
<tr>
<th>Approval To MORTS</th>
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</tr>
</thead>
<tbody>
<tr>
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<td>Saturday Meeting of RAC at Winter Meeting</td>
</tr>
</tbody>
</table>

5. **Tentative Research Projects (TRP)**
   5.1. *Proposal evaluation*
   5.1.1. TRPs are work statements that have been approved by RAC for bid
   5.1.2. The deliberation of research bids must be held in executive session (Only individuals listed on the Committee roster should be present).
   5.2. In general, members who are principal authors of work statements or (RTARs) are not encouraged to bid for the resulting project.
      a. If they do, they must identify themselves as such in their proposals
      b. The evaluators will satisfy themselves that these preparers did not gain an unfair advantage.
   5.2.1. Include reasons for all negative votes and abstentions on the *Summary Sheet for Reporting Evaluation of Proposals* form along with the committee vote.
   5.2.2. All information concerning the bids is to remain confidential until the project has been approved for funding by Research Administration Committee (RAC), and depending upon the project’s funding level Technology Council ($100k to $200k) and the Board of Directors (BOD) (all projects <$200k)
5.2.3. **In order for action to be taken on that project at that meeting, a *Summary Sheet for Reporting Evaluation of Proposals* must be completed for each project bidding and placed in the MORTS’ lockbox outside the headquarters room**

- by Tuesday 11:59 pm at a Society’s Annual or Winter meeting
- or transmitted via e-mail (MORTS@ashrae.net)
- or sent to the MORTS via e-mail at least one week prior to the Fall or Spring RAC meetings.

5.3. TRPs are released for bid when adequate funding is available.

6. **Proposal Evaluation Subcommittee (PES)**

   6.1. Appoint when the work statement is submitted
   
   6.2. Recommended by the Chair of the TC/TG/MTG and approved by the Section Research Liaison
   
   6.2.1. Minimum of 3 and maximum of 5 members including the PES Chair
   
   6.3. The PES is responsible for evaluations of all proposals received and contractor recommendation
   
   6.4. The MORTS and Section Research Liaison shall be ex-officio non-voting members

7. **Project Monitoring Subcommittee (PMS)**

   7.1. The PES shall change to the Project Monitoring Subcommittee (PMS) once the project has been awarded and a contract finalized with the selected contractor
   
   a. It is desirable, but not required, that PMS members should have been members of the PES.
   
   b. Recommended by the Chair of the TC/TG/MTG and approved by the Section Research Liaison
   
   c. No individual who bid on a project, or who is a member of an organization that bid on a project (whether successfully or unsuccessfully), may serve on the PMS of that project
   
   7.2. The MORTS and Section Research Liaison shall be ex-officio non-voting members
   
   7.3. Provides guidance and direction to the research project contractor
   
   7.4. Critically reviews progress of each project to establish validity of data and conformance with the project schedule
   
   7.5. Notifies RAC through its Research Liaison of any problems relating to scope, performance, and schedule
   
   7.6. The PMS shall respond to requests of the Contractor within 30 days.
   
   7.7. The Principal Investigator shall be required to attend at least one meeting of the sponsoring TC/TG/MTG each contract year.
   
   7.8. Complete the Disposition of ASHRAE Sponsored Research Results form, at the completion of the project (see the RAC Research Manual)

8. **Approval**

   8.1. The responsible TC/TG/MTG shall critically review and evaluate any reports (interim or final) submitted by the Contractor and inform the MORTS in writing as to its acceptability within 90 days or the time limit stated in the contract.
   
   8.2. The TC/TG/MTG must approve the project’s final report for publication by a 2/3 affirmative vote.

9. **Research Results**

   9.1. Research results contained in quarterly progress reports or delivered by the contractor in semi-annual presentations to the TC/TG/MTG should be considered interim and tentative and shall be kept confidential. Results shall not be released or discussed outside of the cooperating TC/TG/MTG(s) until the final report is delivered and approved.
9.2. The Society owns all rights in any reports, papers, and other data resulting from its sponsored research, and even after publication, such information may be published by others only with the written approval of the Society.

9.3. Papers prepared to report the results of research by the Society shall be reviewed and approved by one or more responsible members selected from the PMS prior to presentation and/or publication.

9.4. The Society shall publish the results of research which it sponsors. Every effort must be made to obtain a paper and final report which can be published, even if the paper is not presented on a program. In such event, written comments of the responsible TC/TG/MTG and/or others shall be published with the report to support or question its conclusions.

9.4.1. When a report of Society research has been approved by a TC/TG/MTG or at other appropriate times, RAC may request through the MORTS that an article suitable for publication in the ASHRAE Journal/Insights be prepared by the research contractor. Following preparation, the normal Journal/Insights review process shall be followed.

10. Unsolicited Research Proposal (URP)

10.1. Unsolicited Research Proposals are received by MORTS and the Research Administration Committee (RAC) and assigned to a TC for evaluation when appropriate.

10.2. If the RAC liaison determines that the URP addresses a topic already contained in the ASHRAE Research Implementation Plan or an RTAR under development within a TC, then the liaison should recommend to RAC that the proposal be rejected and returned to the proposer unless the interests of the Society are better served by its consideration.

10.3. If the URP is assigned to a TC/TG/MTG, the Chair of that committee shall form a project evaluation committee, headed by the Committee Research Subcommittee Chair, as described in appendix D, section 6 to evaluate the URP and make a recommendation to the Research Liaison and MORTS.

10.4. Evaluation criteria are found in the Research Manual.
Appendix E – Copyright for Draft Documents

“Copyright symbol [current year] ASHRAE. All rights reserved. This is a draft document intended for review only by the cognizant ASHRAE groups and other designated reviewers and is not for distribution to any private interests, individuals, or third parties that are not designated as ASHRAE reviewers for this document. This document may not be distributed in whole or in part in either paper or digital form without the express permission of the chair of the committee originating this document. The appearance of any technical data or editorial material in this draft document does not constitute endorsement, warranty, or guaranty by ASHRAE of any product, service, process, procedure, design, or the like, and ASHRAE expressly disclaims same.”
Appendix F - Broad Topic Special Publications Peer Review Procedure

1. When the TAC Chair, in consultation with TAC members, determines that a newly proposed special publication requires a broader peer review by members of other TC/TG/MTG/TRGs:
   1.1. the Chair of the TC/TG/MTG/TRG sponsoring the publication shall be notified in writing to implement the following procedure for broad peer review:
      1.1.1. Transmit to all TC/TG/MTG/TRG Chairs and members of TAC through ASHRAE staff the working title, purpose, and scope of the proposed new special publication.
      1.1.2. Request in the transmittal message that interested TC/TG/MTG/TRGs recommend a candidate to possibly serve as a TC/TG/MTG/TRG representative on the subcommittee developing and/or reviewing the special publication.
      1.1.3. The sponsoring TC/TG/MTG/TRG Chair shall appoint the subcommittee for the special publication with the approval of the Section Head.
      1.1.4. Transmit to all TC/TG/MTG/TRG Chairs and members of TAC through ASHRAE staff a list of dates when a draft copy of the special publication will be available from the sponsoring TC/TG/MTG/TRG for open review comments consistent with the following development milestones:

<table>
<thead>
<tr>
<th>% Completion</th>
<th>Purpose of Open Review</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>Major conceptual concerns</td>
</tr>
<tr>
<td>80</td>
<td>Errors and omissions</td>
</tr>
<tr>
<td>100</td>
<td>Factual errors</td>
</tr>
</tbody>
</table>

      1.1.5. The window of opportunity for open review of the drafts and comment submissions shall be two weeks.

2. The subcommittee for the special publication shall collect, group (where possible), and summarize comments that are received during the open review periods and issue a document listing the summarized comments and the subcommittee’s responses to them to all TC/TG/MTG/TRG Chairs and members of TAC through ASHRAE staff.

3. TAC may reject the draft and direct changes by the sponsoring subcommittee to insure broad Society acceptance of the proposed publication.
Appendix G - Duties of the TC/TG Professional Development Committee (PDC) Liaison

1. Coordinate with the TC/TG Handbook, Research, Standards, and Program Subcommittees to solicit ideas for and coordinate the development of new professional development courses related to the current activities of the TC/TG.

2. In cooperation with the TAC Liaison Coordinator, investigate the feasibility of developing joint courses or of combining existing similar courses with other TC/TGs and institutions. As needed to facilitate this activity and support the PDC Liaison, the TC/TG Chair shall assign TC/TG members to act as course reviewers.

3. At least 30 days prior to each Annual and winter meeting, the PDC Liaison shall submit an activities summary report to the TC/TG/MTG Chair with a copy to the PDC Chair.

4. Attend PDC meetings upon invitation and provide a detailed report on specific topics if requested.

5. Unless the scope of a MTG allows for this responsibility, MTGs shall propose the development of Professional Development Courses through the TCs and TGs that comprise the MTG.
Appendix H - Parliamentary Motions Guide

*(back to Table of Contents)*

Based on *Robert's Rules of Order Newly Revised (10th Edition)*

The motions below are listed in order of precedence (top to bottom). Any motion can be introduced if it is lower on the chart than the pending motion.

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Bring business before the assembly (a main motion)</td>
<td><em>I move that …</em> OR <em>I move to ...</em> (The lowest rank of motions)</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Majority</td>
</tr>
<tr>
<td>Kill the main motion</td>
<td><em>I move that the motion be postponed indefinitely</em> (May be applied only to main motions)</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Majority</td>
</tr>
<tr>
<td>Amend wording of a motion</td>
<td><em>I move to amend the motion by …</em> (Amend by insert, strike out, strike out and insert, substitute [a whole paragraph or section])</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Majority</td>
</tr>
<tr>
<td>Refer to a committee</td>
<td><em>I move to refer the motion to …</em> (Places business in the hands of a few)</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Majority</td>
</tr>
<tr>
<td>Postpone definitely</td>
<td><em>I move to postpone the motion to …</em> (If passed, the subject cannot be taken up before the set time except by 2/3 vote)</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Majority</td>
</tr>
<tr>
<td>Limit or extend debate</td>
<td><em>I move that debate be limited to …</em> (Not allowed in committees)</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>2/3</td>
</tr>
<tr>
<td>Close debate / stop discussion</td>
<td><em>I move the previous question or I move to stop discussion and vote</em> (Requires a second and a 2/3 vote. A member calling out “question” does not require action by the chair. Previous Question is not allowed in committee)</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>2/3</td>
</tr>
<tr>
<td>Lay aside temporarily</td>
<td><em>I move to lay the question on the table</em> (Allows more urgent business to be acted on. Is not used to “kill” a motion or to delay action on the motion)</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Majority</td>
</tr>
<tr>
<td>Follow agenda</td>
<td><em>I call for the order of the day</em> (Forces a meeting to return to the order of business or agenda)</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>None</td>
</tr>
<tr>
<td>Register a complaint</td>
<td><em>I rise to a question of privilege</em> (To get the attention of the chair on a matter of business that cannot wait, such as “I cannot hear the speaker.”)</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>None</td>
</tr>
<tr>
<td>Take a break</td>
<td>I move to recess for (amount of time)</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Majority</td>
</tr>
<tr>
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</tr>
<tr>
<td>Close meeting</td>
<td>I move to adjourn</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Majority</td>
</tr>
</tbody>
</table>

Notes:
1. A majority vote is a majority of those present and voting (an abstention is not a vote), assuming that a quorum is present. 2/3 vote is 2/3 of those present and voting (an abstention is not a vote).
2. There may be only one amendment to the Main Motion pending at one time. This 1st degree amendment may have only one amendment (2nd degree) pending at one time. As each is voted, other amendments may be offered in succession. A substitute motion is an amendment. Amendments must be germane to the subject matter to be amended. After all amendments are voted on, the Main Motion as Amended must be voted on.
3. When a committee is to be appointed, nominations for members of the committee may be made from the floor. Chair puts vote, beginning with first named in succession. When the chairman is responsible for naming committee members, before the committee can act, the names must be announced to the assembly, unless permission is granted the chairman to do otherwise. Whoever appoints the committee has power to appoint the chairman and fill vacancies.

**Parliamentary Motions Guide**

Based on Robert’s Rules of Order Newly Revised (10th Edition)

Incidental Motions: No order of precedence. These motions arise incidentally and are decided immediately.

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Play by the rules</td>
<td>Point of order</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>None</td>
</tr>
<tr>
<td>Ask the assembly to decide on a ruling by the chair</td>
<td>I appeal for the decision of the chair</td>
<td>Yes</td>
<td>Yes</td>
<td>Varies</td>
<td>No</td>
<td>Majority</td>
</tr>
<tr>
<td>Suspend the rules</td>
<td>I move to suspend the rules</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>2/3</td>
</tr>
<tr>
<td>Avoid main motion altogether</td>
<td>I object to the consideration of the question</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>2/3</td>
</tr>
<tr>
<td>Divide a motion into 2 or more parts</td>
<td>I move to divide the question by ...</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Majority</td>
</tr>
<tr>
<td>Demand a rising vote (counted vote)</td>
<td>I call for a division</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>None</td>
</tr>
<tr>
<td>Parliamentary procedure question</td>
<td>Parliamentary inquiry</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>None</td>
</tr>
<tr>
<td>Request information</td>
<td>Point of information</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>None</td>
</tr>
</tbody>
</table>

Motions That Bring a Question Again before the Assembly: No order of precedence. These motions can be introduced only when nothing else is pending.

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Take motion from the table</td>
<td>I move to take from the table the motion ...</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Majority</td>
</tr>
<tr>
<td>Cancel or change a previous action</td>
<td>I move to rescind the motion to ...</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>2/3 or majority with previous notice</td>
</tr>
<tr>
<td></td>
<td>I move to amend the previously adopted motion to ...</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Majority</td>
</tr>
<tr>
<td>Reconsider motion</td>
<td>I move to reconsider the vote ...</td>
<td>No</td>
<td>Yes</td>
<td>Varies</td>
<td>No</td>
<td>Majority</td>
</tr>
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ASHRAE 2014 Strategic Plan Initiative Gap Analysis
Date: 9/19/18
Initiative Number: 2b
Description: TC RE-organization: A full assessment of the TC organization including responsibilities to meet the needs of ASHRAE in the future. Implement the results of the assessment.
Cognizant Committee or Council(s) or Staff Department: TAC
Committee or Council Chair 2018-2019: Tom Justice
Staff Contact: Mike Vaughn
Respondent: Sarah E Maston

Please answer one of the following questions (please read all possible answers first):

1. Can your committee or council reasonably state that this initiative’s work will be “Complete” by the spring of 2019 or by the roll out of the new Strategic Plan (SP) at the annual meeting in June 2019?
   a. No
   b. Comments: When the original group that was looking at this initiative back in 2017 looked into this, they had two different reports come forward. One was a SWOT analysis and the other detailed difficulties between TAC & CEC. We will be looking at both items. We condensed the original SWOT analysis and redistributed it as a survey to TC chairs, vice-chairs and TAC a few months ago. We have reformed a team (Goldschmidt, Minor, Lawrence, Maston) to take up the information gained in the survey, and to look at ways to reorganize TCs. In addition, Maston and Minor have been in discussions with CEC to open up communication between TAC & CEC.

2. This initiative cannot be reasonably be completed due to its aspirations because of its vision and will take years, if not decades to complete. If this is the case:
   a. Should the work of the initiative be continued (re-evaluated) as part of the ongoing work of a committee, council or staff department as an Action Item, MBO or standard practice?  
      i. Yes
         ii. Comments: The TC reorganization is being taken up by the Organizational Streamlining subcommittee of the new SP & Planning Committee. Maston is on this committee as well.
   b. The work of the initiative is not providing a high or significant ROI for our members or Society, is too costly or is not an efficient use of either or both volunteer staff time and should be “sunsetted” in June 2019 when we move to the new SP.
      i. No
         ii. Comments: Streamlining the TC structure could have enormous benefits for members and staff.
   c. The work of this initiative rises to the level of being strategic, is aspirational and motivational, and is critical to the long term success of ASHRAE, is providing a high or significant ROI to our members and/or Society and should be integrated into the 2019 SP either as a direct goal or initiative or as part of one of the goals or initiatives being considered by the PLC for the 2019 SP.
      i. Yes
         ii. Comments: It will most likely be part of the strategic plan.

3. What are your committee’s or council’s expected budget or expected expenditures with respect to the work related to this initiative (in dollars ($)):
   a. Through June 2019: $0
   b. In the future if you have indicated above that the work related to this initiative should be continued in any form: $0
   c. Comments:
## Technical Activities Committee MBOs 2018-2019

**Tom Justice, Chair**

9/29/2018

<table>
<thead>
<tr>
<th>Item #</th>
<th>MBO</th>
<th>Status</th>
<th>Date Due</th>
<th>Assigned To</th>
<th>Applicable Strategy #</th>
<th>MBO Comments</th>
<th>Strategic Direction Specific Comments</th>
<th>Fiscal Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>TCs</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1.1</td>
<td></td>
<td>Initiated in 2018, but waiting on available time from ASHRAE IT. Now that Society has completed NetForum update, it is expected that I.T will have more time to devote to this effort.</td>
<td>6/1/2019</td>
<td>TAC subc.</td>
<td>2, a, b</td>
<td>Better ways are needed to judge the effectiveness of existing TC's and identify where change is needed.</td>
<td>Efficiency</td>
<td>Unknown</td>
</tr>
<tr>
<td>1.2</td>
<td></td>
<td>Efforts underway to help get the new MTG.HWBE (Health &amp; Wellness in the Built Environment) underway prior to the 2019 Winter meeting</td>
<td>15-Jun-19</td>
<td>MTG Chair and Training Coordinator</td>
<td>2, a, b, c, 1, c 5 a, b, c</td>
<td>MTG's can serve as a vehicle for breaking TC's out of their individual silos and typically generate an increased level of excitement. This ground floor opportunity is often a draw for younger members.</td>
<td>Efficiency and increased Passion</td>
<td>Unknown</td>
</tr>
<tr>
<td>1.3</td>
<td></td>
<td>Plan to train TC Chairs this year on the new roster update process via a web meeting prior to the winter meeting so that a recording of this training can be posted for later reference during the 19-20 roster update cycle</td>
<td>Jan-19</td>
<td>Training Coordinator and ASHRAE Staff</td>
<td>2, a, b</td>
<td>On-line training provides a better and less rushed venue for TC Chair training and gives TAC the opportunity to hear issues prior to the main meetings.</td>
<td>Efficiency</td>
<td>Unknown</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>New online activity form and summary report for section heads will be rolled-out for Atlanta meeting</td>
<td>Jan-20</td>
<td>ASHRAE Staff and TAC subcommittee</td>
<td>2, a, b</td>
<td>Currently less than 50% of TC's are turning in Activity Forms. This MBO is critical to the success of MBO 1.1</td>
<td>Efficiency</td>
<td>Unknown</td>
</tr>
<tr>
<td>2.0 TAC</td>
<td>2.1 Identify through TC Chair meetings which subcommittee meetings could be best brought online</td>
<td>Believe that this was an old MBO, but will continue to encourage TCs to have TC subcommittee meetings prior to Society meetings via the web in order to help reduce meeting space requirements for Society Meetings</td>
<td>1-Jun-19</td>
<td>Section Heads</td>
<td>2 a, b</td>
<td>Many subcommittees such as handbook would be more efficient if conducted on-line and with a significant reduction in expense.</td>
<td>Efficiency</td>
<td>Unknown</td>
</tr>
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<td>-----------------------------------------------------------------------</td>
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<tr>
<td>2.2 Implement opportunities for TC's to become involved with Student Members</td>
<td>TAC/Student Activities Event was held Saturday afternoon in Chicago. This was a huge success. Hope to make this a recurring event.</td>
<td>TAC/Student Activities Event was held Saturday afternoon in Chicago. This was a huge success. Hope to make this a recurring event.</td>
<td>On-going</td>
<td>TAC and staff</td>
<td>1c</td>
<td>TAC to continue to communicate with Student Activities Committee on TAC/Student event at Winter conferences.</td>
<td>Strategic - Students &amp; TC's, future of ASHRAE</td>
<td>None</td>
</tr>
</tbody>
</table>
ASHRAE UPDATE
ExO Report to Committees

2019 ASHRAE Winter Conference Atlanta
In all your interactions at these meetings please remember...

Code of Ethics

“As members of ASHRAE or participants in ASHRAE committees, we pledge to act with honesty, fairness, courtesy, competence, integrity and respect for others in our conduct.”
Attend Presidents Lunch

Monday, January 14

ASHRAE President 2018 - 2019
Sheila J. Hayter, P.E.

Photo Courtesy Dennis Schroeder/NREL
ASHRAE Wants You!

- Nominations for appointed standing committees are sought annually
- Speak with your committee ExO if your appointed term is ending and you wish to be nominated for another Committee - **beginning July 1, 2019**
- Self-nomination is also encouraged
- Nominations are due by **mid-February 2019**
- Councils are elected by the Board of Directors, but nominations are needed
ASHRAE website links are always active for member nominations to Board-elected Standing Committee and Council Positions, Appointments to Committees, and Board Officer and Director Recommendations. Once the deadline has passed, your recommendation will be held until the following year’s election or appointment session.

<table>
<thead>
<tr>
<th>Board Officer and Director Recommendations:</th>
<th>Board-elected Standing Committee and Council Nominations:</th>
<th>Standing Committee Nominations, Appointed by the President-Elect:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Link closes for the following Society year each September 29&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Link closes for the following Society year each September 15&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Link closes for the following Society year each February 15&lt;sup&gt;th&lt;/sup&gt;</td>
</tr>
<tr>
<td><a href="ashrae.org/about/leadership/ashrae-board-of-directors/recommendations">ashrae.org/about/leadership/ashrae-board-of-directors/recommendations</a></td>
<td><a href="ashrae.org/bodnom">ashrae.org/bodnom</a></td>
<td><a href="ashrae.org/comnom">ashrae.org/comnom</a></td>
</tr>
</tbody>
</table>
Presidential Ad Hocs

Standards Membership Model Ad Hoc
• Three new membership models under consideration
• Final recommendation to go before the BOD – during 2019 Annual Conference
• New model placed – 2020-21 (Projected)

Smart Grid Design Guide Ad Hoc
Scope: Oversee the development and publication of a Smart-Grid Application Guide that will provide building owners, managers, and designers the guidance they need to understand the smart grid and applicable standards and regulations, and to design and operate systems in this new smart-grid environment. The guide will focus on the concrete steps needed to prepare a building for the smart grid.
• Overseen by a Presidential Ad Hoc Committee
• Chair: Steve Bushby
Proposed ASHRAE Bylaws Changes on Spring Ballot

- Nominations may be made in writing by not fewer than one percent of ASHRAE members eligible to vote. The minimum number of members required shall be based on the membership roster of the first day of that Society year. No more than 10% of the minimum number of signatures required shall be from one chapter and no more than 30% of the minimum number of signatures shall be from one region.

- One year of credit maximum for ASHRAE Certified Professional credential(s).
ASHRAE’s 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

<table>
<thead>
<tr>
<th>Content should be labeled as advertising or sponsored.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of commercial names and logos shall not imply ASHRAE endorsement, approval or certification of products or services.</td>
</tr>
<tr>
<td>The inclusion of commercial information shall be fair and unbiased so as to avoid explicit promotion of a product or commercial entity.</td>
</tr>
<tr>
<td>Content shall adhere to accepted business practices specified by the U.S. Federal Trade Commission and recognized publishing authorities.</td>
</tr>
<tr>
<td>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.</td>
</tr>
</tbody>
</table>

As the business environment and communication technologies evolve, the policy is under continuous review with the aim to strike the right balance to help fulfill ASHRAE’s mission.

For additional guidance: [ashrae.org/about/governance/ashrae-commercialism-policy-and-guidelines](http://ashrae.org/about/governance/ashrae-commercialism-policy-and-guidelines)
ASHRAE HQ Update

ASHRAE has purchased a building at **180 Technology Pkwy**, approximately 10 miles north of our current location. The building will be renovated to serve as ASHRAE’s new headquarters. We are excited to demonstrate leadership in our industry by transforming an existing building into a state-of-the-art built environment.

- ASHRAE is now in the beginning stages of a major capital campaign to fund these renovations.
- Move by October 2020

[ashrae.org/newhq](http://ashrae.org/newhq)
New and Enhanced Resources

• Building EQ Web Portal – December 2017
• Redesigned Website (ashrae.org) – February 2018
• ASHRAE 365 year round app – May 2018
• Handbook PDFs Now in Technology Portal – June 2018
• New Online Comments Database – September 2018
• HVAC Designer certification launch – June 2019
Certified HVAC Designer (CHD) Certification

Industry Need & Demand

In an “Industry Need” survey, ASHRAE Member respondents agreed:

- “The level of competence among HVAC Designers varies greatly” – 95%
- “HVAC Designer certification is a worthwhile professional development goal” – 85%
- “It is a tool to identify competent new hire prospects” – 74%

Next Steps

- CHD Candidate Guidebook Available – February 1
- CHD Application Launch – March 1
- CHD Practice Exam Launch – May 1
- Computer-based Testing Worldwide – June 1
Expanded Government Outreach Days

• “Days on the Hill” rebranded to “Government Outreach Days” to make more relevant for different types of government visits and regions of the world
• Expanded to Federal Outreach and Local Outreach
• All ASHRAE Members are invited to participate – Get Involved!

• Meetings with Government Officials are growing:
  • SY 2016-17: 8
  • SY 2017-18: 16
  • SY 2018-19: 24 (anticipated)
2019-2024 Strategic Plan

Timeline

- November 2017 - December 2017: Select Strategic Plan consultant & negotiate contract *(Complete - McKinley Advisors)*
- January 2018: Consultant presentation to BOD at ASHRAE Winter Meeting *(Complete)*
- March 2018: Board strategic planning session *(Complete)*
- June 2018: Board reviews first draft of Strategic Plan *(Complete)*
- November 2018: Board reviews and approves revised draft of Strategic Plan *(Complete)*
- December 2018 - March 2019: Stakeholder review of and feedback on revised draft of Strategic Plan – Including Stakeholder development of Budgets and Fiscal Impact
- April/May 2019: Work Plan Planning Sessions with Responsible Committees & Councils
- May 2019: BOD approves Final Strategic Plan 2019-2024 at Spring 2019 Board Meeting
- July 2019 - June 2024: Plan is implemented, tracked, and updated as necessary with status reported with Dashboard
Recent Publications

• 2018 International Green Construction Code (IgCC)
• Stakeholder’s Guide to Commissioning
• A Practitioner’s ASHRAE Guideline 32-2018, Management for Sustainable High-Performance Operations and Maintenance
• Guide to Engineering Management
• ASHRAE Position Document on Climate Change
• ASHRAE Position Document on Refrigerants and Their Responsible Use
• ANSI/ASHRAE Standard 222-2018, Standard Method of Test for Electrical Power Drive Systems
• Revised editions of the following method of test standards: 32.2-2018, 41.9-2018, 72-2018, 158.2-2018, 174-2018
• ANSI/ASHRAE Standard 29-2015 (RA 2018), Method of Testing Automatic Ice Makers
• ASHRAE Guideline 11-2018, Field Testing of HVAC Controls Components
• ASHRAE Guideline 38-2018, Guideline for Using Metal Pressure Vessels to Test Materials Used in Refrigeration Systems
• Spanish Translations: ASHRAE Guideline 1.3-2018, The Strategic Guide to Commissioning
Upcoming Publications

• District Cooling Guide, 2nd edition (Spring 2019)
• District Cooling Owners’ Guide (Spring 2019)
• Design Guide for Multifamily Residential Buildings (Spring 2019)
• Data Center Infrastructure Management (Datacom Series) (Spring 2019)
• Design Considerations for Datacom Equipment Centers, 3rd ed. (Datacom Series) (Spring 2019)
• Design Guide for Combustion Turbine Inlet Air Cooling Systems, 2nd ed. (Summer 2019)
• High-Performance Buildings Simplified textbook (Summer 2019)
• Smart Grid Application Guide for Building Professionals (Summer 2019)
• Design Guide for Duct Systems (Fall 2019)
New ASHRAE Learning Institute Courses

- Choosing the Right Energy Code for Your Project-IECC or ASHRAE 90.1-2016
- How Smart, Efficient, Sustainable Systems Lead to Improved Resilience
- Solar PV & Thermal Systems Analysis and Design
- ASHRAE 90.1 Code Compliance & Plan Review for Authorities Having Jurisdiction
- Introduction to Refrigerants
- Refrigerant Selection
- Refrigerant Management
- Designing for IAQ: Complying with the Requirements of Standard 62.1 (MENA) (Dubai Training Center)
- HVAC Design: Level II-Applications (MENA) (Dubai Training Center)
- New Developments in Lower GWP Refrigerants (MENA) (Dubai Training Center)
- Standard 90.1: HVAC/Mechanical Design and Appendix G (MENA) (Dubai Training Center)
Upcoming ASHRAE Learning Institute Courses

- Safe and Energy Efficient Laboratory Exhaust Stacks
- Guideline 36 Control Sequences
- The New IgCC®
- Improved Presentation Skills
- Installing DDC Control Systems
- Cold-Climate Design Guide
- Hot-Climate Design Guide
Publishing/Education Strategies to Improve Content Access

Enhance member access using online delivery

• Technology Portal for ASHRAE Journal, Research Reports, Conference Papers, Seminars

• Handbook PDFs added to Technology Portal to eliminate CDs

• 90.1 Portal syncs the 2016 standard with the user’s manual plus red-line version

Expand content available electronically

• Free Online Access to Science & Technology for the Built Environment, ASHRAE’s journal of archival research

Use web-based tools to optimize volunteer time


Customize training and translate publications applying business models

Trackable delivery of Handbooks to more countries
See You There!

- ACREX India 2019
  February 28-March 2, 2019 – BEC, Mumbai, India

- 2019 China Refrigeration Expo
  April 9-11, 2019 – Shanghai, China

- 2019 ASHRAE Annual Conference
  June 22-26, 2019 – Kansas City, MO

- International Congress of Refrigeration 2019
  August 24-30, 2019 – Montréal, Québec, Canada
Questions?

Please let your ExO know how and where you’d like to serve next!
**Handbook Responsibilities**

Special publications are sometimes requested of TCs when there is a need for material that is unsuited for Regular Society publications. More information is available in the TC MOP.

**Standards Responsibilities**

**Program Activities (For This Meeting)**

- Total Number of Forums
- Total Number of Debates
- Total Number of Seminars
- Total Number of Paper Sessions

**Current Research Activities**

- # of new/revised RTARs submitted
- # of other active RTARs
- # of Work Statements submitted
- # of other active Work Statements
- # of active TRPs
- # of active RPs
- # of RPs completed & approved at this meeting
- Problems getting RTAR/WS approved?

**TC Management**

- Minutes completed on time?
## Other Technical Activities

As requested, members of a TC/TG/TRG shall compose answers to or review FAQs assigned to their committee.

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agenda distributed on time?</td>
<td>Yes</td>
</tr>
<tr>
<td>Did Chair attend training?</td>
<td>Yes</td>
</tr>
<tr>
<td>Did Vice Chair attend Chair Training?</td>
<td>Yes</td>
</tr>
<tr>
<td>Did Program Chair attend training?</td>
<td>Yes</td>
</tr>
<tr>
<td>Did Handbook Chair attend training?</td>
<td>Yes</td>
</tr>
<tr>
<td>Did Research Chair attend breakfast?</td>
<td>Yes</td>
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## Award Nominations (last six months)

<table>
<thead>
<tr>
<th>Category</th>
<th>Nominations</th>
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<tbody>
<tr>
<td># of Distinguished Service Nominations</td>
<td>0</td>
</tr>
<tr>
<td># of Exceptional Service Nominations</td>
<td>0</td>
</tr>
<tr>
<td># of Other Nominations: Hightower, Research, Fellow, etc</td>
<td>0</td>
</tr>
</tbody>
</table>

Specify Award(s): [TC Activity For](http://web.ashrae.org/tc_activity/?com_id=4)

## Any Concerns or requests for the Technical Activities Committee?

Submit

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http://web.ashrae.org/tc_activity/?com_id=4  5/15/2019