



**1791 Tullie Circle, N.E./Atlanta, GA 30329  
404-636-8400**

**TC/TG/MTG/TRG MINUTES COVER SHEET**

**(Minutes of all Meetings are to be distributed to all persons listed below within 60 days following the meeting.)**

TC/TG/MTG/TRG No. 8.2 DATE June 26, 2017

TC/TG/MTG/TRG TITLE Centrifugal Machines

DATE OF MEETING January 22, 2018 LOCATION Chicago, IL

MEMBERS PRESENT	YEAR APPTD	MEMBERS ABSENT	YEAR APPTD	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
Forrest Yount (VM), Chair	7/01/2017			Dustin Meredith – TAC Section Head
Raymond Good	7/01/2017			Michael Perevozchikov
Laurent Abbas (VM)	7/01/2015			Nick Zupp
Mark Rogan (VM)	7/01/2015			Eric Albrecht
Lindsey King (VM)	7/01/2017			Mark Adams
Mark Adams	7/01/2010			Barbara Minor
Rupal Choksi (VM)	7/01/2017			Tom Watson
Phil Johnson (VM)	7/01/2017			Stephen Duda
John Vucci (VM)	7/01/2016			Scott MacBain
Trent Hunt (VM)	7/01/2017			Satyam Bendapudi
Dwayne Johnson (VM)	7/01/2016			Meagan Gibbs
				Drew Turner
				Justin Prosser
				Mike Stark

<b>DISTRIBUTION: All Members of TC/TG/MTG/TRG plus the following:</b>	
TAC Section Head: Dustin Meredith	SH8@ashrae.net Where x is the section number
All Committee Liaisons As Shown On TC/TG/MTG/TRG Rosters (Research, Standards, ALI, etc.)	Michael Patton – 2020 HB Systems & Equipment – <a href="mailto:mpatton888@msn.com">mpatton888@msn.com</a> Curtis Eichelberger – Research Liaison – Curtis <a href="mailto:eichelberger@jci.com">eichelberger@jci.com</a>
Mike Vaughn, Manager Of Research & Technical Services	MORTS@ashrae.net

## **MEETING MINUTES**

- Call to Order at 2:15 pm
- Introduction of Attendees, Liaisons, Officers and Guests.
  - Quorum established, 9 voting members present
- Chair Reviewed Agenda
- Chair read ASHRAE code of ethics statement and directed TC to the full ASHRAE code of ethics.
- Chair reviewed TC8.2 Mission Statement and Scope.
  - Scope and mission statement **Appendix A.**
- Review of last meeting minutes. Minutes were compiled based on subcommittee reports. Previous Secretary (Laurant Abbas) took a different job and will no longer be attending. Minutes are compiled by the chair, with the help of the committee.  
Vote to approve: 9/0/0
- Reports:
  - 5.1 Program Subcommittee L. King
    - Lindsey reviewed attached report **Appendix B.**
    - Committee approved the submission of 3 seminars for Houston.
  - 5.2 Handbook Subcommittee D. Turner
    - Drew agreed to become new Handbook Chair..
    - Drew solicited participation and organized first web meeting
  - 5.3 Standards Subcommittee S. Hanson
    - i) SPC 184P Update J. Vucci
    - ii) SPC 30 Update R. Choksi
    - iii) SPC 90.1 Update S. Hanson
    - iv) Guideline 22 update J. Vucci/P. Johnson
    - v) Std 15 update P. Johnson
  - 5.4 Research Subcommittee M. Adams
    - Mark reviewed attached report **Appendix C.**
  - 5.4 MTG Reports P. Johnson
    - MTG.LowGWP – Phil Johnson provided an update and submitted report **Appendix D.**

5.5 Membership R. Good

5.6 Honors and Awards F. Betz

- No action taken

5.7 Web Master D. Johnson

- Dwayne Johnson agreed to take on Webmaster responsibility.

5.8 Section 8 Chair's Breakfast R. Good

- Ray reviewed meeting summary **Appendix D**. Notes in red were added from this TC Committee Meeting.

- Old Business
  - None
- New Business
- For the Good and Well Being...
- Adjournment at 4:30pm

Respectfully submitted by Forrest Yount

## **Appendix A - Scope and Mission**

### **Scope**

TC 8.2 is concerned with packaged equipment which involves centrifugal compressors, including those heat exchangers, drivers, controls and accessories, which are specific to packaged centrifugal equipment. TC 8.2 is also concerned with the design and performance of centrifugal compressors, steam turbines and gas turbines for use in refrigerating applications.

### **Mission**

The mission of Technical Committee 8.2, Centrifugal Machines, is to provide world class technical expertise on all aspects of centrifugal refrigeration machines. This committee is a resource to industry, academia, and others following society protocols through seminars, standards, technical papers/articles and other presentations.

## **Appendix B - Program Subcommittee Report**

TECHNICAL COMMITTEE MEETING  
T.C. 8.2 CENTRIFUGAL MACHINES  
**TC 8.2 Programs Subcommittee Report**  
2018 ASHRAE Winter Meeting, Chicago, Illinois

January 22, 2018

### **Chicago Update**

#### **3 Programs Submitted, 2 Accepted**

Campus Operators Reflect on Using Guideline 22 and Standard 90.1 for Chiller Plant Monitoring: Accepted (Sunday 8:00 AM-9:00 AM) ~150 people in attendance, Positive Feedback

Next Generation of Lower or Low GWP Next Generation HVAC&R Equipment: Accepted, CoSponsored with 3.1, Refrigerants and Secondary Coolants (Monday 1:00-2:30)

Lower GWP Alternative Refrigerant for Centrifugal Machines: Not Accepted, Previously Submitted twice; Will hold off to submit for Atlanta when there is not already an entire track for similar topics.

#### **Seminar Ideas for Houston (All motions for sponsoring these ideas accepted by TC, No Abstains or Opposed)**

- **Bearing Type Systems-**
  - Chaired by Ahmad Abu-Heiba
  - Speakers Daikin (Jeff Morgan), Carrier (Zaffir Chaudhry), Trane (Joe Heger), Danfoss speaker
  - Seeking Cosponsorship with TC 8.1, Rotating Machines
  
- **Fundamentals of Centrifugal Machines**
  - Chaired by Megan Gibbs
  - Speakers Fred Betz, Lindsey King, Carrier Speaker
  
- **Centrifugal Machines in Niche/Unusual Applications**
  - Chaired by Lindsey King
  - Speakers Ahmad, JCI speaker, Trent Hunt

#### **Future Seminar Ideas**

- Low GWP Alt Refrigerants for Atlanta
- Series vs Parallel Seminar
- Staged Common YEA questions Seminar\_Topic not defined
- Other?
- SPC 184 Field Testing Standard Addendum Update

Lindsey King  
Program Subcommittee Chair  
January 22, 2018

## Appendix C - Research Subcommittee Report

TECHNICAL COMMITTEE MEETING  
T.C. 8.2 CENTRIFUGAL MACHINES  
**TC 8.2 Research Subcommittee Report**  
2018 ASHRAE Winter Meeting, Chicago, Illinois

January 22, 2018

### Research S/C Chair Breakfast notes of interest

- RAC evaluated 2 RTAR's – Both accepted with Comments.
- RAC reviewed 2 work statements – Both returned.
- 40 Unsolicited Research Proposals (URP's) were submitted and RAC has selected 6 finalists to provide additional information for final selection process.

### Current Activities

Research Subcommittee online meeting was held on January 5, 2018.

Attendees: 22 participants for Handbook, Program, and Research.

### Project Status

- **1677 - Measurement and Prediction of Waterside Fouling Performance of Internally Enhanced Tubes in Cooling Tower Applications**
  - We are cosponsoring a study being undertaken by TC 8.5 on fouling of enhanced tubes. Looking at a smooth bore tube and multiple enhanced surface tubes. Scope includes testing, providing a model of the results, and a simulation calculation methodology. Testing is continuing and collecting data. Testing will conclude in the late spring.
- **1716 - Oil concentration of field-installed liquid chillers with flooded type evaporators.**
  - RTAR was approved to proceed to the next stage. RAC returned some comments to be incorporated into the Work Statement. Phil Johnson is taking the lead on completing this Work Statement.
  - We are bringing a WS to the TC meeting for approval. The deadline for submittal and approval is February 2018 or the project will be dropped permanently.
- **1793 - Development of Method of Test for Motor Component Thermal Conductivity**
  - We submitted, with co-sponsorship from TC8.1 and TC1.11, an RTAR for research of heat transfer of motor components for hermetic motors in refrigerant. This would develop correlations for motor manufactures to use for motor design.
  - RAC approved our RTAR with comments.
  - Rick Heiden will take the lead to write the Work Statement.
  - The effort on the WS is continuing. One of the comments is that we should be soliciting funding from non ASHRAE organizations. That effort is underway but we are not having any success. The recommendation from our RL is to show due diligence to attempt and then submit with that information. Rick is continuing to run down leads. We will be setting up a conference call to review this work statement and then sending out for a letter ballot in order to meet the submission to RAC before the next deadline of March 15th.

### Future Activities

- We discussed possible new ideas for research at the Sunday Meeting but no new ideas were generated. We will continue to solicit additional ideas.

Respectfully submitted,  
Mark Adams  
Research Subcommittee Chair  
January 22, 2018

## Appendix D - MTG.LowGWP STATUS REPORT

### MTG.LowGWP STATUS REPORT

#### Activity areas of this MTG:

- Planning seminar(s) for technical programs
- Initiating, monitoring & summarizing research efforts
- Encouraging development of LCCP models

#### Meetings

MTG.LowGWP held meetings as follows:

- 29-Jan, 1-Feb-2017, Las Vegas, NV
- 25,28-Jun-2017, Long Beach, CA
- 21-Jan-2018, Chicago, IL
- 24-Jan-2018, Chicago, IL (*planned*)

#### Technical Programs

TC planning to submit technical program proposals can ask MTG.LowGWP to co-sponsor.

Chicago programs (co-)sponsored by MTG.LowGWP:

AHR Expo Session 2, Lubricant Changes for Low GWP Next Generation Equipment

AHR Expo Session 4, Some Low GWP Next Generation Refrigerant will be Flammable: What does it mean to be Flammable?

AHR Expo Session 8, Contaminant Control: What is the Same and What is New When Using Low GWP Refrigerants?

Seminar 35, Low GWP Refrigerants in Heat Exchange Equipment: Part 1, Introduction and Case Studies

Debate 2, Low GWP Refrigerants in Heat Exchange Equipment

Seminar 45, What In The World? Global Refrigerant Regulations Explained By Experts from Around the Globe

#### Research

Research projects of interest to TC 8.2:

*[note: completed research project final reports are available at ASHRAE [research web site](#) ]*

**1731-WS:** Heat Transfer Performance of Medium Pressure Alternative Lower GWP Refrigerants In Flooded Evaporator Comprising an Enhanced Tube Bundle. WS was in process (as of Jan-2017).

**1800-RTAR:** Spray Evaporation on Enhanced Tube Bundles with Low GWP Pure Refrigerants and Refrigerant/Miscible Oil Mixtures. MTG.LowGWP co-sponsoring. WS submitted but returned for revisions (as of Feb-2017).

**RP-1806,** Flammable Refrigerants Post-Ignition Simulation and Risk Assessment Update  
Status: Gexcon US is contractor, project started on Jan-2017. Task 1 draft report now in review & approval. Task 2 and Task 3 expected to take about 6-7 months starting from Feb-2018.

**RP-1807,** Guidelines for Flammable Refrigerant Handling, Transporting, Storing and Equipment Servicing, Installation and Dismantling  
Status: Navigant Consulting is contractor. Almost complete. Draft report in review & approval process, perhaps 1-2 months until publication.

**RP-1808**, Servicing and Installing Equipment using Flammable Refrigerants: Assessment of Field-made Mechanical Joints  
Status: Creative Thermal Solutions is contractor. Testing almost completed as of Jan-2018.  
Draft report in process, perhaps 2-3 months until publication.

## **LCCP**

International Institute of Refrigeration (IIR) formed a working group (WG) to assess the merits of different methods for evaluating the Life Cycle Climate Performance (LCCP) for refrigerating systems environmental impact of refrigerants and to produce implementation protocols for these methods, for use by decision makers and refrigeration stakeholders.

WG name: "IIR Working Group on LCCP Evaluation". Nine (9) Working Party meetings have been held to date, the most recent was August 2016. Meeting documents are available online at the [IIR web site](#).

Updated LCCP guideline document (v1.2) was published after the January 2016 meeting, which includes recommendations for chiller related inputs to a LCCP calculation. During mid-2016 an addendum was prepared by the WG. A final document was expected late 2016 but not yet published.

[http://www.iifiir.org/userfiles/file/about\\_iir/working\\_parties/WP\\_LCCP/08/Booklet-LCCP-Guideline-V1.2-JAN2016.pdf](http://www.iifiir.org/userfiles/file/about_iir/working_parties/WP_LCCP/08/Booklet-LCCP-Guideline-V1.2-JAN2016.pdf)

## **Membership**

Current MTG.LowGWP representation from TC 8.2:

**Primary:** Phil Johnson

**Alternate #1:** Laurent Abbas

**Alternate #2:** Ray Good

Other TC representation: 1.1, 1.3, 2.5, 3.1, 3.2, 3.3, 3.4, 8.2, 8.4, 8.5, 8.7, 8.11, 10.1, and 10.7.

Other SSPC representation: 15, 34.

Respectfully Submitted,

Phillip Johnson,  
TC 8.2 Representative to MTG Alternative Lower GWP Refrigerants

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For Reference:

<https://www.ashrae.org/standards-research--technology/technical-committees/section-mtg-multidisciplinary-task-groups/mtg-lowgwp-lower-global-warming-potential-alternative-refrigerants>

## **MTG: Alternative Lower GWP Refrigerants**

### **Scope**

MTG.LowGWP will coordinate TC/TG/TRG technical activities to help transition the HVAC&R industry to sustainable lower Global Warming Potential (GWP) alternative refrigerants. The MTG will further request participation from US DOE, AHRI, and others with shared goal. The MTG responsibilities include research, development and presentation of technical programs of all types on alternative lower GWP refrigerants, suggestions for Life Cycle Climate Performance (LCCP) systems evaluation for different applications, development of lower GWP solutions for different applications, and a special publication detailing aspects of LCCP applied to the HVAC&R fields.

**Objective/Impact**

This MTG will create a synergy between TCs working on advancing the HVAC&R state-of-the-art. The Members will coordinate the efforts undertaken by TCs 1.1, 1.3, 2.5, 3.1, 3.2, 3.3, 3.4, 8.2, 8.4, 8.5, 8.7, 8.11, 10.1, and 10.7 plus SSPC 15, SSPC 34 and the work of AHAM, AHRI, U.L., and UNEP to investigate the performance of alternative refrigerants and refrigerant blends proposed by TC 3.1. The MTG will also work closely with TC3.2 and TC3.4 to ensure the compatibility of the new refrigerants with current and future systems. Furthermore, the MTG will coordinate the results obtained from research performed in different TCs with TCs 1.5, 2.5 and 4.1 to establish a standardized LCCP evaluation in order to ensure that the lower GWP refrigerants do not contribute more emissions indirectly. Results from the work coordinated by this MTG will be published in ASHRAE handbook chapters sponsored by different committees. The diversity of the MTG participating TC membership will result in stronger impact on the HVAC&R community and ensure faster and sustainable transition to environmentally friendly refrigerants.

**Appendix E - Chair's Breakfast Report**

**SECTION TC/TG/TRG CHAIR'S BREAKFAST MEETING**

2018 Winter Meeting

Chicago, IL

**Sunday, January 21st**

**6:30 A.M. – 8:00 A.M. CST**

**Palmer House Hotel – ALL Section meetings located on 3<sup>rd</sup> Floor**

**Section 1**, Salon 1 Room, 3<sup>rd</sup> Floor **Section 2**, Salon 5 Room, 3<sup>rd</sup> Floor

**Section 3** Salon 4 Room, 3<sup>rd</sup> Floor **Section 4**, Salon 9 Room, 3<sup>rd</sup> Floor

**Section 5**, Salon 6 Room, 3<sup>rd</sup> Floor **Section 6**, Salon 2 Room, 3<sup>rd</sup> Floor

**Section 7**, Wilson Room, 3<sup>rd</sup> Floor **Section 8**, Salon 10 Room, 3<sup>rd</sup> Floor

**Section 9**, Salon 12 Room, 3<sup>rd</sup> Floor **Section 10**, Kimball Room, 3<sup>rd</sup> Floor (**TAC MBO #3.1**)

**Section MTG**, Madison Room, 3<sup>rd</sup> Floor

I. CALL TO ORDER

II. ROLL CALL AND INTRODUCTIONS (5 minutes)

III. ADDITIONS AND/OR CHANGES TO THE AGENDA (5 minutes)

IV. REVIEW ANY SPECIAL ASSIGNMENTS, ACTION ITEMS FROM LAST MEETING, AND NEW ISSUES (10 minutes).

New Assignments:

A. **To be determined**

V. DISTRIBUTE WRITTEN INFORMATION AND REQUESTS FROM SOCIETY LIAISONS TO TC/TG/TRG CHAIRS (30 minutes).

Additional Potential Announcements/Reminders;

A. NEW!

1. 2017-2018 George B. Hightower Award Recipient – Art Hallstrom – TC 1.6

2. 2017-2018 Service to ASHRAE Research Award Recipient – Brian Silveti – TC 6.9

3. Discuss if TGs, TRGs, and MTGs in section will continue in 18-19 Society Year

4. 17-18 Rosters Access & Distribution

5. MTGs that have been formed since Long Beach Meeting – MTG.EBO (Effective Bldg. Operations)

6. TC Website template – Feedback or Suggested Improvements, if any?

7. New Restructured TC MOP (Manual of Procedures) – Feedback or Suggested Improvements, if any?

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

9. Updated TAC Presentation Template Available for TC members to use with local Chapter

10. Basecamp Information from ECC

B. AT THIS MEETING

1. On-Site Training Options – TC Chair Training of Roster Update Process for SY 18-19 roster

2. Location of Section Head Mailboxes & Free Wi-Fi Access at this Society Meeting

3. RPM (Remote Participation Meetings)

C. UPCOMING DEADLINES

1. TC Activity Forms for the Chicago Meeting are Due to Section Heads before **Wednesday, 1/24/18**

2. Seminar and Forum proposals for Houston are due by **Friday, February 9, 2018**

D. REMINDERS

1. 2017-2018 Rosters Access & Distribution

2. Useful TC/TG/TRG/MTG Chair Information and forms on ASHRAE Website

3. Request for each TC to review ASHRAE Code of Ethics at start of TC meeting

4. Make Special Effort to Welcome New Members and Visitors (Potential Members) to TC Meeting

5. Option for TC Subcommittee Meetings via Conference Calls and Web Meetings

6. Is your TC Website Up-to-date?

7. 17-18 TC Master Calendar – Now Available through Google

E. RECENT ANNOUNCEMENTS

1. RAC Prioritizing Research Topics Related to Residential Sector
2. CEC's Standing Request for Future Society Meeting Program Track Suggestions
3. CEC Seeks TC Volunteers willing to Support Content Development and Quality Control for Society Technical Program at Society Meetings

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

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

1. Program Focus of Chicago Meeting
2. Houston Meeting – June 23 – 27, 2018
3. Atlanta Meeting – January 12 – 16, 2019

#### G. OTHER UPCOMING WORKSHOPS AND CONFERENCES

1. TBD

#### VIII. REMARKS FROM SOCIETY LIAISONS TO TC/TG/TRG CHAIRS

Liaison members from Research Administration, ASHRAE Program, Handbook, Standards, and other standing committees will have an opportunity to describe their committee activities that relate to the TC/TG/TRG functions, if time permits. Written announcements must be provided as a minimum by liaisons in order to have an opportunity to speak at this meeting.

ADJOURN

**Note: This agenda will be discussed and finalized during the full TAC meeting in Chicago. This draft of the agenda is only intended to promote thinking prior to and discussion during that meeting.**

**Announcements and Reminders for TC/TG/TRG & MTG Chairs  
CHICAGO 2018  
A. NEW!**

**1. Discuss and confirm that TGs, TRGs, and MTGs in section will continue in 17-18 Society Year or disband**

TBD

**2. 17-18 Rosters Access & Distribution** - Remember, the current 2017-2018 roster for your TC, TG or MTG is in effect until after the June meeting this year – through Friday, June 30th.

By now, each TC, TG and MTG chair should have received a PDF & MS-Excel file of their new 2017-2018 roster from their Section Head or staff for distribution to the committee. In addition, each member can view all of the rosters of their committees on the ASHRAE Website. Go to [www.ashrae.org](http://www.ashrae.org) <http://www.ashrae.org>, click on the "Membership & Conferences" tab in the header, click on "My Membership" text in the left sidebar, and log in (if you have not logged in lately, you might need to set up a new username and password). Click on the "Update Your Bio / View or Edit Tour Profile" link. Now, you should see your current "bio info". Click on "Committees" on the left sidebar; all of the committees you are a member of will appear. Click on the "blue" roster text at the left hand side of a committee to reveal the roster with linked contact information. Make sure everyone on your committee also knows how to access the roster.

The Provisional Corresponding Member (PCM) position is a relatively new position on TC/TG/TRG rosters. This position allows potential new members to be added by staff to the committee roster any time a request for membership is made by an individual. The position has a 2-year term on the committee. Staff will notify the chair and reissue a new roster to the committee chair any time a provisional member is added. The TC/TG/TRG chair has the option each year during the regular roster update process to convert provisional CMs that have been active participants on the committee the past year into regular CMs or voting members or drop them. If no action is taken, they will time expire from the roster and be removed by staff.

**3. Let's Celebrate ASHRAE's Technical Excellence Historically!**

ASHRAE is highly regarded for its technological advances. Consider that these advances evolved from the efforts of our predecessors and you, and the current members of ASHRAE's Technical Committees in advancing HVAC&R technology are building on a deep foundation. So, what is the historical foundation of your Technical Committee specialty? ASHRAE will be celebrating its 125th anniversary in a couple years. The Historical Committee has a project to publish articles in the ASHRAE Journal and organize paper presentations celebrating our technical heritage for the anniversary. We plan to emphasize technical advances after 1920. Can you help with an article or a paper or can your TC organize and sponsor a program session for the 2019-2020 meetings? Here is a list of topics that TC members have already suggested.

- Development of open communication protocols such as BACNET.
- Modern improvements in psychrometrics (Goff & Gratch).
- History and effect of the Environmental movement on our technology. How technology and equipment has improved the indoor environment.
- The refrigerant revolution
- Solving the problems of "sick buildings."
- The re-discovery of past technology and its application today (such as district energy, hydrocarbon refrigerants, off peak energy storage, "total energy" systems, etc.)
- History of the application of electronics to HVAC&R technology.
- ASHRAE's long history in applying innovative technology.
- History and importance of frozen food technology.

All of these topics and others you may think of need to be written up and/or presented by someone. How about YOU?

The 125th anniversary will be celebrated at the 2020 winter and Annual meetings. The Historical Committee has been charged with the responsibility of organizing Society and industry history projects for the 125th. If you would like to submit an article or a paper or organize a program session, contact Emily Sigman, Historical Committee Staff Liaison at [esigman@ashrae.org](mailto:esigman@ashrae.org).

There is a deadline – please submit abstracts or outlines before **February 28, 2018**.

#### **4. Oversight of TC websites with regard to *Technical Bulletins* (White Papers) and alignment with Society positions, policy, or opinions**

TCs are allowed to develop Technical Bulletins - A Technical Bulletin does not result from a technical meeting and is a brief 1-2 page statement on a special interest HVAC&R topic that has been developed by either a technical or grassroots committee of ASHRAE. After the TC approves the Technical Bulletin, TAC is responsible for coordinating a peer review by a minimum of three persons with expertise in the field of the bulletin before it can be posted. In addition, ASHRAE's policy for websites states the following: **"4 (3) f. Statements and presentations may not appear on web sites that state, purport, or imply that they present ASHRAE positions, policy, or opinions."**

#### **5. Additional TC E-mail Position Aliases Now Available**

New position e-mail alias addresses have now been created for each of the remaining mandatory positions of the Technical Committee management team (Secretary, Standards Sub. Chair, Program Sub. Chair, Handbook Sub. Chair, and Webmaster). The 17-18 E-mail Alias list with these new position aliases is posted on the ASHRAE website [www.ashrae.org/TCs](http://www.ashrae.org/TCs) under the heading *Procedures, Forms & Information for TCs/TGs/MTGs and TRGs*.

#### **6. New Restructured TC MOP (Manual of Procedures) issued**

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

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

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

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

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

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

TAC recently updated the standard presentation and presentation notes that TC members can use, without a lot of effort, to explain what TCs do for the Society and how that work benefits members in your local ASHRAE Chapter. You should also know that use of this presentation at a chapter meeting in SY 17-18 will earn a chapter 50 (100 points maximum) PAOE points. Additional PAOE points are also possible in SY 17-18 for a presentation(s) on the work of one specific TC.

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

## **10. Basecamp Information from ECC**

More and more TCs and standing committees are making use of ASHRAE's subscription to Basecamp3 to better organize, store, and distribute online committee files that are needed for their meetings through a dedicated committee Basecamp site. If you would like to learn more about Basecamp and how to request a site for your particular committee, please go to the Electronic Communications Committee (ECC) web page: (<https://www.ashrae.org/society-groups/committees/electronic-communications-committee> ) and scroll down to the section titled *Guidance for Basecamp 3*

## **11. Participation Requested for an Survey being Conducted for an ASHRAE Research Project**

**ASHRAE RP-1650:** Training Requirements for Sustainable, High-Performance Building Operations, which is sponsored by TC 7.3.

We are conducting a survey of the Facility Managers in the industry who are involved in the O&M of High Performance Building Operations. The aim of this survey is to gain an insight into the knowledge and skill requirements needed for O&M staff to operate high performance buildings. The results of the survey will help us formulate training documents that address knowledge and skill sets that are required for O&M personnel to effectively operate such buildings. We would like to request you to make this survey available to the members of your TC. Their input regarding their experience with the O&M of High Performance buildings and systems would greatly benefit and inform this survey. TC members are also encouraged to share the survey link with colleagues that may be better positioned to respond to such a survey.

Filling out this survey should take about 15 minutes of your time.

The link to this survey is provided below:

[https://montana.qualtrics.com/jfe/form/SV\\_2ixnELa2V9IfaRL](https://montana.qualtrics.com/jfe/form/SV_2ixnELa2V9IfaRL)

We plan on closing this survey on **Wednesday, February 2018**.

### **B. AT THIS MEETING**

#### **1. On-Site Training Options**

##### **i. TC/TG/TRG Chair's Training Workshop Reminder**

Sunday January 21<sup>st</sup>, 9:45-10:45 AM in Chicago Room, 5<sup>th</sup> Floor, in the Palmer House Hotel. The training will start with a presentation on how to use the new on-line TC roster update system and answer any questions you have regarding this new system. The moderator will then conduct a Q&A session with the Chairs in order to get a better understanding of what they need or want from TAC in the form of training. The moderator will also ask for feedback on the current TAC training modules and close by laying out his potential vision for future training modules.

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

Monday, January 22<sup>nd</sup>, 6:30 AM – 9:30 AM in Grand Ballroom, 4<sup>th</sup> Floor, Palmer House Hotel. Please encourage your Research Subcommittee Chair or another representative from the TC to attend this meeting so that your RAC Research Liaison (RL) can get an update on the TC's research activities and so that your RL can help any resolve issues & questions that the TC may have concerning their research program. The training portion of this meeting will focus on changes to the *Research Manual*.

### iii. TC Program Subcommittee Chair Training in Long Beach

Tuesday, January 23<sup>rd</sup>, 11:15 AM – Noon, Salon 10 Room, 3<sup>rd</sup> Floor, Palmer House Hotel. *Don't complain about the meeting program and your TC's submissions if you have not been to training.*

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

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

## 2. Location of Section Head Mailboxes & Free Wi-Fi Access at this Society meeting

Mailboxes are located just outside ASHRAE Headquarters Office (Salon 3 Room – Salon Level (3<sup>rd</sup> floor) – Palmer House Hotel. ).

Also, Internet access and computers for e-mail are available in the Cyber Café located in the registration area during operating hours. Please be considerate to others and limit your usage to five minutes.

Wireless internet will be available in all meeting rooms at the Hyatt, Renaissance, and Long Beach Convention Center. ASHRAE will be working with the internet provider to manage the bandwidth so that member expectations of accessibility and speed are fulfilled. We would like to request that everyone limit their usage to functions that do not use excessive bandwidth. Applications such as Facebook, YouTube, streaming video, etc. use excessive bandwidth.

Palmer House Hotel Wi-Fi Access: **PH\_Meeting\_Room** is the network, username is **ASHRAE18** and password is **chicago** all (case sensitive).

## 3. RPM (Remote Participation Meetings) being held in Chicago

The 13th RPM (Remote Participation Meeting) Capable Society Meeting, which allows some TC members to participate in the TC meeting from a remote location electronically, will occur in Chicago and the following sixteen TCs have agreed to participate in this effort: TC 1.12, TC 2.1, TG2(HVAC), TC 4.1, TC 4.2, TC 4.3, TC 4.7, TC 5.11, TC 6.9, TC 7.3, TC 7.8, TC 9.2, TC 9.3, TC 9.4, TC 10.3, and TC 10.6 – This is an increase of one in the number of TCs that hosted RPM meetings in **Long Beach**. A total of 46 RPM meetings will be hosted in **Chicago** when you include project committee and other committee meetings. For comparison, a total of 33 RPM meetings were hosted in **Las Vegas** last year at this time.

The chairs of those TCs participating should provide to their Section Head feedback on their RPM meeting experience before TAC meets on Wednesday morning, 1/24.

## 4. Name Badges

As offered in the past, members of TCs who are not registered for the Conference and plan to only attend TC meetings may receive a free, plain white name badge. The purpose of these badges is for TC members not registered for the Conference to be able to identify one another in meetings.

To receive your badge, please go to the ASHRAE Registration desk located in the Exhibit Hall room at the Palmer House Hotel and look for the sign for "TC Badges." Please identify yourself as someone only attending committee meetings, not registered for the Conference, who would like a white name badge. An ASHRAE staff person will create a badge for you that includes your name, company name and city, state and country (if outside the U.S.). The badge will not have a QR code and will not allow you into the Technical Program.

However, if you'd like to register for the entire Conference you can do so in advance or on-site. We realize your time is limited, one-day registrations (\$270 for Members) are available as well as one-session registrations (\$70). If you wish to register for one day of the Technical Program you or one session, you can do so at the ASHRAE Registration desk. The One-Day option gives you access to the Virtual Conference which is viewable on-demand for 18 months. Questions? Contact [meetings@ashrae.org](mailto:meetings@ashrae.org).

### **C. UPCOMING DEADLINES**

#### **1. TC Activity Forms for the Chicago Meeting are due to Your Section Head before Wednesday, 1/24/18**

*TC/TG/TRG Activity Feedback Form (Excel)* can be downloaded from the Technical Committee webpage under the "TC Forms and Documents" page - <https://www.ashrae.org/standards-research-technology/technical-committees/tc-forms-and-documents>. Section heads can also provide an electronic copy of the form if requested.

#### **2. Seminar and Forum proposals for Houston are due by Friday, February 9th, 2018.**

Please visit the following site to submit your proposal:

<http://submissions.mirasmart.com/ASHRAEHouston2018/Splash.aspx>

For more information, go to: <https://www.ashrae.org/membership--conferences/conferences/2018-ashrae-annual-conference>

#### **3. 2018 RPM (Remote Participation Meetings) Request for Houston Meeting**

ASHRAE has streamlined the process for requesting RPM meetings moving forward, which will allow us to confirm meeting information earlier in advance of the actual meeting dates.

The updated procedures are as follows:

- ALL committees that want to be considered for an RPM capable meeting in Houston next June must turn in an *ASHRAE Meeting Room Request Form* for Houston to the ASHRAE Meetings section.
- The request should include the reasons why you are requesting RPM meeting capability.
- RPM meeting requests for the upcoming Houston Annual meeting should be submitted by Friday, April 9<sup>th</sup> or sooner
- Confirmation emails (verifying the requests) will be sent out in May 2018
- Requests received after the above date may not be accommodated due to high and growing demand for this service.

### **D. REMINDERS**

**1. Useful TC/TG/TRG/MTG Chair Information and forms on ASHRAE website** Information for TC/TG/TRG and MTG chairs can be found on the Technical Committee page of the ASHRAE website at the following link: <http://www.ashrae.org/tcs>

**2. Request for each TC to briefly review ASHRAE Code of Ethics at start of meeting** See the following link for the latest version of the ASHRAE Code of Ethics: <https://www.ashrae.org/about-ashrae/>

#### **3. Make a Special Effort to welcome new Members, and Visitors to TC meeting**

Potential new members for your committee have been encouraged to drop-by your meeting. As a result, please make a special effort to recognize and warmly welcome all visitors to your meeting – A TC can never have too many willing and able volunteers.

**4. Option for TC Subcommittee Meetings via Conference Calls and Web Meetings** More and more TCs are taking advantage of a new Society service that allows TCs to hold subcommittee meetings by phone and/or web. Many TCs are finding this to be a more efficient way for them to conduct subcommittee business and it also allows TC members that can't travel to meetings on a regular basis a way to still contribute to the TC. Such a change can also eliminate potential conflicts with the TC's program sessions at Society meetings. Please pass your conference call/web meeting/webinar requests on to the Manager of Research and Technical Services, Mike Vaughn, at [mvaughn@ashrae.org](mailto:mvaughn@ashrae.org) or [MORTS@ashrae.net](mailto:MORTS@ashrae.net)

#### **5. Is Your Committee Website up to Date?**

If not, please ask your webmaster to at least post the latest minutes and the Chicago meeting times and agenda. If your website has been neglected, add an action item for this meeting to appoint a responsible member of the TC/TG/TRG who will bring it back to life. The new TC website template has greatly simplified the duties of the TC webmaster and this form of communication is critical to the efficient operation of your committee, and for attracting new members.

The recent conversion to a new TC website platform highlighted a couple areas where a refresher of the ASHRAE rules on website maintenance is warranted. First be aware that ASHRAE Products (i.e., handbook chapters, journal articles, final reports from research projects, etc.) cannot be published on your TC's website. It is very appropriate to post the title and scope of the product and then link the reader to the ASHRAE bookstore or other location on the ASHRAE site where the product may be purchased. Any possible exceptions to this rule must be sent through Steve Comstock for review and approval ([scomstock@ashrae.org](mailto:scomstock@ashrae.org)). The second issue involves timely posting of the draft minutes. Draft minutes (and final, approved minutes from the prior meeting) should be posted to your website (or otherwise distributed to the members) within 60 days after the meeting. Please ensure that your secretary and webmaster are aware of this deadline. To assist your secretary in understanding the procedures for taking and reporting minutes, a video has been developed and posted on the Technical Committees' Training page (<https://www.ashrae.org/standards-research--technology/technical-committees/tc-training-and-presentations>). On the same page, a video has also been posted for use by webmasters to learn about the procedures and schedule to maintain the new websites.

**6. TC 2017-2018 Master Calendar – Now Available through Google** - The Technical Committee Master Calendar is now available through Google. In order to access this calendar you need to have a Google account.

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

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

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

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

To set up Google Calendar Sync to your Outlook:

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

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

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

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

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

## **E. RECENT ANNOUNCEMENT**

### **1. RAC Prioritizing Research Topics Related to the Residential Sector**

Continuing in 2017-2018, RAC will be prioritizing for bid accepted research topics that support Goal #3 below from the Research Strategic Plan.

**Goal #3:** To reduce significantly the energy consumption for HVAC&R, water heating and lighting in existing homes.

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

The Conferences and Expositions Committee (CEC) oversees ASHRAE's annual and winter conferences and other specialty conferences and expositions globally. The CEC continually works to improve the conference experience for all attendees. To help keep a "pulse" on the technical issues facing professionals in the HVAC&R marketplace, and to create meetings that reach all of ASHRAE's constituencies, the CEC seeks ideas for tracks for the Atlanta 2019 winter meeting and annual and winter conferences beyond as well as topics for specialty conferences from TC members.

Please submit your suggestions to ASHRAE Staff member Tony Giometti ([Giometti@ashrae.org](mailto:Giometti@ashrae.org)).

You can also add your track suggestion in the "Comment" section of the TC Activity form for the Chicago meeting.

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

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

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

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

Contact Karen Murray (ASHRAE staff) [kmurray@ashre.org](mailto:kmurray@ashre.org) or Karen Thrasher (2017-18 PDC chair) [PDCchair@ashrae.net](mailto:PDCchair@ashrae.net) with your course ideas.

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

### **1. Chicago Winter Conference – Jan. 20 – Jan. 24, 2018**

Conference Website: <https://ashraem.confex.com/ashraem/w18/cfp.cgi>

Conference Program Chair: Michael Collarin

Program Focus at Chicago Winter Conference

i. Track 1: Systems and Equipment

ii. Track 2: Fundamentals and Applications

iii. Track 3: Standards, Guidelines and Codes

iv. Track 4: Earth, Wind & Fire NEW!

v. Track 5: Transportation IAQ and Air Conditioning NEW!

vi. Track 6: Tall Buildings

vii. Track 7: Modeling Throughout the Building Life Cycle NEW!

viii. Track 8: Heat Exchange Equipment

ix. Track 9: Refrigerant Mini Track @ Expo\*

x. Track 10: Residential Mini Track @ Expo\*

## **2. Houston Annual Conference - June 23 – June 27, 2018**

Seminar and Forum proposals for Houston are due by **Friday, February 9th, 2018**. Conference Website: <https://www.ashrae.org/membership--conferences/conferences/2018-ashrae-annual-conference/call-for-papers>

Conference Program Chair: Cindy Moreno Email: [cindym@tmmechanical.com](mailto:cindym@tmmechanical.com)

Program Focus at Houston Annual Conference

i. Track 1: HVAC&R Systems and Equipment

ii. Track 2: Fundamentals & Applications

iii. Track 3: District Energy and Cogeneration Plants NEW!

iv. Track 4: Safeguarding our HVAC&R System NEW!

v. Track 5: Residential: Modern Buildings in Hot & Humid Climates

vi. Track 6: Professional Skills

vii. Track 7: Research Summit

viii. Track 8: HVAC&R Control Freaks NEW!

ix. Track 9: HVAC&R Analytics NEW!

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

### **1. 2018**

i. **Business and Technical Aspects of Deep Energy Retrofit of Buildings** – Jan. 18 to 20, 2018 –  
Chicago, IL USA

ii. **THE Global Women in STEM Leadership Summit** – Mar. 19 to 20, 2018, Four Seasons Hotel, Atlanta GA USA. This is the only one of its kind 2-day summit held in the world that is dedicated to giving women in STEM access to powerful tools, strategies and networks to advance their careers and realize their full potential. [Learn More >>](#)

iii. **2018 ACEEE Hot Water Forum** – Mar. 20 to 22, Portland, OR USA - <http://aceee.org/conferences/2018/hwf>

iv. **13th International HVAC&R Technology Symposium** – Apr. 12 to 14, Istanbul, TURKEY

[More Information >>](#)

v. **Roomvent & Ventilation 2018 Conferences** – Jun. 2 to 5, Espoo, FINLAND - <http://roomventilation2018.org/>

vi. **1st IIR International Conference on the Applications of HFO Refrigerants** – Sep. 2 to 5, Birmingham, UNITED KINGDOM - [hfo2018@ior.org.uk](mailto:hfo2018@ior.org.uk)

vii. **IBPC 2018** – Sep. 23 to 26, Syracuse, NY USA - <http://ibpc2018.org/>

viii. **2018 Building Performance Analysis Conference and SimBuild co-organized by ASHRAE and IBPSA-USA** – Sep. 26 to 28, 2018 – Chicago, IL USA – Contact: [ashrae.org/BuildPerform2018](http://ashrae.org/BuildPerform2018)

ix. **The Third International Conference on Efficient Building Design** – Oct. 4 to 5, 2018 – Beirut, LEBANON – Contact: [ashrae.org/Beirut2018](http://ashrae.org/Beirut2018)

x. **14th Asia Pacific Conference on the Built Environment** – November 18 to 19, 2018 – Kuta-Bali, INDONESIA– Contact: <https://ashraem.confex.com/ashraem/bpa17/cfp.cgi>

xi. **2<sup>nd</sup> ASHRAE Developing Economies Conference** – Nov. 10 to 11, 2017, Delhi, INDIA – Contact: [ashrae.org/14thAsiaPacific](http://ashrae.org/14thAsiaPacific)