

**AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING
 ENGINEERS, INC.
 1791 Tullie Circle, N.E./Atlanta, GA 30329
 404-636-8400**

TC/TG/TRG MINUTES COVER SHEET

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

TC/TG/TRG NO 8.2 DATE June 30, 2014

TC/TG/TRG TITLE Centrifugal Machines

DATE OF MEETING January 20, 2014 LOCATION New York, NY

MEMBERS PRESENT, appt yr	OTHERS PRESENT	EX-OFFICIO MEMBERS
Rick Heiden, (VM), 2012, Chair	Katelynn Balmer	Micheal Patton – 2016 Handbook
Fred Betz (VM), 2013, Vice	Justin Piggush	David Yashar – Research Liaison
Forrest Yount (VM), 2013, Sec	Hassan Javed	Rick Larson – Standard Liaison
Justin Kauffman	Atul Singh	Stephanie Reiniche – Mgr Stndrds
Mark Adams	Ihsoincan Turon	Michael Vaughn – Staff Liaison
Susanna Hanson	Chris Kirchner	Walter Gronzik – TAC Chair
Phillip Johnson	Steve Tredinnick	Francis Mills – Special Pubs
Mark Rogan	Charles Allgood	Don Brandt – ALI/PDC
Raymond Good (VM), 2013	Tom Gorman	
Konstantions Kontomaris (VM), 2011		
Jeb Schreiber (VM), 2010		
John Vucci (VM), 2011		
Laurent Abbas		
Satyam Bendapudi		
Rupal Choksi		
Seth Gladfelter		
Scott MacBain		
William McQuade-TAC Chair		
Andrew Price		
Michael Stark		
Stephen Duda-Section Head		
Tom Watson- 20/20 Vision		

DISTRIBUTION

<i>All Members of TC/TG/TRG plus the following:</i>	
TAC Section Head:	Steve Duda sduda@rossbar.com
TAC Chair:	Bill McQuade william.f.mcquade@jci.com
All Committee Liaisons As Shown On TC/TG/TRG Rosters:	Program: Bill Dietrich william.dietrich@daikinapplied.com Research: David Yashar david.yashar@nist.gov Standards: Rick Larson rick.ashrae@gmail.com Special Pubs: Francis Mills famills@hotmail.co.uk Chapter Tech Transfer: Keith Reihl reihl@reihlengineering.com ALI/PDC: Don Brandt dbrandtz@aol.com 90.1: Susanna Hanson shanson@trane.com 20/20 Vision: Tom Watson tom.watson@mcquay.com
Manager Of Standards:	Stephanie Reiniche sreiniche@ashrae.org
Manager Of Research & Technical Services:	Mike Vaughn mvaughn@ashrae.org

MEETING MINUTES

1. Call to Order at 2:20 pm on January 20, 2014.
2. Introduction of Attendees, Liaisons, Officers and Guests.
 - Attendance sheet circulated
 - Quorum established, 7 of 10 voting members present
3. Reviewed TC8.2 Mission Statement and Scope.
 - Scope and mission statement **Appendix A.**
 - Reviewed and discussed modifying the term refrigeration or refrigerating directly.
4. Reviewed Review/Approval of Denver minutes (meeting date June 24, 2013)
 - Unanimous approval 7-0.
5. Reports:
 - 5.1 Program Subcommittee F. Betz
 - Fred reviewed attached report **Appendix B.**
 - 5.2 Handbook Subcommittee J. Kaufmann
 - Chapters that TC 8.2 is responsible are 38 – Compressors, and 43 – Liquid Chilling Systems. These will be updated for the 2016 handbook. The subcommittee intends to prepare the chapters so that they can be approved by the full committee in the January 2015 meeting. Kauffman will schedule two interim teleconferences before the Seattle meeting to continue revising the chapters.
 - 5.3 Standards Subcommittee S. Hanson
 - Susanna reviewed attached report **Appendix C.**
 - 5.4 Research Subcommittee M. Adams
 - Mark reviewed attached report **Appendix D.**
 - 5.5 Membership F. Yount
 - The Roster for 2013/14 is established.
 - The TC has 10 voting members.

- New corresponding members have been added. Anyone wanting to become a corresponding member can add themselves as “Provisional Members” on the website.
- Riyaz Papar and Dr. Mueller have requested to be transitioned to corresponding members. Dr. Abbas, Rupal Choksi, and Andrew Price will be added as voting members after Seattle in June.
- Paul Kozlov and Jeb Schreiber will roll off as voting members in June. Justin Kaufman will become JCI’s voting member.
- This will give us 9 members.
- Committee assignments as follows:

Chair	Heiden - VM
Vice – Chair	Betz - VM
Secretary	Yount - VM
Program	Betz - VM
Standards	Hanson - CM
Research	Adams - CM
Handbook	Kauffman - CM
Webmaster	Rogan - CM
Membership	Yount - VM
Honors and Awards	Heiden - VM
MTG.LowGWP Liaison	Johnson - CM

5.6 Honors and Awards

R. Heiden

- Stephen Duda was awarded fellow designation for his outstanding contributions to Society.
- Recommended submitting Tom Watson for Boggs award. Deadline is May 1.
- Please get additional H&A suggestions to Rick.

5.7 Web Master

M. Rogan

- Mark demonstrated how to access TC website at web address <http://tc82.ashraetcs.org/>

5.8 Section 8 Chair’s Breakfast

R. Heiden

- Rick reviewed meeting summary **Appendix E**. The following highlighted items from that summary were discussed.
- Reviewed outstanding TC award requirements to foster improved performance.
- Reviewed Code of Ethics and where to find them **Appendix F**.
- A master calendar is established.

6. Old Business

None

7. New Business

- Phil Johnson gave an MTG update that Low GWP met on January 8 and will meet again on January 22.
- AHRI held the Low-GWP AREP conference on Thursday prior to ASHRAE. Conference proceedings available at: <http://www.ahrinet.org/site/517/Resources/Research/AHRI-Low-GWP-Alternative-Refrigerants-Evaluation/AHRI-Low-GWP-AREP-Conference>

8. Adjournment at 4:00pm

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-TC 8.02 Program Subcommittee Report

2014 Winter Meeting, New York City

Subcommittee Meeting: Jan 19, 2014 / 5:40 to 6:15 pm

Attendees: Laurent Abbas, Mark Adams, Fred Betz, Ray Good, Rick Heiden, Phillip Johnson, Justin Kauffman, Andy Price, Jeb Schreiber. Guests: Katelynn Balmer, Michael Groen, Hassan Javed, David Yashar (Research Liason).

CEC Update:

- **Deadline** for Seminar/Forum submissions is **February 13, 2014** for **Seattle (2014 Summer)**. TCs will be notified of acceptance or rejection of Seminar/Forum submissions in March, 2014. Tracks for Seattle are:
 - Track 1 Indoor Environment – Health, Comfort and Productivity
 - Track 2: Research Summit
 - Track 3: Ground Source Heat Pumps: State of the Art Design, Performance and Research
 - Track 4: HVAC&R Systems and Equipment
 - Track 5: HVAC&R Fundamentals and Applications
 - Track 6: Standards, Guidelines and Codes
 - Track 7: Refrigeration
 - Track 8: Installation, Commissioning, Operation, Maintenance of Existing Buildings
 - Track 9: Professional Skills
- **Deadline** for new Conference Paper Abstracts and Conference Paper Session Proposals for **Chicago (2015 Winter)** is **March 24, 2014**.

Recent Past Programs:

- Seminar 20 at Chicago 2012 Winter: *Back to Basics: Selection of Proper Chiller Technology*. Chair: Riyaz Papp. Speakers: Scott McDonough and Fred Betz.
- Conference Paper Session #15 at Chicago 2012 Winter: *Considerations for Chiller Life Cycle Evaluations Including Comparisons to AHRI 550/590 IPLV*. Chair: Rick Heiden. Speakers: Saunders Smith and Stephen Duda.
- Seminar #21 in Denver 2013 Summer: *Water Side Economizers – a.k.a. Free Cooling*. Chair: Fred Betz. Speakers: Charlie Putz, Jeff Stein, Suzanne Hanson.

New York City (Current) Programs:

- No Programs made the schedule for NYC

Planned or Future Programs:

- Seminar for Seattle (previously approved for NYC submittal): Standard 90.1-2013 *Where Do We Go From Here*: AHRI is facilitating efficiency table discussions with their member companies. Program suggestion would be to

take a holistic approach with TC 9.01 on whole building on a performance basis. Avoid specific chiller promotion. *Susanna Hanson will Chair; possible speakers are Dick Lord and Paul Kozlov.*

- Seminar for Seattle (previously approved for NYC): Program on oil-free chiller/compressor performance records, reliability, and maintenance practices (if it can be done non-commercially). Phil Johnson to Chair. Possible Speakers: Paul Kozlov, Gabriel Peters, Changiz Tolouee, and speaker on ceramic bearings.
- Proposed Seminar for Chicago 2015: *Introduction to Standard 184 MOFT for Chillers* when Std. 184 is released. Rick Heiden to Chair: *Possible speakers – Robert Blanton, Phil Johnson, John Vucci.*
- Proposed Seminar, Paper Session or mini-conference session for Seattle 2014 or Chicago 2015: Technical Paper from RP-1476. Perhaps expand the session to a full time slot with supplemental presentations. *Phil Johnson will spearhead this effort through the Low GWP MTG as he was Chair of PMS-1476.*
- Proposed Seminar for Chicago 2015: Seminar on Multiple Chiller Sequencing. Andy Price to Chair. Possible Speakers include Steve Taylor, Doug Reindl (recent paper on the topic). We would use this as an “Intermediate” level back-to-basics seminar.

Future Conferences:

- We need to put together a paper session for future presentation. We should issue a “call for papers”.
- All committee members – feel free to send suggested topics for Sessions.

Old Business

- Volunteer Peer Reviewers for Conference Papers: Phil Johnson, Justin Kauffman, Ray Good, Susanna Hanson, Riyaz Papar, Fred Betz, Paul Kozlov, Mike Zamalis, Rick Heiden.

New Business

- None.

Next Meeting

- Subcommittee will meet in Seattle from 6:00 to 7:00 on Sunday evening.

Respectfully submitted by:

Fred Betz
TC 8.02 Program Subcommittee Chair
Jan 20, 2014
email: fbetz@pedcoea.com
phone: 513 378-1394 (cell)

Appendix C-Standards Subcommittee Report

Standard 90.1 Susanna Hanson

90.1-2013 published in October with lots of errata identified. Next published booklets will incorporate the errata
New chiller table included in 2013 version

Addendum DU – did not make the 2013 standard – will likely have an ISC voted out in Seattle for review over the summer

Hydronic and heat recovery working groups are open to non-members of 90.1

No Spring interim meeting – may have working groups meet the Thursday before the Seattle meeting starts on Friday.

Standard 184P John Vucci

Met via phone call August 20

Uncertainty calculations – flow measurement – thinking about using ASME rather than 41.8 which is under review

Rupal said there is a new AHRI report or procedure available on their website
Similar information on uncertainty is in Std. 30, that will need to be in both or cross referenced
Sampling rate being discussed
Informal review had no comments – did not receive any comments – discussed publicizing outside of the Standards
Actions newsletter and ASHRAE Journal
Did not get out for an advisory public review yet
Meeting 8a-noon Tuesday morning Hilton Concourse F

Standard 30 Rupal Choksi

Interim meeting/call Aug 21
Met Monday morning (day before this meeting)
Chillers engineering committee is revising 550/590 revision will be complete by this year for a publish in January 2015
Data sampling rate is being discussed
Interim meeting in April 2014

41.11 power measurement for HVAC equipment Rick Heiden

approved in 2nd public review
Will be bundled with IEEE 120
Application of that power measurement to HVAC equipment – first to be expanded to include field measurement
Other standards will also expand to include field measurement
Drive and power measurement on either side of drives is included

AHRI 1210/1211 VSD performance 75hp and under

Certified performance on a variable speed drives across an operating map
TC 1.11 is considering issuing request for new vfd test method standard to support the performance standard

Standard 15 Phil Johnson

Has been static with respect to centrifugal machines
Change Proposal touched a paragraph in the area of pressure limiting devices there is an exception for centrifugal machines that may be changed. Would be out for public review after Seattle
2L refrigerants Low GWP – high level 15 is developing requirement for how to use 2L
Advisory Public Review in Fall 2011 nothing since then.
Open issues to be resolved. Ongoing research and research that has not yet been made public that would impact safety requirements.

Standard 147 no report

Standard 196P MOT for Leakage Rates

Total leakage calculated from putting the operating chiller in a box/bubble
Not just sniffed but mass calculated
May significantly affect this committee/industry

Susanna Hanson
Principal Applications Engineer
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Appendix D-Research Subcommittee Report

2014 ASHRAE Winter Meeting, New York, New York

January 20, 2014

Research S/C Chair Breakfast notes of interest

- ASHRAE has 62 active research projects with a total value of \$10.8M.

- Since June meeting 6 projects were complete, 10 new projects were approved for funding, and 8 Tentative Research Projects were released for bidding.
- In NY RAC evaluated 6 RTAR's – Accepted - 3; returned - 1; rejected - 2. RAC reviewed 4 work statements at this meeting and 2 are moving forward.
- Five URPS are under review by RAC.

Current Activities

Research Subcommittee meeting was held on Sunday January 19, 2014.

Attendees: M. Adams, J. Kauffman, R. Good, F. Betz, L. Abbas, A. Price, J. Schreiber, K. Balmer, H. Javed, M. Green, P. Johnson, and R. Heiden.

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.
- **1716 - Oil concentration of field-installed liquid chillers with flooded type evaporators.**
 - RTAR has been approved to proceed to the next stage. RAC returned some comments to be incorporated into the Work Statement. Justin Kauffman will take the lead on this effort.
 - Discussion occurred about details of how to proceed. There was discussion around taking samples and the type of researcher we should target for this project. Discussion also occurred about the amount of detail to be specified in the WS versus what we would expect the researcher to develop.

Future Activities

- RTAR for research related to 2L safety classification as applied to commercial and industrial centrifugal machines. Several organizations are working on similar studies. Committee has recommended that we hold on this project until it becomes clear what other work is proceeding.
- We are still continuing to look for new ideas to kick off another project.

Respectfully submitted,
Mark Adams
January 20, 2014

Appendix E- Section 8 Chair's Breakfast Handout

1/18/2014

AGENDA

SECTION TC/TG/TRG CHAIR'S BREAKFAST MEETING

2014 Winter Meeting

New York, NY

Sunday, January 19th

6:30 A.M. – 8:00 A.M. EST

New York Hilton Hotel Midtown

Section 1, Madison Room, 2nd Floor **Section 2**, Concourse H Room, Concourse Floor

Section 3, Concourse F Room, Concourse Floor **Section 4**, Holland Room, 4th Floor

Section 5, Morgan, 2nd Floor **Section 6**, Section 6, Gramercy East Room, 2nd Flr.

Section 7, Clinton Room, 2nd Floor **Section 8**, Bryant Room, 2nd Floor

Section 9, East Room, 4th Floor **Section 10**, Concourse C Room, Concourse Floor

I. CALL TO ORDER

II. ROLL CALL AND INTRODUCTIONS (5 minutes)

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

IV. REVIEW MINUTES/NOTES, SPECIAL ASSIGNMENTS, ACTION ITEMS FROM LAST MEETING, AND NEW ISSUES (30 minutes).

New Assignments:

A. To be determined

V. IDENTIFY SHARED OPPORTUNITIES AND CHALLENGES FOR SECTION (10 minutes).

Society Strategic Plan? Research Strategic Plan?, Handbook workshop recommendations?, etc.

VI. REVIEW SECTION MBOs (10 minutes).

Discuss section and TC MBOs for this year and coming year and how the section can work together to address them or establish section and TC MBOs if not already done.

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

Additional Announcements/Reminders;

1. 2013-2014 Hightower Award Recipient – G.D. Mathur, TC 5.7

2. Outstanding TC Award – NEW!

3. YEA/TC Hospitality Sunday afternoon in New York

4. 14-15 Roster update process & TC input deadline

5. TC/TG/TRG Chair's Training Workshop Reminder

6. Request for each TC to Review ASHRAE Code of Ethics

7. Location of Section Head Mailboxes at this Society meeting

8. Useful TC/TG/TRG Chair Information on ASHRAE website

9. TC Master Calendar – Now Available through Google

10. New MTGs that have been formed – MTG.HCDG (Hot Climate Design Guide)

11. TC Representatives on MTGs are now validated by TC Chair via the TC roster update process

12. TC Members are encouraged to volunteer with CEC to review technical papers for ASHRAE conferences

13. CEC proposed or recently implemented technical program changes

14. Report on TC/TG/TRG websites in Section (SHs need to report to TCs which sites are not up to date.)

15. Special effort to welcome new members, and visitors (potential members) to TC meetings

16. What type of webinar training modules would be useful to TC chairs?

17. ASHRAExCHANGE

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

19. New TAC Presentation template for TC members to use with local Chapter

20. Employment Discipline added to ASHRAE BIO Online Input Form

21. E&P Beta Test #5 TC meetings being Held in New York

22. New TC Activity Form

23. Upcoming Program Submission Dates

24. Upcoming Conferences

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.

Announcements and Reminders for TC/TG/TRG & MTG Chairs

New York 2014

1. 2013-2014 Hightower Award Recipient – G.D. Mathur, TC 5.5 & TC 5.7

G.D. Mathur has provided technical leadership to TC 5.5 (Air-to-Air Energy Recovery) and TC 5.7 (Evaporative Cooling) for more than twenty years in a variety of positions. He has written and revised both TCs' handbook chapters many times and has never missed a single handbook deadline. In the last four years, Mr. Mathur has been

responsible for updating Two-Phase Thermosiphon Loop air-to-air heat transfer technology. When TC 5.5 was considering the elimination of the Thermosiphon section from its chapter in the ASHRAE Handbook, G.D. led the effort to reverse that decision.

Mr. Mathur's contributions to ASHRAE technical committees, especially to TC 5.5 and TC 5.7, in the last four years have been exemplary and make him a well deserving recipient of the George B. Hightower Award.

2. Outstanding TC Award – NEW!

TAC has developed a new award call the Outstanding Technical Committee Award. The purpose of the award is to recognize, annually, a single Technical Committee within each TAC Section that has the highest measured performance based on a set of weighted criteria as compared to other TCs within that same Section. The goal of this award is to reward TCs for the behaviors and activities that further the goals of TAC and exhibit excellence in the operation of a technical committee. The criterion used is a point system with values assigned to various metrics and activities, which are collected through an updated TC activity form. The award will serve to heighten TC Chair and committee member awareness of what activities are valued to encourage improved performance, and foster friendly competition between TCs within a Section.

3. YEA/TC Hospitality Sunday Afternoon in New York

Is your TC in search for new members? If so, please plan to attend the Young Engineers of ASHRAE (YEA) / TC Hospitality at the New York meeting on Sunday, 1/19, from 4 p.m. to 7 p.m. in the Petit Trianon room on the 3rd floor of the New York Hilton Midtown Hotel. Food and beverages will be available at this casual gathering as well as ice-breaker games to help get these young engineers of the Society talking with TC representatives at the event.

4. 14-15 Roster update process and process for adding provisional CMs

Remember, the current 2013-2014 roster for your TC, TG or MTG is in effect until after the June meeting this year. The new committee rosters for Society year 2014-2015 will be created based upon the update information that each TC, TG or MTG provides to their section head at **this meeting** by midnight, Tuesday, 1/21/14 and these new rosters will go into effect on July 1, 2014. Please see your section head for the 2014-2015 Roster Update form if you still need a copy.

By now, each TC, TG and MTG chair should have received a PDF & MS-Excel file of their current 2013-2014 roster from their Section Head for distribution to the committee. In addition, each member can view/download all of the rosters of their committees on the ASHRAE Website. Go to www.ashrae.org/MyActiveCommittees and log in (if you have not logged in lately, you might need to set up a new username and password). Make sure everyone on your committee also knows how to access the roster.

The Provisional Corresponding Member 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 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.

5. TC/TG/TRG Chair's Training Workshop Reminder

Sunday January 19, 9:45-10:45a in the Sutton Center Room (2nd floor) in the New York Hilton Midtown Hotel. As with the Breakfast meeting, both the Chair and Vice-Chair are expected to attend; attendance will be tracked so that we can assess who has been trained. Bring questions - if you need an answer, it's quite likely others also need the same answer. The main focus of this particular workshop will be the roster update process.

6. Request for each technical committee to briefly review ASHRAE Code of Ethics at start of TC meeting

See the following link for the latest version of the ASHRAE Code of Ethics:

<https://www.ashrae.org/about-ashrae/> A hardcopy of the ethics is also attached to this document.

7. Location of Section Head Mailboxes at this Society meeting & Free WiFi Access at this Society meeting

Mailboxes are located just outside ASHRAE Headquarters Office (Nassau Room – 2nd Floor - New York Hilton Midtown Hotel).

Also, high speed wireless internet service will be available in meeting rooms and in public areas of the hotel this meeting compliments of ASHRAE. See Page 12 of program for log-in information.

8. 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/standards-research--technology/technical-committees>
The TC/TG/TRG Manual of Procedures (MOP) has been revised to include a new committee type, Multidisciplinary Task Groups (MTGs). MTGs are different from TCs, TGs, and TRGs. The objective of the MTG is to first try to better coordinate and focus the activities of the affiliated TC and non-TC groups (EHC, REF, SSPCs, outside groups, etc) that make-up the MTG on the task for which the MTG was created without duplicating the functions of a TC or TG so that the task can be completed as efficiently as possible. In special cases, MTGs may also be authorized by TAC to assume some TC/TG functions, such as research, if it is deemed necessary to better complete their task assignment.

Since the need, purpose, and progress of each MTG is reassessed and reaffirmed by TAC each year, there are no term limits for the MTG Chair, Vice Chair, Members and Alternates.

9. TC 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:

1. At the bottom of the calendar list on the left, click Add and select Add a friend's calendar.

2. Enter the appropriate email address (techservices1791@gmail.com) in the field provided, then click Add. This calendar is public and will appear under 'Other Calendars' in the left column.

To set up Google Calendar Sync to your Outlook:

1. Make sure you're using a supported operating system and Outlook version.

2. Download Google Calendar Sync (version 0.9.3.6) at

http://dl.google.com/googlecalendarsync/GoogleCalendarSync_Installer.exe

3. 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.

4. Click OK to confirm that you're aware this is an executable file.

5. Read through the Google Calendar Sync Terms of Service, and click I Agree.

6. 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.

10. New MTGs that have been formed

TAC approved the formation of the following new Multidisciplinary Task Group (MTG) at their fall meeting:

MTG.HCDG – Hot Climate Design Guide Development

Scope

MTG.HCDG will coordinate TC/TG/TRG technical activities to help support the technical basis, development, and publication of a "Hot Climate Design Guide." Responsibilities include the development of supporting research, presentations, and content for the "Hot Climate Design Guide" special publication.

The chair of this MTG is Frank Mills.

For more information on this MTG and the six other MTGs, please go to the MTG section on the following web page: <http://www.ashrae.org/standards-research--technology/technical-committees> If your TC would like to have a voting representative on a particular MTG, please contact the ASHRAE Manager of Research and Technical Services, Mike Vaughn, at MORTS@ashrae.net.

11. TC Representatives on MTGs are now validated by TC Chair via the TC roster update process

TC chairs with voting representatives on a multidisciplinary task group (MTG) will no longer need to submit a letter each year to the TAC MTG Section Head as confirmation that they are satisfied with of their voting representatives

on MTGs and wish to appoint them another year to serve on the MTG. Instead, TC chairs will confirm their MTG representatives as part of the TC roster update process each January.

12. TC members are encouraged to volunteer with CEC to review technical papers for ASHRAE conferences

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.

13. CEC proposed or recently implemented technical program changes

TC Program Subcommittee Chair Training in New York

Please notify your program subcommittee chair that CEC will be offering training to them as follows in New York: Tuesday, 1/21, 11:15 a.m. – Noon, Harlem Room, (Fourth Floor) New York Hilton Midtown Hotel.

New Type of Program Created for ASHRAE Winter/Annual Conferences - Workshops

One hour long workshops consisting of first short presentations by subject matter experts and then discussion time with audience can now be proposed by TCs.

Program Focus at Seattle Annual Conference

The Seattle Conference Technical Program addresses broad topics in the application of technology to practice, specific applications in ground source heat pumps, O&M and indoor environmental quality, as well as new reports on research taking place worldwide. Specific program tracks are as follows:

- The Indoor Environment—Health, Comfort and Productivity Track
- The Ground Source Heat Pumps State of the Art: Design, Performance and Research Track
- The Installation, Commissioning, Operation, Maintenance of Existing Buildings Track
- The Refrigeration Track
- The Standards, Guidelines and Codes Track
- Professional Skills Track

The Seattle conference will also host the second annual ASHRAE Research Summit, which will present innovations in HVAC&R research with particular emphasis on high performance building design and its role in a clean energy economy, and brings together researchers to present and discuss the latest research. Researchers will present papers, seminars and forums or participate in panel discussions. Also, highlights on ongoing ASHRAE funded research will be presented.

Authors of some 200 Conference paper abstracts have been invited to submit papers for the Research Summit and Conference.

Seminar and Forum proposals for Seattle are due by Thursday, February 13, 2014. Please visit the following site to site your proposal:

<http://ashraem.confex.com/ashraem/s14/cfp.cgi>

Program Focus at Chicago Winter Conference

The Chicago Conference, January 24 – 28, 2015, has announced a call for papers. Conference paper abstracts are due March 24, 2014. If accepted, written conference papers due July 7, 2014. Technical Papers are due April 14, 2014.

Specific tracks are as follows:

- Systems and Equipment
- Fundamentals and Applications
- Industrial Facilities
- Large Buildings: Mission Critical Facilities and Applications
- Energy Efficiency
- Life Safety
- Design of Energy and Water efficient Systems
- Hospital Design and Codes

For more information, go to: www.ashrae.org/chicago.

14. Report on TC/TG/TRG websites in Section (SHs need to report to TCs which sites are not up to date.)

Is your committee website up to date? If not, please ask your webmaster to at least post the latest minutes and the New York 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. This form of communication is critical to the efficient operation of your committee, and for attracting new members.

TAC and the Electronic Communications Committee (ECC) recently posted a webinar recording on how to set-up and maintain a basic TC website using the ASHRAE server and TC website template at the following link:

<http://media.ashrae.biz/webinar/TrainingWebinar.avi>

15. Special effort to welcome new members and visitors (potential members) to TC meetings

Potential new members for your committee have been encouraged to drop-by your meeting in New York. 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.

16. What type of webinar training modules would be useful to TC chairs?

TAC is planning to develop, present, record, and post a series of short training webinars for TC chairs on topics such as voting rules, roster update, parliamentary procedures, etc. and they would like to know from TC chairs what other training topics are needed for this new program.

17. ASHRAE_{EXCHANGE}

Please check out ASHRAE's new online forum/discussion board service and connect with other professionals in the built environment community on a variety of current discussion topics. <https://www.ashraexchange.org>

18. 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 or MORTS@ashrae.net

19. New TAC Presentation template for TC members to use with local Chapter

The new presentation template allows TC members, without a lot of effort, to give a presentation to their local chapter on TAC and the TCs in general and to also customize a few slides with information specific to their own TC or TCs. The template is posted now on the Technical Committee page of the ASHRAE website for download.

20. Employment Discipline added to ASHRAE BIO Online Input Form

A new input field titled Employment Discipline has been added to the ASHRAE online member (BIO)graphical input form and TAC would like all TC members to self-declare their employment discipline prior to the Winter meeting in New York by going to the Members Only section

(<https://eweb.ashrae.org/eweb/DynamicPage.aspx?Site=ASHRAE&WebKey=8396a37a-9fc2-4f50-9332-Seebebe73494>) and enter their employment discipline information. The link should take you directly to the screen,

which is located under demographics.

You will need your login and password to enter. Employment Discipline is located in the third section.

Once you have made the necessary updates, save the changes and logout.

Employment Disciplines:

Academic

Academic - Professor/Staff

Academic – Student

Government and Organizations

Government - Federal (e.g., DOE, EPA, USDA)

Government - National Lab (e.g., ORNL, NIST) Government - Local (e.g., city or state governments)

Not-for-Profit Organization (USGBC, Habitat for Humanity, etc.)

Trade Association (ACCA, SMACNA, etc.)

Building Industry

Architect

Building Owner / Management Firm

Consultant
Contractor
Designer
Facilities Manager/Operator
Manufacturing Industry
Manufacturer
Manufacturer
Manufacturer – Sales
Manufacturer’s Representative
Other
Model Code Organization
Retired
Utility
Other

Thus far, approximately 25% of TC Members have declared their discipline.

21. E&P Beta Test #5 TC meetings being Held in New York

The 5th beta test of Electronic and Present (E&P) meetings, which allows some TC members to participate in the TC meeting from a remote location electronically, will occur in New York and the following TCs have agreed to participate in this test: TC 1.5, TC 2.2, TC 2.8, TC 4.2, TC 7.9, MTG.ET (RP-1561 PMS), TC 8.8, TC 9.2, TC 9.3 (RP-1603 PMS), and TC 9.9

The chairs of those TCs participating should provide to their Section Head feedback on their E&P meeting experience before TAC meets on Wednesday morning, 1/22.

22. New TC Activity Form

TAC has developed a new TC activity form that they would like all TCs to use at this meeting to report to their section head. Attached is a copy of this form for your use. Section heads can also provide an electronic copy of the form if requested.

23. Upcoming Program Dates

Seattle Meeting - June 28-July 2, 2014

- Seattle Seminar and Forum Session Proposals are due February 13, 2014
- Technical Papers final review due February 25, 2014
- All presentation files (PPT) due online – June 2, 2014
- Conference Website: <http://www.ashrae.org/seattle/>

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, the CEC seeks ideas for tracks for the Chicago meeting next year 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)

24. Upcoming Workshops and Conferences:

- 1st International Conference on Energy and Indoor Environment for Hot Climates**, February 24-26, 2014, Doha, Qatar. Contact: www.ashrae.org/hotclimates
- 49th AiCARR International Conference of 2014**, February 26-28, 2014, Rome, Italy. Contact: <https://www.ashrae.org/membership--conferences/conferences/ashrae-endorsed-events/2014/49th-edition-of-aicarr-international-conference-of-2014>
- 2014 International Sorption Heat Pump Conference (ISHPC2014)**, Mar. 31 – Apr. 3, 2014, College Park, MD, USA. Contact: <http://www.ceee.umd.edu/events/ISHPC2014/>
- 2014 ASHRAE High Performance Buildings Conference** – April 7-8, 2014, Hyatt Fisherman’s Wharf – San Francisco, CA USA. Contact: <http://www.hpbmagazine.org/hpb2014>. Call for Posters currently open through Feb. 21, 2014. Submit online.

□ **Efficient, High Performance Buildings for Developing Economies** — April 24 - 25, 2014 - Manila, Philippines
Contact: www.ashrae.org/Developing2014

□ **11th International Energy Agency (IEA) – Heat Pump Conference**, May 12-16, 2014, Montreal, Canada.
Contact: www.iea-hpc2014.org - See attached Registration brochure.

□ **2014 ASHRAE/IBPSA-USA Building Simulation Conference**—September 10-12, 2014 – Atlanta, GA USA.
Contact: www.ashrae.org/Simulation2014. Call for Presenters currently open through Feb. 10, 2014. Submit online.

□ **ICR2015 - 24th IIR International Congress of Refrigeration** – August 16-22, 2015 – Yokohama, Japan.
Contact: <http://www.icr2015.org> . Call for abstracts starts April 1, 2014 and ends Oct. 10, 2014.

ASHRAE Code of Ethics

(Approved by ASHRAE Board of Directors January 31, 2007)

As members of ASHRAE, we pledge to act with honesty, fairness, courtesy, competence, integrity and respect for others in our conduct.

Efforts of the Society, its members, and its bodies shall be directed at all times to enhancing the public health, safety and welfare.

Members and organized bodies of the Society shall be good stewards of the world's resources including energy, natural, human and financial resources

Our products and services shall be offered only in areas where our competence and expertise can satisfy the public need.

We shall act with care and competence in all activities, using and developing up to date knowledge and skills.

We shall avoid real or perceived conflicts of interest whenever possible, and disclose them to affected parties when they do exist.

The confidentiality of business affairs, proprietary information, intellectual property, procedures, and restricted Society discussions and materials shall be respected.

Each member is expected and encouraged to be committed to the code of ethics of his or her own professional or trade association in their nation and area of work.

Activities crossing national and cultural boundaries shall respect the ethical codes of the seat of the principal activity.

Appendix F-ASHRAE Code of Ethics

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