

**AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING  
ENGINEERS, INC.  
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. TC 2.5 DATE 18 June 2014

TC/TG/MTG/TRG TITLE TC 2.5 Global Climate Change  
DATE OF MEETING 21 January 2014 LOCATION New York, New York

MEMBERS PRESENT	YEAR APPTD	MEMBERS ABSENT	YEAR APPTD	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
Mr. Matt Ritter	7/01/2013	Mr. James G. Crawford	7/01/2012	Van Baxter (CM)
Mr. William F. McQuade, PE	7/01/2012	Dr. Steven H Bernhardt	7/1/2010	Zidu Ma
Mr. David S. Godwin	7/01/2012	Mr. Bruce Lindsay	7/1/2012	Don Brundage (CM)
		Dr. Anthony Arguez	7/01/2011	John Karakash
				Craig Bradshaw (CM)
				Osami Kataoka (CM)
				Gabrielita Pinell
				Michael Stark
				Eric Sturm (PCM)
				Harvey Sachs (Res. Liaison)
				G D Mathur (CM)
				George R. Phelps
				Matthew Dahlhausen
				Joel Hall (CM)
				Larry Burns
				Jibo Sanyal (CM)

**DISTRIBUTION**

*All Members of TC/TG/MTG/TRG plus the following:*

TAC Section Head:	J. Thomas Sobieski
TAC Chair:	Walter T. Grondzik

All Committee Liaisons As Shown On TC/TG/MTG/TRG Rosters:	
Manager Of Standards Manager Of Research & Technical Services	Stephanie Reiniche Mike Vaughn

1. **CALL TO ORDER** [Bill McQuade]

1.1. Introduction of members and guests and determination of quorum. Quorum was not

1.1.1. Members Present (03) were: Matt Ritter, William F. McQuade, and David S. Godwin (NQ)

1.1.2. Members Absent (04) were: James Crawford, Steven Bernhardt, Bruce Lindsay, and Dr. Anthony Arguez

1.1.3. Corresponding members present (08) were Van Baxter, Don Brundage, Craig Bradshaw, Osami Kataoka, Eric Sturm, G D Mathur, Joel Hall, and Jibo Sanyal.

1.1.4. Guests were Zidu Ma, John Karakash, Gabrielita Pinell, Michael Stark, Harvey Sachs (Research Liaison,), George R. Phelps, Matthew Dahlausen, and Larry Burns

1.2. Agenda revision / acceptance

1.3. Establishment of a quorum. A quorum was not present for the meeting.

1.4. Approval of 29 January 2013 (Dallas) meeting minutes and 25 June 2013 (Denver). Because TC 2.5 did not have establish quorum for this meeting, Minutes from 29 January 2013 (Dallas) and 25 June 2013 (Denver) could not be approved.

1.5. The ASHRAE Code of Ethics was read by Chairman McQuade.

2. **CHAIRMAN'S ANNOUNCEMENTS** [Bill McQuade]

2.1. Report of TC/TG Chairs' Meeting

2.1.1. **Announcements and Reminders for TC/TG/TRG & MTG Chairs, New York 2014**

2.1.2. **2013-2014 Hightower Award Recipient – Lucas Hyman, TC 1.10**

Lucas B. Hyman has provided technical leadership to TC 1.10 (Cogeneration Systems) for more than four years. He has also made very significant technical contributions to TC 6.2 (District Energy) and TC 6.9 (Thermal Storage). Mr. Hyman is the author and instructor of two 3-hour courses on Combined Heating & Power (CHP), both of which were approved by ASHRAE's Professional Development Committee (PDC). He is now developing an on-line course on the same subject. In the last four years Mr. Hyman has authored and co-authored two books, respectively: Thermal Storage Systems and Sustainable On-Site CHP Systems. In that time he has also published one ASHRAE paper and made 13 presentations at ASHRAE conferences, chapters or co-sponsored meetings on a broad range of topics including thermal energy storage, chilled water distribution, sustainability, campus master planning for energy conservation, and hybrid chiller systems. Mr. Hyman's contributions to ASHRAE technical committees and especially to TC 1.10 in the last four years have been exemplary and make him a well deserving recipient of the George B. Hightower Award.

2.1.3. **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.

#### 2.1.4. YEA/TC Mixer 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 Mixer 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.

#### 2.1.5. 13-14 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, 1/29/13** and these new rosters will go into effect on July 1, 2014.

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.

#### 2.1.6. Meeting Procedures updated in TC MOP

Part 4 – Meetings of the Manual of Procedures (MOP) for ASHRAE technical committees (TCs/TGs/MTGs/TRGs) has been revised to clarify that attendance at technical committee meetings and subcommittee meetings must be open, except as allowed for by executive session procedures, and that an interim meeting is allowed with proper notification. See the following link for the latest version of the TC MOP: <https://www.ashrae.org/standards-research--technology/technical-committees>

#### 2.1.7. 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/>

#### 2.1.8. 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.

#### 2.1.9. 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-9fc2-4f50-9332-5eebebe73494>) 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 Discipline

category:

discipline:

**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.

**2.1.10. E&P Beta Test #3 TC meetings being Held in New York**

The 5<sup>th</sup> 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.

**2.1.11. 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](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.

#### 2.1.12. **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>

#### 2.1.13. **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.

#### 2.1.14. **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.

##### Program Focus at Seattle Annual Meeting

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>

#### 2.1.15. 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)

#### 2.1.16. Upcoming Program Dates

##### Seattle Meeting - June 28-July 2, 2014

- Conference Site Live: January 6, 2014
- Web Site Opens for Seminar and Forum proposals – January 6, 2014
- Final Conference Papers Submitted for Review – January 9, 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](mailto:Giometti@ashrae.org))

**2.1.17. Upcoming Workshops and Conferences:**

- **1<sup>st</sup> International Conference on Energy and Indoor Environment for Hot Climates**, February 24-26, 2014, Doha, Qatar. Contact: [www.iea-hpc2014.org](http://www.iea-hpc2014.org) or <http://ashraem.confex.com/ashraem/ihc14/cfp.cgi>
- **49<sup>th</sup> 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>
- **Efficient, High Performance Buildings for Developing Economies** — April 24 - 25, 2014 - Manila, Philippines Conference Paper Abstracts due July 12, 2013. <http://ashraem.confex.com/ashraem/dev14/cfp.cgi>
- **11<sup>th</sup> International Energy Agency (IEA) – Heat Pump Conference**, May 12-16, 2014, Montreal, Canada. Contact: [www.iea-hpc2014.org](http://www.iea-hpc2014.org)
- **2014 ASHRAE/IBPSA-USA Joint Building Simulation Conference**–September 10-12, 2014 – Atlanta, GA USA. Contact: <http://ashraem.confex.com/ashraem/emc14/cfp.cgi>

2.2. Review of 2013-2014 roster, Appointment of Subcommittee Chair

2.2.1. Assignment of New Subcommittee Chair

2.2.1.1. Program Subcommittee Chair

2.2.1.2. Climate Change Handbook Chapter Subcommittee Chair

2.3. Roster Update for 2014-2015

Committee Positions for July 1, 2013 to June 30, 2014 term:

**Chairman:** Bill McQuade **Vice Chair:** Matt Ritter  
**Handbook Subcommittee Chair:** Van Baxter  
**Research Subcommittee Chair:** Dr. Anthony Arguez

**Secretary/Webmaster:** Don Brundage  
**Program Subcommittee Chair:** Jim Crawford  
**Standards Subcommittee Chair:** Bill Walter

Voting Members (6 + INQ):	Bill McQuade	(2015)	
	Matt Ritter	(2017)	
	Jim Crawford	(2015)	
	<b>Dr. Anthony Arguez</b>	(2015)	Requested to Move to Corresponding
Member	<b>Dr. Steve Bernhardt</b>	(2014)	Will Not be returning
	<b>Bruce Lindsay</b>	(2016)	Will Continue but not attend this meeting
	David S. Godwin	(Member Non-Quorum-2015)	

Terms Expiring in June of 2014: Dr. Steve Bernhardt

2.3.1.1. Members rolling off: Dr. Steve Bernhardt

2.3.1.1.1. Possible Voting Members: Dr. Tom Lawrence, Osami Katoka, Dave Stirpe, Don Brundage

2.3.1.1.2. New Corresponding Members: Blaine Connor,

2.3.1.1.3. New Provisional Members: Jenny Powell

2.3.1.2. Discussion of new Voting Members

2.3.1.3. Discussion of How to Stagger Voting Member terms Going Forward

2.3.1.4. New Corresponding Members

3. **UPDATE REPORTS ON RELATED TREATIES/ACCORDS AND ACTIVITIES** [Round Table Discussion]

3.1. International Treaties on Climate and Ozone

3.2. European F-Gas Update

3.3. North America

3.4. China and Rest of Asia

4. **CLIMATE CHANGE POSITION DOCUMENT – FORMAL REVISION AND UPDATE**

4.1. Discussion of Scope-In corporate AR5 conclusions

4.2. Establishment of a committee, assignment of Chairmanship

5. **LIAISON REPORTS**

6. **SUBCOMMITTEE REPORTS**

6.1. Program [Jim Crawford]

6.1.1. Possible future programs for Seattle 28 June to 2 July 2014

6.1.2. Possible future programs for Chicago, 24 January to 28 January 2015

6.1.3. **Eric Sturm volunteered to be the new program subcommittee chair.**

6.2. Handbook [Van Baxter] –

6.2.1. 2013 Handbook of Fundamentals, Chapter 29 Refrigerants, GEP section (if Climate Change chapter not approved)

6.2.2. 2013 Handbook of Fundamentals, Chapter 34 Energy Resources (TC 2.8 cognizant TC) (if Climate Change chapter not approved)

6.2.3. Discuss next steps of our proposed Climate Change Handbook Chapter

Van Baxter Communications:

*Regarding timing, right now the final 2017 Fundamentals chapter manuscript due dates (for final, TC-approved chapter drafts) are spread out over the period from March 1 to July 31, 2016. So the proposed Climate Change chapter due date, if approved by Handbook Cmte, will fall into that window. Based on past experience I would recommend the TC complete work on the chapter and vote it out by no later than the January 2016 Orlando meeting - but aim to get all the heavy lifting & reviews done by Summer 2015. After the MS is approved & submitted you'll get a final chance to review galley proofs and make minor (typo corrections, etc.) changes in late 2016.*



*The Handbook Committee has approved the proposed new chapter by a large, though not unanimous, majority (17 -4-0, CNV). The recommendation will go forward to Pub/Ed Council on Tuesday – assuming they approve it will be a go. One major item that came up in the discussion was that there are several other TCs and committees, etc., who have interest in the subject and concern expressed that they be informed about the new chapter and invited to participate or contribute material. I think the wider interest was instrumental in swaying many of the Handbook committee members to support the motion. I have copied Hank Bagheri (Handbook chair), Mark Owen (Handbook editor), and David Yuill (2017 Volume chair) so they can comment further on the Hdbk Cmte discussion if they wish.*

*One way to get the information out to all the other potentially interested groups would be to send an general announcement along with a copy of the proposed chaptered outline to the TC chairs and others using the ASHRAE e-mail aliases. I'd be happy to develop such a message and review with you and Matt before it goes out if you want. I will only be able to be at the TC 2.5 meeting for about the first 15 minutes so will have limited time to discuss it there.*

- 6.2.3.1. Assignment of Chair and Committee members – Chairman McQuade assigned Matt Ritter to be handbook chair for the Climate Change Chapter. Since committee assignments are made by the chair without needing approval of the TC, this could be done although we did not have quorum..

6.2.3.2.

6.3. Web Site [Don Brundage]

6.4. Research [Anthony Arguez]

Jibo Sanyal volunteered to be the new research subcommittee chair. Our official research chair for 2014-2015 ASHRAE year is Anthony Arguez, but with his reduced involvement Jibonananda Sanyal agreed to take on the responsibility.

6.5. Standards [Bill Walter]

7. **OTHER BUSINESS**

8. **ADJOURN**

7.