

**AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING  
ENGINEERS, INC.  
1791 Tullie Circle, N.E./Atlanta, GA 30329  
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**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 06 January, 2014

TC/TG/MTG/TRG TITLE TC 2.5 Global Climate Change  
DATE OF MEETING 25 June, 2013 LOCATION Denver, CO

| MEMBERS PRESENT             | YEAR APPTD | MEMBERS ABSENT               | YEAR APPTD | EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE |
|-----------------------------|------------|------------------------------|------------|--|
| Mr. Don Brundage, PE        | 7/01/2011  | Mr. Denis F. Clodic, PhD     | 07/01/2011 | Piotr Domanski                               |
| Mr. William F. McQuade, PE  | 07/01/2012 | Dr. Anthony Arguez, I        | 07/01/2011 | John Proctor                                 |
| Mr. James G. Crawford       | 09/01/2011 | Mr. Larry Butz               | 07/01/2011 | Eric Strum                                   |
| Mr. William F. Walter       | 07/01/2011 | Mr. Steven H. Bernhardt, PhD | 07/01/2010 | Rakesh Goel                                  |
| Mr. Thomas M. Lawrence, PhD | 07/01/2009 | Mr. David S. Godwin, PE      | 07/01/2012 | G.D. Mathur                                  |
|                             |            | Mr. Bruce B. Lindsay, PE     | 07/01/2012 | Richard Weekley                              |
|                             |            |                              |            | Paulo Tabares                                |
|                             |            |                              |            | Kenji Takizawa                               |
|                             |            |                              |            |  |
|                             |            |                              |            |  |

**DISTRIBUTION**

| <i>All Members of TC/TG/MTG/TRG plus the following:</i>          |  |
|--|--|
| TAC Section Head:  | J. Thomas Sobieski   |
| TAC Chair:   | William F. McQuade, PE   |
| All Committee Liaisons :   |  |
| Research Liaison<br>ALI/PDC:<br>Special Pubs<br>Standards        | David A. John, PE<br>Donald L. Brandt<br>Francis Mills<br>Hoy R. Bohanon, Jr. and Cecily M. Grzywacz |
| Manager Of Standards<br>Manager Of Research & Technical Services | Stephanie Reiniche<br>Mike Vaughn  |

## 1. CALL TO ORDER [Don Brundage]

- 1.1. Chairman Don Brundage introduced the members of the committee and asked each guest present to introduce themselves and state their affiliation.
- 1.2. Chairman Brundage then provided an overview of the previously distributed agenda and asked if there were any additions or corrections proposed or suggested by the members. Hearing none the agenda was established as previously distributed.
- 1.3. Establishment of a quorum: The 2013 OEWG of the Montreal protocol was unfortunately scheduled the same week as the ASHRAE meeting. The result was that many of the voting and corresponding members who regularly attend were not able to be in Denver and a quorum was not established. The tally was as follows:
  - 1.3.1. Voting Members (11): Don Brundage, , Bill Walter (Member non-quorum), Bill McQuade , Jim Crawford, , Thomas Lawrence, (Quorum is 6 if both member non-quorum are present, 6 if one is absent, 5 if both are absent.) As we had one non-quorum member present (Walter) and only 5 voting members, a quorum was not established.
- 1.4. Approval of 29 January 2013 (Dallas) meeting minutes: As we were not able to establish a quorum the Dallas minutes could not be approved and their approval will be deferred until the January meeting in New York.

## 2. CHAIRMAN'S ANNOUNCEMENTS [Don Brundage]

### 2.1. Report of TC/TG Chairs' Meeting

#### 2.1.1. 2013-2014 Hightower Award Nomination Process and Deadline

Nominations for the 2013-2014 George B. Hightower Technical Achievement Award are due to our Section Head by **September 1, 2013**. The award recognizes outstanding technical leadership and contributions on a TC/TG/TRG during the past Society year, excluding research and standards activities. Please go to the Technical Committee page of the ASHRAE website at the following link under the "Procedures and Forms..." heading: <http://www.ashrae.org/standards-research--technology/technical-committees>

#### 2.1.2. ASHRAE Research Award for TC Volunteers:

Nominations for the 2013-2014 Service to ASHRAE Research Award for TC volunteer efforts are due to RAC research liaison by **September 30, 2013**. Please go to the Research page of the ASHRAE website at the following link under the "Research Grants and Awards" heading: <http://www.ashrae.org/standards-research--technology/research>

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

The new presentation template that 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 is now available. The template is posted on the Technical Committee page of the ASHRAE website for download <http://www.ashrae.org/standards-research--technology/technical-committees>

#### 2.1.4. New MTGs that have been formed:

##### 2.1.4.1. MTG.CCDG, Cold Climate Design Guide

Scope: MTG.CCDG will coordinate TC/TG/TRG technical activities to help support the technical basis, development, and publication of a "Cold Climate Design Guide" in conjunction with REHVA and SCANVAC. Responsibilities include the development of supporting research, presentations, and content for the "Cold Climate Design Guide" special publication.

The chair and vice chair of the MTG are Frank Mills and Bjarne Olesen, respectively.

#### 2.1.5. 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 start of the new Society year on July 1, 2013** by going to the Members Only section (<https://eweb.ashrae.org/eweb/DynamicPage.aspx?Site=ASHRAE&WebKey=8396a37a-9fc2-4f50-9332-5eebebe73494>) and entering 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.

| Employment Discipline |  |
|-----------------------|--|
| category:             | Government and Organizations                       |
| discipline:           | Not-for-Profit Organization (USGBC, Habitat, etc.) |

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
- Engineer
- Facilities Manager/Operator

Manufacturing Industry

- R&D
- Design & Construction
- Sales
- Mfg. Representative

Other

- Model Code Organization
- Retired
- Utility
- Other

**2.1.6. E&P Beta Test #4 TC meetings being Held in Denver**

The 4<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 Denver and the following TCs have agreed to participate in this test: TCs 1.5, 1.8, 2.2, 2.8, 5.8, 7.9, 8.8, 8.12, and 9.3 (PMS RP-1603). The chairs of those TCs participating should provide to their Section Head with feedback on their E&P meeting experience before TAC meets on Wednesday morning, 6/26.

**2.1.7. TC Volunteers willing to Support Content Development and Quality Control for Society Technical Program at Society Meetings**

TAC/CEC are requesting that TCs provide, after each meeting, a list of qualified volunteers from our TC that are potential Technical Session chairs and reviewers of session papers that are related to TC's scope for use by the Conferences & Exhibitions Committee (CEC) in developing technical content for future technical programs.

## 2.1.8. CEC proposed or recently implemented technical program changes:

### 2.1.8.1. TC Program Subcommittee Chair Training in Denver:

The program subcommittee chair is to attend a training by CEC on Tuesday, 6/25, 11:15 a.m. – Noon, Plaza Court 3 room (Concourse Level) – Plaza Building – Sheraton Denver Hotel

### 2.1.8.2. Program Focus on Research Going Forward at Each Annual Meeting

Starting at the Denver Conference, the Society's annual conference program will have a special emphasis on research.

## 2.1.9. **Special effort to welcome new members, and visitors (potential members), particularly international members, to TC meetings**

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

## 2.1.10. **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)

## 2.1.11. **Upcoming Program Dates:**

### New York Meeting – January 18-22, 2014

- Conference Site Live: June 3, 2013
- Web Site Opens for Seminar and Forum proposals – June 3, 2013
- Final Conference Papers Submitted for Review – July 3, 2013
- Technical Papers final review due August 12, 2013
- New York Seminar and Forum Session Proposals are due August 12, 2013
- All presentation files (PPT) due online – January 3, 2013
- Conference Website: <http://www.ashrae.org/newyork/>

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

#### 2013

- Conference Paper Abstracts due September 23, 2013
- Technical Papers Due for Review – September 23, 2013
- Acceptance/Reject Notifications issued for Conf. paper abstracts – Oct. 7, 2013

#### 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 Seattle 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))**

### 2.1.12. Upcoming Workshops and Conferences:

- **ECOS 2013**, July 16-19, 2013 - Guilin, China. Endorsed by ASHRAE. Contact [ecos2013-china@iet.cn](mailto:ecos2013-china@iet.cn) or <http://tinyurl.com/d6s3gnk>.
- **CIAR XX**, July 22-23, 2013 - Cartagena, Colombia. Endorsed by ASHRAE. Contact [ciar2013@acaire.org](mailto:ciar2013@acaire.org) or <http://tinyurl.com/CIAR2013>.
- **IBPSA 2013 (13th International Conference of the International Building Performance Simulation Association)**, Aug. 25-30, 2013 - Chambéry, France. Endorsed by ASHRAE. Contact: <http://www.bs2013.fr/>
- **AHR Expo-Mexico 2013**, Sep. 23-25, 2013 – Mexico City, Mexico. Endorsed by ASHRAE. Contact [www.ahrexpomex.com/eng](http://www.ahrexpomex.com/eng)
- **5<sup>th</sup> International Conference – Solar Air Conditioning**, Sep. 25-27, 2013 - Black Forest, Bad Krozingen, Germany. Endorsed by ASHRAE. Contact: <http://solaircon.com/>
- **7<sup>th</sup> CLIMAMED Mediterranean Congress of Climatization**, Oct. 3-4, 2013 - Istanbul. Endorsed by ASHRAE. Contact 90 3124194571, [ttmd@ttmd.org.tr](mailto:ttmd@ttmd.org.tr), or [www.climamed.org](http://www.climamed.org).
- **ICEBO (13th Annual International Conference for Enhanced Building Operations)** Oct. 8-11, 2013 Montreal, QB, Canada. Contact <http://ietc.tamu.edu/home> or <http://icebo.tamu.edu/home>
- **IAQ 2013: Environmental Health in Low Energy Buildings**, Oct. 15-18, 2013 Vancouver, BC, Canada. Contact ASHRAE at 800-527-4723, ext. 1158, [IAQ2013@ashrae.org](mailto:IAQ2013@ashrae.org), or [www.ashrae.org/IAQ2013](http://www.ashrae.org/IAQ2013).
- **iMechE BIM Seminars: Manufacturing with BIM: Ensuring Cost-Effective Integration**, Oct. 17, 2013 Manchester, UK. Contact: <http://events.imeche.org/>
- **The 12th Asia Pacific Conference on the Built Environment**, Nov. 5-7, 2013 Shangri-la Hotel Makati, Manila, Philippines. Contact: <https://www.ashrae.org/membership--conferences/conferences/ashrae-endorsed-events/2013/12th-asia-pacific-conference-on-the-built-environment>
- **iMechE BIM Seminars: Manufacturing with BIM: Ensuring Cost-Effective Integration**, Nov. 7, 2013 London, UK. Contact: <http://events.imeche.org/>
- **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/>
- **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). See attached call for papers pamphlet. Paper Abstracts due date extended to June 30 and if someone needs more time that will be ok too.

### 3. Regional Climate and Ozone Legislation Update (Summaries of Round table discussions):

#### 3.1. Domestic North America:

A discussion was had on the current state of climate change legislation in the US. A summary is that wide division among Democrats and Republicans has brought all but a very few “voter friendly” bills to a complete standstill. There seems no current political will to support another run at a Waxman-Markey like comprehensive climate bill. The Obama Administration has directed the EPA to use its existing power and programs, specifically the SNAP program to begin an evaluation and reduction of high GWP substances used within our industry. The EPA is operating on a very limited budget and staff and the prospect of quick action is minimal.

#### 3.2. European Union:

The review of the F-Gas regulation continues and it is expected that Environmental Committee of the European Parliament will issue a draft proposal to the Council based on the recommendations of the Commission study and recommendations. The leader of the Environmental Committee (Rapporteur) is a Danish National named Bas Eichout and he is very green leaning so the expectation is that the proposal will be more aggressive than that of the Commission. The process going forward is that the Environmental Committee will issue a proposal to the Council of States and a Tilogue (Council and Environmental Committee of the Parliament will negotiate a compromise,

facilitated by the Commission). The first reading will occur in the fall. If an agreement takes place the new rule will go into effect in late spring, early summer. If an agreement does not happen it will go into a second reading, which will likely not occur until after the European Elections in May. Depending on who wins and the priority of the Greek Presidency this could drag out the process for another two years.

### 3.3. Multilateral Agreements: Kyoto Protocol and Montreal Protocol

#### 3.3.1. Montreal Protocol:

For the 4<sup>th</sup> year in a row the U.S, Canada, and Mexico have put forward the North American Amendment proposal to the Montreal Protocol. This amendment, if passed, would result in a systematic phase-down of global HFC use to 20% of base line levels by 2033 in both developing and developed countries (but on different schedules). Recent past has shown strong resistance by India, China, Brazil and another of other countries. The hope of the negotiations this week is that the US, Canada, and Mexico will be able to broker a formal contact group at the OWEG in Bangkok. This would allow for formal discussions to be recorded in the proceedings and establish a formal dialogue moving forward. The US State Department has been engaging in Bi-lateral discussions with China and India in an effort to move the process forward.

#### 3.3.2. Kyoto Protocol:

The Kyoto Protocol process is in serious disarray. Very little progress has been made since Copenhagen and the prospect of a rapid comprehensive agreement is extremely thin. Despite commitments made in Rio, many believe that the Kyoto Protocol process is dying a slow death. Those that have attended recent meetings report very little if any discussions on HFCs.

## 4.1 Review of 2013-2014 roster

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

**Chairman:** Bill McQuade

**Vice Chair:** Matt Ritter

**Secretary/Webmaster:** Don Brundage

**Handbook Subcommittee Chair:** Van Baxter

**Program Subcommittee Chair:** Jim Crawford

**Research Subcommittee Chair:** Dr. Anthony Arguez

**Standards Subcommittee Chair:** Bill Walter

Voting Members (6 + 1NQ):

Bill McQuade

Matt Ritter

Jim Crawford

Dr. Anthony Arguez

Dr. Steve Bernhardt

Bruce Lindsay

David S. Godwin (Member Non-Quorum)

Terms Expiring in June of 2014:

Dr. Steve Bernhardt

## 4. LIAISON REPORTS (None)

## 5. **SUBCOMMITTEE REPORTS**

### 5.2 Program [Absent, No report]

Cynthia Gage is retiring and will not be as active on TC 2.5. We will need to appoint a new Program Chair. One topic that would be good would be to schedule an overview of the final outcome of the European F-Gas Regulation revision (if it is completed). Timing will likely be best for the Annual meeting in Seattle next summer. This will likely be the first function HFC phase down regulation and will establish the basis for future ones in other regions.

### 5.3 Handbook [Van Baxter]

We currently have responsibility for the following sections of the Fundamental Handbook:

2013 Handbook of Fundamentals, Chapter 29 Refrigerants, GEP section

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

The previous discussion and current proposal to the committee is that we develop a standalone chapter on Climate Change to be included in the 2017 version of the Fundamentals Volume. An outline of the Chapter topics was developed by Matt Ritter and Jim Crawford. As we do not have a quorum, Don will send out a letter ballot to the incoming committee members in June to vote for approval. We will need to designate a Chair to keep this moving but as James, Matt and Van were not present, Bill McQuade will have to appoint this subcommittee in his term.

5.3.1 Web Site [Don Brundage] - Don reported that he will be working to update the current Website and improve upon the content as he retires as Chair.

### 5.4 Research [Anthony Arguez]- (Absent, no report)

### 5.5 Standards [Bill Walter]

We are not cognizant on any current Standards or have any planned.

## 7. **OTHER BUSINESS**

## 8. **ADJOURN**