

**Minutes**  
 Technical Committee TC 2.5 (*Global Climate Change*)<sup>1</sup>  
 Orlando, FL  
 Tuesday, 26 January 2016, 1:30 - 3:30 pm  
**Orange Ballroom B (Hilton LL)**

**Action Items**  
**Orlando Meeting**

Item	Responsible Party	Action
1.	Matt Ritter	Submit changes to the Roster
2.	Don Brundage Cynthia Gage	Complete Climate Change Position Document and send to TC for vote.
3.	Eric Sturm  Don Brundage	a) Confirm speaker approvals to post their Orlando presentations on the TC's website, then submit to webmaster (Don Brundage). b) Post presentations to website.
4.	Alamelu Brooks	Begin assembling the Climate Change Chapter and provide the draft to TC in six months.
5.	Van Baxter	Submit Handbook Chapter to McQuade and Ritter for review. Then send final version to TC for approval.

1. **CALL TO ORDER** – The meeting was called to order by Chair Ritter at 1:30 pm. The Chair reported that Joel Hall, one of our members, died unexpectedly on Saturday and called for a moment of silence in remembrance.
  - 1.1. Members and guests introduced themselves. A sign-in sheet was circulated. See Attachment A.
  - 1.2. Quorum was met.(4 VM, 1 VNQ)
  - 1.3. Atlanta minutes were approved. 4-0-0-2-CNV
  
2. **CHAIRMAN’S ANNOUNCEMENTS** [Matt Ritter]
  - 2.1. Report of TC/TG Chairs’ Meeting – **See Attachment B.**
  - 2.2. Review of 2016-2017 roster, Subcommittee Assignments – Cynthia Gage is rolling off as voting member and secretary. Alamelu Brooks will become the new secretary.
    - 2.2.1. Bill Walter agreed to be the MTG LowGWP liaison. Larry Burns will be the alternate.
    - 2.2.2. Felix Fluor will roll on as voting.
  
3. **UPDATE REPORTS ON RELATED TREATIES/ACCORDS AND ACTIVITIES** [Round Table Discussion]
  - 3.1. International Treaties on Climate and Ozone
    - 3.1.1. UNFCCC Paris Agreement – INDCs where each country made a pledge about their reductions. Many of the countries included HFCs in some of their reductions proposals. Agreed to a temp limit of 2C maximum over preindustrial, but pledges would only help to get us to 2.7. Thus more is needed. Ideally they would like 1.5C. There is no recourse if they do not meet their pledges. US senate does not have ratify because the pledges were written as “should” not “shall”. Also volunteer programs such as carbon pricing or emissions trading these are acceptable ways to meet the reductions. There will be a signing ceremony in April requiring 55 countries sign who together meet at least 55% of the proposed reductions. Financing is still an issue and how to increase the pledges as its reviewed every 5 years.
    - 3.1.2. Montreal Protocol HFC Amendment – Matt reported that new HFC proposals made and progress was made. International amendment underway. High ambient environments and the cost still an issue. US is developing a

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<sup>1</sup> SCOPE: TC 2.5 is concerned with the impact that the activities of the HVAC&R industry may have on the global environment, including greenhouse warming and ozone depletion. This Task Group coordinates activities and planning for the Society to address these issues. This includes identifying factors within the scope of the HVAC industry, which may impact, favorably and unfavorably, the global environment and the role that ASHRAE is serving and could serve.

stakeholder workshop in DC at EPA on Feb16. Open to public. Must register, though. Three MP HFC meetings scheduled this year. Majority of the industry prefers a global solution rather than very different options at each individual country.

- 3.2. European F-Gas Update - Regulation is in place with quota system. A Dubai conference addresses the F gases and Montreal protocol as it is more binding than the COP issue. EU wants something more binding than COP. This year reduction step is 7% and 2017 is 37%. There is a debate whether there is some excess stocks from 2014 (60 thousand tons) when market is 80 thousand tons.
- 3.3. North America – nothing reported
- 3.4. China and Rest of Asia – nothing reported
- 3.5. US EPA GreenChill program involves 20% of the US supermarkets. Focuses on emission reductions. Leak rates for these systems are at about 6%.

#### 4. **UPDATE ON CLIMATE CHANGE POSITION DOCUMENT**

A draft version of this document was sent to the TC before the meeting. A new Chair is needed to complete the revisions. Brundage and Gage will take over. Gage noted that the pie chart needs to be updated. We will complete the changes and then send the document out to the TC for vote.

#### 5. **LIAISON REPORTS**

Pawel Wargocki, RAC liaison, supports the idea of a forum seeking research ideas. Asks that we ensure he is in the process should we start some research project.

#### 6. **SUBCOMMITTEE REPORTS**

- 6.1. Program [Eric Sturm] - We sponsored a program here in Orlando. The attendance was 80-100. All the speakers have agreed to have their presentations posted on our website.
  - 6.1.1. Possible future programs for:
    - 6.1.1.1. St. Louis, MO, June 25-29, 2016 – nothing to propose.
    - 6.1.1.2. Las Vegas There is a track addressing the climate change impacts on the future of buildings. We are discussing a possible workshop – should we adapt or prevent? Scott has something to contribute on the adaptation side. Also discussing a possible forum for research ideas for section 2. Section 3 did this in the past.
    - 6.1.1.3. Future topics may be on carbon trading policies and emissions trading.
- 6.2. Handbook [Baxter] – Moved and approved to change our course and just update the appropriate sections in the Refrigerants and Energy Resources (4-0-0-2-CNV) Sections of the Handbook. Van will find the galley version and send it to McQuade and Ritter for review and update. He will indicate due date for comments and then will send out the final for email ballot.
  - 6.2.1. 2013 Handbook of Fundamentals, Refrigerants Chapter, GEP section 2013 Handbook of Fundamentals – These values have been updated to AR5 and sent to TC for review. EU has required that AR4 numbers be used. The TC discussed having columns for both the AR4 and AR5 values.
  - 6.2.2. Energy Resources Chapter (TC 2.8 cognizant TC) – There is some info already available in this chapter regarding global carbon emissions.
- 6.3. Climate Change Chapter for Handbook – By e-mail, the Chair of this subcommittee resigned and indicated that no progress had been made. As noted in Section 6.2, development of this chapter for the 2017 Fundamentals Handbook has been set aside. Van will check whether we can input a new chapter into the on-line handbook rather than wait for the next 4 year cycle. Assuming this is acceptable, Alamelu Brooks will take over as the chair for the new chapter. Matt and Bill are contributing. We will use the existing outline and previous commitments from volunteers. Goal is to have a draft in 6 months. Additional volunteers were identified.
- 6.4. Web Site [Don Brundage] – ASHRAE's new website structure is out and TC 2.5's site is up to date.
- 6.5. Research [Jibonananda Sanyal] – The Research Chair was not present. The TC had a general discussion about what research might be appropriate. Cynthia Gage reported that an RTAR was submitted several years ago for LCCP methodology research. But now IIR is publishing guidelines on LCCP for HVAC/R which is close to being done. This has been on-going for 2 -3 years.

6.6. Standards [Bill Walter] – ISO TC 86: US has an advisory group and they need additional members on this. There were 9 applications for St 34. All were approved. International standard 817: the maintenance group is adding new refrigerants to this standard. They will meet again in St. Louis.

6.7. MTG Update – No report provided.

**7. OTHER BUSINESS**

CEC (Rocky Alazazi) is sponsoring a session in Las Vegas Track 6. They are seeking paper reviewers from our TC as well as session proposals. TC 2.5 discussed developing a white paper on emissions trading and carbon pricing.

**8. Adjourned** at 3:26 pm.