

AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS, INC.
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 6.9

DATE: Tuesday, February 10, 2015

TC/TG/MTG/TRG TITLE: Thermal Energy Storage

DATE & LOCATION OF MEETING:

Monday, January 26, 2015

Chicago, IL

MEMBERS PRESENT	YEAR APPTD	MEMBERS ABSENT	YEAR APPTD	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
John Lau	2013	John Filler	2012	Steve Benz - CM
John Dunlap	2011	Mark McCracken	2013	Ken Fulk - CM
John Nix	2013			Clinton Lampman - CM
Chris Mincey	2013			Lucas Hyman - CM
John Andrepont	2011			Richard Brooks - CM
Henry Becker	2013			Brian Blenis - CM
Scott Shaffer	2012			Verle Williams - CM
Harshal Upadhye	2012			Geoff Bares - CM
Paul Steffes	2012			Charles Dorgan - CM
Guy Frankenfield	2011			Tim Hentel - CM
Jeff Kane	2013			Blake Ellis - CM
				Rui Fan - CM
				Farzin Rad - CM
				Michael Perevozchikov - CM
				Charles Upshaw - CM
				Zidu Ma - CM
				Larry Markel - CM
				Amy Van Asselt - G
				Chuck Booten - G
				Mikelann Scerbo - G
				Cameron Weekly - G
				Christopher Leonard - G
				Brandon Gill - G
				Atila Novosela - G
				Sean Reed - G
				Gang Wang - G

DISTRIBUTION

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

TAC Section Head:	Mark Hegberg
TAC Chair:	Guy Frankenfield of DN Tanks
ALL COMMITTEE LIAISONS AS SHOWN ON TC/TG/MTG/TRG ROSTERS:	Chris Mincey of Crom - Programs
	John Lau of BAC - Handbook
Manager Of Standards	John Filler of Trane
Manager Of Research & Tech. Services	Brian Silveti of Calmac

ASHRAE TC 6.9 – Thermal Storage - General Meeting

Meeting Minutes - Grant Park (Sixth Floor), Palmer House
Hilton
Chicago, IL

Monday, January 26, 2015
4:30 – 6:00 PM

1. Preliminaries

- a. The meeting was called to order at 4:31 PM by Guy Frankenfield, Chair.
- b. Several weeks prior to the meeting, the agenda was posted on the TC 6.9 webpages and emailed to all TC 6.9 members.
- c. Several months before this meeting, the prior meeting minutes were posted on the TC 6.9 webpages.
- d. The Purpose Statement is posted on the TC 6.9 webpages.
- e. Roll call was taken and 11 of the 13 voting members were present including the Chair.
- f. Everyone in attendance (including guests) was given the opportunity to introduce themselves.
- g. There was a slight modification to the agenda to include discussion on the activity in TC 1.10.

2. Approval of Minutes

- a. The minutes from the Summer Meeting in Seattle, WA were posted on the TC 6.9 website within 30 days of that meeting, and available to all members.
- b. There were no suggested changes to the minutes.
- c. John Andrepont made a motion to approve the minutes. John Nix seconded the motion. The motion was approved unanimously by a vote of 10-0-0 (Chair not voting, CNV).

3. Announcements by Chair – Guy Frankenfield

- a. Chair Frankenfield reported on the Section 6 meeting.
 - Geoff Bares and Guy Frankenfield attended the Section 6 breakfast meeting, and the Chair workshop. It is noted that Geoff Bares will be taking over the Chair position on July 01, 2015.
 - The Section emphasized the importance of ASHRAE's code of ethics.
 - The Section encouraged ASHRAE members to update their biographies on the ASHRAE website.
 - Standard 100 was discussed among Section 6.

4. Liaison Reports

- a. Professional Development Committee (John Nix)
 - The Distinguished Lecturers (DL) list has been reviewed and Section 6 is in the process of updating the Thermal Storage course. The four hour Thermal Storage course was submitted and revised to incorporate information on renewables. Doug Reindl is the main contact for this course and John Nix is working with ASHRAE staff Karen Murray.

5. Handbook – John Lau

- a. Chapter 51 of the ASHRAE Handbook is currently in the third year of the four year cycle. The HVAC Systems & Equipment Handbook Revision Update is due in 2016.
- b. The following additions and revisions to Chapter 51 have been completed:
 - Sustainability, grid reliability, renewable power
 - Heating thermal storage
 - Electrical thermal storage supporting grid integration
 - Emergency cooling by incorporating research results from RP-1387
 - Water treatment for TES
- c. Special thanks to the authors who provided the revisions, the reviewers who took the time to provide comments, and to John Lau who coordinated the process for TC 6.9.
- d. John Andrepont made a motion to approve the revised Chapter 51 of the ASHRAE Handbook with minor changes. Jeff Kane seconded the motion. The motion was approved unanimously by a vote of 10-0-0 (CNV).

6. Programs – Chris Mincey

- a. Review of Past Programs (Seattle, WA – Summer 2014)
 - No seminars took place in Seattle.
 - A technical tour of the CPAC facility took place in Seattle which was very informative.
 - b. Future Programs (Atlanta, GA – Summer 2015)
 - Abstracts for seminars for the Atlanta conference are due on February 9, 2015.
 - TC 6.9 reached out to TC 9.9 and will attempt to join with TC 1.9 to co-sponsor a mission critical program.
 - Seminar titled “Method of Testing the Performance of Cool Storage Systems” – Standard 150 – Chris Mincey is the Seminar Chair. This seminar was rejected for the Seattle, WA conference. Presenters would be John Nix and Charles Dorgan. Lucas Hyman will fill in if needed. John Andrepont made a motion to submit abstracts for the seminar in Atlanta. John Dunlap seconded the motion. The motion was approved unanimously by a vote of 10-0-0 (CNV).
 - c. Future Programs (Orlando, FL – Winter 2016)
 - The Orlando conference will have a design-build track.
 - Consensus among the committee was to wait to vote on the Orlando seminar proposals until the next meeting.
- 7. Standards – Mike Filler (In December of 2014, Robert Willis resigned from TC 6.9. Mike Filler agreed to take over this Chair position for Robert Willis, but Mike Filler was not in attendance at this meeting. Geoff Bares pinch hit for Mike Filler as the Standards subcommittee Chair for this meeting.)**
- a. Standard 94.2
 - SPC 94.2 was scheduled to meet during the Chicago conference, but due to Mike Filler’s absence, SPC 94.2 did not meet. No update was provided.
 - SPC 94.2 is currently at the minimum of six voting members. There is a need to increase voting membership on this committee. Members who are interested in joining this committee should contact Mike Filler.
 - b. Standard 150
 - SPC 150 is working on a more substantive revision. SPC 150 will meet through conferences calls over the next month or two and will prepare a submittal of an updated Standard 150 by the Atlanta conference. SPC 150 committee will be sending the DRAFT of the revisions to the members for their review and comment.
 - c. Standard 100
 - Standard 100 is going through a review process. Recent revisions to Standard 100 directly impact Cogeneration in a negative way, and to some degree affect Thermal Storage. The Standard 100 revision focuses on using site energy rather than source energy for energy consumption calculations. Members noted that this is a significant flaw in the standard. TC 1.10 is taking the lead on technical errors in Standard 100. Standard 100 will be continually maintained.
 - d. Members suggested that we should branch out to other standards committees and organization to ensure TC 6.9 is up-to-date on the latest standards activities. Members can sign up at ASHRAE website for various standards listservs in order to be notified of standards going out for public review.
- 8. Research – Brian Silveti (Brian Silveti was not present at this meeting. Guy Frankenfield took the lead on the Research discussion for this meeting.)**
- a. TRP-1607 – Design and Utilization of Thermal Energy Storage to Increase the Ability of Power Systems to Support Renewable Energy Resources
 - The RFP for this Technical Research Project received 11 proposals from bidders to conduct this research.
 - Discussion of the potential bidders was taken into the Executive Session with only members present who do not have a conflict of interest in the bid.
 - The decision of the Executive Session on the winning bidder will be kept confidential. The Research Administration Committee will make the official announcement to the winning bidder.
 - b. Work statement 1719 – Design Guide for Cool Thermal Storage
 - Jeff Kane, Chris Mincey, and Ken Fulk volunteered to assist with the revision of this work statement.
 - c. Combined Heat and Power Design Guide
 - TC 6.9 was a cosponsor of the development of this design guide. The guide includes a spreadsheet analysis tool.

- The guide has been submitted and publication is forthcoming.
- d. RTAR: Update the ASHRAE Design Guide for Combustion Turbine Inlet Air Cooling Systems Published in 1999
 - TC 1.10 has asked TC 6.9 and TC 6.2 to be co-sponsors for the RTAR. It was clarified that if TC 6.9 voted to cosponsor this RTAR, we would be making a commitment of at least one member to be a part of the future PES and PMS.
 - The RTAR is intended to include better coverage of thermal storage in the update design guide.
 - John Dunlap made a motion to cosponsor this RTAR, and John Andrepont seconded the motion. The motion was approved unanimously by a vote of 10-0-0 (CNV).
- e. New item under consideration includes:
 - Corresponding member Paulo Tabares is considering submitting an RTAR for residential thermal storage and is interested in working with other members on a work statement.

9. Long Range Planning/Website – Guy Frankenfield

- a. Chelsea Wells, an assistant to Guy Frankenfield, will be TC 6.9's webmaster.
- b. For the Atlanta conference, a request will be made to hold the TC 6.9 meeting with web conference capability so that members who cannot attend in person can call in.
- c. Three voting members will be rolling off as of June 30 including Guy Frankenfield, John Andrepont, and John Dunlap. These members must wait one year before they can roll back on. These corresponding members agreed to become new voting members as of July 01, 2015; Ken Fulk, Larry Markel, and Blake Ellis. This would bring out total voting membership to 14 including Geoff Bares the incoming Chair.
- d. It was clarified that the maximum voting membership should be a total of no more than 18.
- e. John Lau has agreed to be the next Vice Chair.
- f. The committee discussed how ASME had a thermal storage summit, which was driven by ASME member polls that illustrated consistent interest in thermal storage. ASME formed a PTC 53 thermal storage committee to develop specifications, analyze performance, and provide safety recommendations focused on high temperature solar applications. PTC 53 is in its very early stages. ASME understands that ASHRAE has done significant work with thermal storage in regards to HVAC and they are aware of AHRI Standard 900 for thermal storage. PTC 53 will have a web meeting in March. John Lau will be the ad hoc liaison to PTC 53 and will monitor and participate in ASME's thermal storage activities as necessary.

10. Honors and Awards – Mike Filler (Mike Filler was not present at this meeting. Guy Frankenfield took the lead on the Honor and Awards update for this meeting.)

- a. It was announced that John Carter of TC 4.3 won the Hightower Award.
- b. It was announced that Ian Walker of TC 4.3 won the Research Award.
- c. Members were notified that the deadline to submit a nomination for an award is September 1, 2015.

11. Old Business

- a. No old business.

12. New Business

- a. No new business, except that members can stay for the Executive session, provided that they do not have a conflict of interest regarding the vote on TRP-1607. In the Executive session, there would be a vote on the PES recommendation of the winning proposer for the TRP-1607 research project.

13. Adjournment – Motion by John Dunlap to adjourn, seconded by John Andrepont. Meeting adjourned at 6:00 PM.