

ASHRAE Technical Subcommittee 6.9 – Thermal Storage

Meeting Minutes – Seattle, WA

June 30, 2014

1. Preliminaries

- a. The meeting was called to order at 4:30 PM by Guy Frankenfield, Chair.
- b. The agenda and sign-in sheet were distributed to all members.
- c. The Purpose Statement was read by Chairman Frankenfield.
- d. Roll call was taken and 11 of the 12 voting members were present.
- e. Everyone in attendance was given the opportunity to introduce themselves.
- f. There were no changes to the agenda as proposed.

2. Approval of Minutes

- a. The minutes from the Winter Meeting in New York City, NY 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 Dunlap made a motion to approve the minutes. Mark MacCracken 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. Per the Section 6 meeting, Mike McDermott (ASHRAE Program Coordinator for Seattle, WA) recommended that Workshops be utilized attract young engineers to the TC.
- b. We should work towards developing a pool of technical paper reviewers that includes: volunteer reviewers name, TC affiliation, and professional area of expertise. This will assist ASHRAE to properly match up the best reviewers for the subject of the technical paper.

4. Liaison Reports

- a. Section 6 TC Section Head – Mark Hegberg was unable to attend meeting
- b. Professional Development Committee (John Nix)
 - Doug Reindl will be submitting the ½ day TES training to ASHRAE Professional Development for approval.
 - Once the training program is approved, then our TC can recommend it for inclusion in the program of a future conference.
 - The consensus of the TC was that this was a good idea.

5. Handbook – John Lau

- a. ASHRAE Chapter 51 is currently in the second year of the 4 year cycle.
- b. The following additions/revisions are being worked upon:

- Sustainability, grid reliability, TES and renewable power (John Andrepont has provided the DRAFT revisions)
 - Emergency cooling by incorporating research results from RP-1387. (Tom Vega has provided the DRAFT revisions)
 - TES system commissioning (Lucas Hyman, John Nix, and Henry Becker have provided the DRAFT revisions)
 - Hot water TES (Paul Steffes has provided the revisions)
 - Underground TES (Ed Lohrenz)
 - Phase change materials (Mike Kazmierczak)
 - Delete obsolete info, update the references and bibliography, as necessary (Mike Kazmierczak)
- c. These members volunteered as reviewers for this revision:
- John Andrepont (Voting Member)
 - Jeff Kane (Voting Member)
 - John Nix (Voting Member)
 - Keith Ponitz
 - Charles Upshaw, Dennis Alejandro - Sustainability, grid reliability, TES and renewable power section, only.
 - Geoff Bares
 - Umbreto Berardi
- d. The authors who have provided their DRAFTS were recognized
- e. The goal is to have the revisions reviewed and ready for a TC vote by the January winter meeting in Chicago. The due date to submit revisions for Chapter 51, Thermal Storage, is March 29, 2015.
- f. Liaison, Michael Patton, introduced himself. He was pleased with the progress of our TC with the Handbook revisions.

6. Programs – Chris Mincey

- a. Review of Past Programs (New York City, NY – Winter 2015)
- Panel Workshop: “Dispelling the Myths about TES – Why aren’t you using TES?” - This workshop received high evaluation ratings despite ASHRAE’s technical difficulty of not having the presentations uploaded.
 - 3-Part Seminar series on TES District Energy, Combined Heat and Power, and Thermal Energy Storage. The seminar was well attended, with approximately 250 attendees. This presenters received high ratings based on the evaluations of the attendees.
- b. Future Programs (Chicago, IL – Winter 2015)
- Abstracts for Chicago conference are due on August 11, 2014.
 - The two seminars that will be proposed for this conference:
 - “Thermal Energy Storage and Renewable Energy” – Lucas Hyman is the Seminar Chair. Members who expressed an interest to present include; John Andrepont, Mark MacCracken, Harshal Upadhye, Moncef Krarti, and Doug Reindl. Chris Mincey will verify that all the presenters are committed to present at this

seminar. If we have over 3 presenters, we may submit this as a two-part seminar.

- “Conserving Energy and Water with TES Systems” – Geoffrey Bares is the Seminar Chair. This seminar was rejected for the Seattle, WA conference. It will be re-submitted for the Chicago, IL conference. Presenters include; Guy Frankenfield, Lucas Hyman, and John Lau.
- d. Future Programs (Atlanta, GA – Summer of 2015)
 - The following programs are being developed:
 - Seminar titled “Method of Testing the Performance of Cool Storage Systems” – Standard 150 – Chris Mincey is the Seminar Chair. Presenters would be John Nix and Charles Dorgan.
 - Workshop titled something like “Feasibility Study for a Thermal Energy Storage Project – Where do I Start?” – Mike Filler will be the Seminar Chair. Several members expressed an interest in presenting including; Mark MacCracken, Harshal Updadhye, John Andrepont, and others.
 - It was noted by John Andrepont that the Summer 2015 conference interferes with IDEA’s annual conference.
- e. Future Programs (Conference TBD)
 - John Andrepont recommended co-sponsoring with TC 9.9 on Seminar with content that includes TES for both mission critical back-up and energy savings. Chris Mincey will reach out the Program Chair of TC 9.9 to see if they are interested. Henry Becker suggested that TC 3.6 could also be included in this seminar, too.

7. Standards – Robert Willis (Geoff Bares pinch hit for Robert who could not attend)

- a. Standard 94 series
 - Current through 2015.
 - ASHRAE Standard 94.1 and 94.3 were withdrawn, previously.
 - ASHRAE Standard 94.2 was reaffirmed, and an SPC is being established. Per John Nix, prospective members of the SPC are currently going through the confirmation process.
- b. SPC 150
 - SPC 150 was re-affirmed without revisions so that the Standard would stay active. It went out for public comment – and no comments were received.
 - Now the SPC is going through revision (about 2/3’s complete). The SPC met on 06-29-14, but there were not enough members for quorum. However, the SPC agreed to complete the revisions to the main document, and then add a Guideline in the Appendix for those who are interested in the using the commissioning standard, but cannot meet all of the aspects of the test procedure.
 - The goal of the SPC is to have the revision ready by January 2015.

8. Research – Brian Silveti

- a. Work statement 1607 – Design and Utilization of Thermal Energy Storage to Increase the Ability of Power Systems to Support Renewable Energy Resources
 - This Work Statement is now essentially approved by RAC.
 - Larry Markel was recognized for his efforts and leadership in moving this Work Statement forward.
 - It is expected that by the January 2015 meeting, contractors may be bidding this project.
- b. RTAR 1719 on Cool Storage Design Guide
 - Brian Silveti has addressed the comments and obtained Received comments and are currently being addressed.
 - Brian was able to obtain an important endorsement letter from Stephen Comstock, ASHRAE's director of Publications and Education.
 - Motion by Mark MacCracken to approve move forward with a Work Statement for this RTAR once it is approved. Seconded by John Andrepont. The motion was approved unanimously by a vote of 11-0-0 (Chair Voting, CV)
- c. URP – Carbon Emissions Tool – has not yet been submitted by Michael Deru of NREL. However, Michael Deru recently indicated that he is still planning on submitting it to ASHRAE for approval.
- d. New items under consideration include:
 - Chilled water storage diffuser design
 - TES for residential applications

9. Long Range Planning/Website – Guy Frankenfield

- a. We are currently without a webmaster. Volunteer was requested, but no one replied. However, until we get a permanent webmaster, Harshal Upadhye agreed to do be our webmaster in the interim.
- b. We discussed that ASME is looking to fill any gaps with energy storage and our standards. Recently ASME held a forum with speakers from many aspects of the energy storage field. Their forum was submitted as a report, and John Lau distributed the report to our members in March of 2014. After discussion, our TC agreed that we should communicate with ASME to understand their initiatives. John Lau agreed to be the ad hoc liaison with ASME, and learn more about their plans. John will bring this information back to the TC.

10. Honors and Awards – Mike Filler

- a. Mike Filler reminded all the members to keep their ASHRAE biographies up to date. By keeping bio's up to date, ASHRAE can track your involvement and give you credit for you efforts.
- b. There are forms that are required to be filled out for special recognition like a Hightower award. It was noted that at this meeting there were two Hightower recipients; Lucas Hyman and Dharam Punwani.

11. Old Business

- a. No old business.

12. New Business

- a. No new business.

13. Adjournment – Motion by John Nix to adjourn, seconded by John Dunlap. Meeting adjourned at 5:40 PM.