

**ASHRAE TC 1.10 COMMITTEE MINUTES**  
**Long Beach, CA**  
**June 26, 2007**

The meeting was called to order by Chairman Jay Jayaraman at 3:30 PM.

1. Chairman Jay Jayaraman welcomed all members and acknowledged the visitors.
2. Self-introductions were made by all present. TC 1.10 has 12 Voting Members including 2 international of which 10 were present (including 2 international) at this meeting. A quorum was established for the meeting.
3. Riyaz Papar –Secretary of the TC - read the TC 1.10 mission statement.
4. Copies of the Minutes of the meeting held in Dallas, TX were sent via email and made available to the attendees at the meeting. Tim Wagner moved that the Dallas, TX meeting minutes be accepted as written with a minor edit for a spelling change in a name. Rich Sweetser seconded the motion. The motion passed (For:10; Against:0, Abstain:0, Absent:2).
5. Chairman's Report – Jay Jayaraman  
Jay acknowledged participation of the outgoing Section Head of Section 1 – Mr. Charles (Chuck) Wilkin during the Sub-Committee meeting. Chuck regretted that he could not attend the main meeting since he needed to attend a lot of meetings that day with in the limited time he had. Chuck thanked TC 1.10 and strongly recommended that we have an MBO for each Sub-Committee. All other items are included below.

Jay mentioned that he was very pleased to see that the proposed program registration policy at the Dallas, TX meeting had been rescinded by the ASHRAE BOD. He credited this to the strong opposition message that the ASHRAE members from all the TC's sent to the BOD. It was good to see that the ASHRAE leadership responded in favor of it's members.

Jay mentioned that he will prepare an MBO list by the NY meeting. One of the MBO's discussed during the TC Chair's meeting was to have one objective per each subcommittee.

ASHRAE President, Terry Townsend, has offered to send letters to employers thanking them for supporting their employees who have participated in ASHRAE activities during the 2006-2007 Society year. Jay asked TC members that they provide their contact and supervisor information to Kemin McCutchen ([kmccutchen@ashrae.org](mailto:kmccutchen@ashrae.org)) no later than Friday, 07/18/07.

Jay reported that a Research Advisory Panel (2007-2010) has been set up to make the next strategic plan (2010-2015). RAC reports a surplus of \$200K. RAC has smoothed out the process of research proposals, work statements and approvals. It is encouraging TC's to submit new RTAR's and Work Statements to benefit from the new process.

Jay reported that the nominations for George B. Hightower award are due by 09/01/2007.

## 6. Sub-committee Reports:

### a) Programs: Rich Sweetser

Two seminars were scheduled at the Long Beach meeting. Rich reported on these two seminars. The first seminar “Economic and Environmental Benefits of Turbine Inlet Cooling” had three presentations and was attended by ~40 people. Rich thanked the Chair, Dharam Punwani and the speakers (Patricia Graef, Gary Hilberg, Kurt Liebendorfer) for their presentations. The second seminar “California Gold Rush: Cashing in on Sustainability with CHP in California” had four presentations and was attended by ~55 people. Rich chaired the session and thanked the speakers (Timothy Wagner, Ian Spanswick, William Martini, Gearoid Foley).

The deadline for Program submissions for the New York Meeting is August 3, 2007. The meeting theme is “Reaching New Heights in Net Zero Design”. Rich provided further information as regards the new ASHRAE “presentations upload” policy. This would require that all presentations would need to be uploaded 10 days prior to the meeting. If not, then the TC would not get a Priority #1 for the following meeting. In the event, the presentation was not uploaded 24 hours prior to the meeting, then the speaker would not be allowed to present at the meeting in addition to the TC losing it’s #1 Priority for the next meeting.

Coming to the program submittals for NY, Rich mentioned that none of the previous TC 1.10’s programs were selected by ASHRAE Programs for NY PDH seminars. TC 1.10 hadn’t submitted any new programs for consideration but it was agreed that it would be good to have a TC 1.10 program approved for NY PDH credit. Riyaz Papar mentioned that if TC 1.10 could get a quick abstract aligned with the theme and tracks, get speakers and commit to the deadlines, he would pursue it with the Program Committee. Riyaz agreed to keep Rich posted on the matter.

The following programs were proposed for the New York (January 2008) meeting:

Priority #0 NY PDH Seminar: CHP 101

Chair – Harold Smith

1. CHP Design Basics, Gearoid Foley, ICHPS
2. CHP Technology Portfolio Today and Tomorrow, Richard Sweetser, EXERGY Partners Corp.
3. CHP and the Environment, Green Buildings and LEED, Louay Chamra, Mississippi State University

Priority #1 Seminar: CHP in New York Green Buildings, if You Can Make it Here You Can Make it Anywhere

Chair - Rich Sweetser

1. New York State’s View of CHP, Dana Levi, NYSERDA
2. Grid Insolated in the Bronx Zoo or Power to the Chimps, Tim Wagner, UTRC
3. Large Tonnage CHP at One New York Plaza, Ian Spanswick, JCI/YORK

4. Developing an Engine-Drive Heat-Pump Peak Electric Power Reduction in New York State and Elsewhere, Isaac Mahderekal, Team Consulting

Priority #2 Seminar: Real Time Energy Value Today and Tomorrow – Turbine Inlet Cooling

Chair - Harold Smith

1. Kurt Liebendorfer, Stellar Energy Systems
2. Gary Hilberg, Turbine Air Systems

Priority #3 Forum

Sustainability – is it time to measure resource energy efficiency an idea whose time has come because of Energy Security, Sustainability and the Environment?

Moderator - Richard Sweetser

A Motion was made by Rich to submit the above programs for the New York meeting. Riyaz Papar seconded the motion. The motion passed (For: 10; Against: 0, Abstain: 0, Absent: 2).

A Motion was made by Rich to develop a Transaction session for the Salt Lake City meeting (June 2008). Ian Spanswick seconded the motion. The motion passed (For: 10; Against: 0, Abstain: 0, Absent: 2).

There was also some discussion on ASHRAE policy on seminar recordings for DVDs.

b) Research: Ali Jalalzadeh

Ali and Harold Smith attended the Research SubCommittee Chairs' breakfast meeting on Monday (06/25/07) and Ali reported on the following topics:

1. RAC indicates a decline in the amount of RTARs and Work Statements for CY 2005 to CY 2006 was encountered.
2. The top 3 reasons why fewer RTARs were submitted: lack of time to write RTARs; reluctance to write RTARs because authors are discouraged from bidding; RTARs returned for arbitrary, unclear, or conflicting reasons.
3. The top 3 reasons why fewer Work Statements were submitted: the first two reasons are the same as the RTARs and the third is lack of approved RTARs to work from.
4. RAC is advocating policy changes to allow authors to bid on work-statements. Also recognition will be given to authors of Work Statements by publishing their names in the ASHRAE Journal.
5. RAC is working towards ways to provide more predictable funding. Co-funding for ASHRAE Research is available from ARTI and CEC.
6. RAC will review RTAR's in October and March

Ali mentioned that there was interest from Larry Markel (TC1.9) to write joint work statements on topics of mutual interest.

Ali also discussed the previous RP737 (Development of a new Cogeneration Design Guide). With the probable availability of Research funds and a good business case for

ASHRAE Publications, it was agreed to submit a new RTAR that would revisit the topic and develop a new Cogeneration Design Guide. Harold Smith will get a sample RTAR from Sriram Somasundaram that was submitted and approved while developing the Fuel Cell Applications Guide. Tim Wagner agreed to work with Harold for developing a new RTAR. Feedback on this RTAR development will also be sought from the Research Liaison for Section 1.

Timothy Wagner, Riyaz Papar and Abdi Zaltash attended the PMS meeting for RP1340 on Monday (06/25/07). A “no cost extension” was requested by the contractor and approved by ASHRAE. The PMS will complete the review of the project report to date and send comments back to the PI in two weeks.

c) Handbook: Timothy Wagner

Tim provided a short summary of submission for the handbook chapter. It has been submitted as per ASHRAE deadlines and is currently being reviewed by ASHRAE. Tim will keep the TC informed on any further developments. On behalf of TC 1.10, Jay thanked Tim Wagner and the handbook subcommittee for the excellent work on the revision of the handbook chapter.

There is also a separate chapter that is currently being developed by the CTIC subcommittee. They have set July 23<sup>rd</sup> as their final deadline for completion as that is the ASHRAE deadline for submission for the 2008 handbook volume. Currently, the CTIC subcommittee has a draft developed and it is a fairly short chapter (12-16 pages). The subcommittee, after review, will vote on it on July 9<sup>th</sup>. It will then be sent to the TC members by July 13<sup>th</sup> for their review and final vote. Jay Jayaraman requested that Tim Wagner and Riyaz Papar be cc:ed on email correspondences. Please see the Footnote\* for post TC 1.10 meeting information on the CTIC chapter.

Cindy Callaway, CTIC handbook chapter liaison attended TC 1.10 meeting for an update. She mentioned that in the new chapter the TC should address sustainability. She also provided additional information for inclusion in the CD+ version. Items that can be very beneficial to the enduser such as spreadsheets, good graphical animations to explain concepts, etc. are recommended. From a chapter submission perspective, she reminded the TC to submit both versions – IP and SI, check-list, number of votes (for/against) and an explanation if it was not a unanimous decision. The chapter number for the CTIC chapter has not been assigned. TC 1.10 asked Cindy to request ASHRAE Publications, if

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\* Please note that post TC 1.10 meeting, the CTIC chapter for the 2008 handbook volume was completed and reviewed by the sub-committee and comments were incorporated by Dharam Punwani. It was then sent to TC 1.10 voting members for their review and comments. A motion (via email) was then made by Dharam Punwani that the CTIC chapter be submitted to the ASHRAE Handbook Committee for publication. It was seconded by Timothy Wagner. The motion passed (For: 10; Against: 0, Abstain: 1, Absent: 1) via electronic vote. The person who abstained would have preferred that more information be included on part-load operation of CTIC systems for combined cycle power plants. Timothy Wagner submitted the SI and IP versions of the CTIC chapter and the associated paperwork to ASHRAE by the deadline – 07/23/07.

possible, to have the CTIC chapter immediately following the Cogeneration Chapter in the handbook. This would mean that the CTIC chapter would be numbered as 8.

Birol Kilkis asked TC 1.10 members to send him an email for future revisions of the CTIC chapter.

d) Membership: Jay Jayaraman

The new TC 1.10 roster (effective July 1<sup>st</sup>) was circulated to all present at the meeting. TC 1.10 will have 11 members, including 2 international members. For 2007-08, Jay Jayaraman will be Chair, Harold Smith will be Vice Chair and Riyaz Papar will be Secretary. Jay briefly discussed TC membership and requested all members present to submit any corrections in their information.

On behalf of TC 1.10, Jay thanked Ali Jalalzadeh for his efforts as the Research SubCommittee Chair. Ali's professional job responsibilities have changed and he has requested that TC 1.10 nominate someone else for his position. Since, there were no immediate volunteers, Harold Smith agreed to be the Research SubCommittee Chair till someone else was found to accept the position.

e) Standards: Harold Smith

No report on standards. Please see section on 189P review in New Business.

f) Web Site: Dharam Punwani

Dharam reported that the website is current and up to date. He mentioned that no personal information is available on the website. If someone does find any personal information on the website, then they should notify Dharam immediately for removing it. Dharam is also requesting feedback and input from the members related to Content on the website

g) CTIC: Dharam Punwani

CTIC proposed a seminar for New York, NY and that was reported in the Programs subcommittee report. A new handbook chapter on Combustion Turbine Inlet Cooling is being developed. Please refer to the Handbook subcommittee report section for information on this matter. CTIC requests future scheduling of subcommittee meeting on Monday at 4:15 – 7:00 pm.

8. New Business:

a. 189P Public Review

Standard 189P (Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings) is out for public review. TC 1.10 recognizes that moving the Society from minimum acceptable energy standards towards “green” or “sustainable” building standards is a good policy. This is not a simple task and TC 1.10 encourages the Society to use its full resources (especially the TC's where the technical expertise resides).

Rich Sweetser provided TC 1.10 meeting attendees with a written report on some of the main

issues, concerns and conflicts in 189P with ASHRAE 90.1. He mentioned that resource efficiency was mentioned only once in 215 pages. Rich further mentioned that Section 7 is the energy efficiency chapter and it references renewables with a 1% requirement. Nevertheless, there is no mention of CHP. Rich summarized that the other issue was that 189P was a difficult document to read and comprehend. TC 1.10 members expressed their concerns and provided responses. Also, there has been ongoing discussion in different committees on 189P review. The 189P Standards Committee expects people to submit comments in writing and send them directly - one comment per form.

Rich Sweetser made a motion – TC 1.10 authorize Rich Sweetser, Tim Wagner and Jay Jayaraman to seek clarification on issues and concerns in 189P and follow up with a report to TC 1.10 and comments to the 189P Standards Committee. Riyaz Papar seconded the motion. The motion passed (For: 10; Against: 0, Abstain: 0, Absent: 2).

b. George B. Hightower Award

In consideration of all the time and effort that Rich Sweetser has put in for TC 1.10 over the past years, Jay Jayaraman made a motion to nominate Rich for the Hightower award. Vic Penar seconded the motion. The motion passed (For: 10; Against: 0, Abstain: 0, Absent: 2). Jay will submit the paperwork on behalf of Rich.

c. ASHRAE Journal articles

Jay Jayaraman, as part of his MBO, would like TC 1.10 members to write 2 articles annually for publication in the ASHRAE journal. Rich Sweetser and Gearoid Foley agreed to write an article on Cogeneration Basics; Marija Todorovic agreed to write another article. Harold Smith agreed to help with the reviews and submission.

d. TC 1.10 Mission

On behalf of TC 1.10, Jay Jayaraman requested John Andrepont's help to revisit TC 1.10's Title, Purpose and Scope. John agreed to do that and will submit that information to the TC by the next meeting.

e. Advanced Reciprocating Engineering Conference

Gearoid Foley informed TC 1.10 that the Advanced Reciprocating Engine Conference is going to be held in California on September 18/19, 2007. It is sponsored by California Energy Commission and Southern California Gas Company. It is a good opportunity to promote CHP there and there is a session on CHP at the conference. This conference will move to New York next year.

9. Adjourn:

Jay Jayaraman mentioned that he will request a shorter combined meeting time for subcommittee meeting and TC meeting (probably 1:00 – 4:30 pm) for the future meetings. The next TC 1.10 meeting will be held on Tuesday, January 22, 2008 in New York, NY.

With no other pending items, Jay asked for a motion to adjourn the Long Beach meeting. Rich Sweetser made the motion; Tim Wagner seconded. The motion passed unanimously (For: 10; Against: 0, Abstain: 0, Absent: 2).

Minutes prepared by Riyaz Papar, TC 1.10 Secretary.

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**Mission of TC 1.10**

TC 1.10 is concerned with cogeneration systems, their cycles, and components including heat recovery, energy conversion, and system integration. The systems provide both power (electric and/or shaft) and thermal energy (heating and/or cooling) and are variously known as cogeneration systems; trigeneration systems; combined heat and power (CHP); combined cooling, heating, and power (CCHP); and integrated energy systems (IES).

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