

**AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS, INC.**  
**1791 Tullie Circle, N.E./Atlanta, GA 30329**  
**404-636-8400**  
**TC/TG/TRG MINUTES COVER SHEET**

(Minutes of all TC/TG/TRG Meetings are to be distributed to all persons listed below within 60 days following the meeting.)

TC/TG/TRG NO. TC1.10 DATE January 29, 2011

TC/TG/TRG TITLE Cogeneration Systems

DATE OF MEETING June 29, 2010 LOCATION Albuquerque, NM

MEMBERS PRESENT	YEAR APPTD	MEMBERS ABSENT	YEAR APPTD	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
Harold Smith	2008	Alan Green	2007	Chang W. Sohn
Riyaz Papar	2008	Ian Spanswick	2006	Isaac Mahderekal
Maria Todorovic (Non-Quorum)	2006	Gearoid Foley	2008	Karl Mayer
Annette Dwyer	2008			Dragos Paraschiv
John Andrepont	2007			Mark McCaulay
Louay Chamra	2008			Mike Cocking
Birol Kilkis	2009			Richard Sweetser
Lucas Hyman	2009			Siir Kilhis
Abdi Zaltash	2008			Tim Wagner
				Vic Penar
				Vikas Patnaik
				Mark Davis

**DISTRIBUTION**

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

TAC SECTION HEAD: Vic Penar	
TAC CHAIR: Don Brundage	
ASHRAE MANAGER OF TECHNICAL SERVICES:	Michael Vaughn
ALL COMMITTEE LIAISONS AS SHOWN ON TC/TG/TRG ROSTERS:	Journal / Insights: Ned Belt & Ismena Deacon RAC Research: Sriram Somasundaram Handbook: John Clark / Cindy Callaway TEGA: Melvin Glass ALI: Florentino Mendez Special Publications: Stan Mumma Standards: Michael Woodford CEC: None Research & Tech Services: Michael Vaughn

**ADDITIONAL DISTRIBUTION**

MANAGER OF STANDARDS MANAGER OF RESEARCH	Stephanie Reiniche Bill Seaton
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**ASHRAE TC 1.10 COMMITTEE MINUTES**  
**Albuquerque, New Mexico**  
**June 29, 2010**

The TC 1.10 meeting was called to order by Chair Harold Smith at 3:00 PM.

1. Chair Harold Smith welcomed all members and acknowledged the visitors.
2. Self-introductions were made by all present. TC 1.10 has 11 Voting Members, including 1 non-quorum member, of which 9 were present. Hence, a quorum was established.
3. Secretary Tim Wagner read the TC 1.10 mission statement.
4. Copies of the minutes of the meeting held in Orland (January 2010) were distributed to the attendees of the meeting. John Andrepont made a motion that the minutes be accepted as written. Riyaz Papar seconded the motion. The motion passed (For: 9, Against: 0, Abstain: 0, Absent: 2, CNV = Chair Not Voting).
5. Sub-committee Reports:

**a) Programs:** Rich Sweetser

TC 1.10 did not sponsor any programs for the current meeting.

Rich Sweetser made a motion that the following sessions be submitted for Las Vegas:

Sponsored Seminar – Low Energy Design for Casinos: Integrating CHP Systems

Chair: Richard Sweetser

This seminar has two presentations:

- The Rio Hotel & Casino – Gearoid Foley
- Las Vegas MGM Mirage City Center – Bruce Hedman

Co-Sponsor with TC 9.5

Chair: Mark Davis

1. Micro-Combined Heat and Power Systems Part 1: Applications, Best Practices, and Technologies
2. Micro-Combined Heat and Power Systems Part 2: Case Studies

Riyaz Papar seconded the motion. The motion passed (For: 9, Against: 0, Abstain: 0, Absent: 2, CNV).

TC1.10 has previously voted to sponsor a Transaction session entitled “Understanding the Carbon Footprint of CHP Systems.” These papers will be presented in Las Vegas.

**b) Research:** Abdi Zaltash

The TC1.10 work statement entitled “CHP Design Guide – Update to the Cogeneration Design Guide (1996)” was returned by RAC with conditional approval; two minor revisions were made by Abdi. The edited version was re-submitted to RAC for final approval.

The TC 6.9 (Thermal Storage) Work Statement entitled “TES & CHP System Performance Metrics Related to Carbon Emissions at the Power Generation Source” (RTAR #1576), which TC1.10 is co-sponsoring, is in process. The PMS Members are: TC 6.9: Guy Frankenfield, John Nix, and Brian Silvetti; TC 1.10 Lucas Hyman and Dharam Punwani.

Marija Todorovic distributed a draft RTAR titled “Solar Assisted Goethermal CHP Systems.” The TC provided comments; Marija will prepare a revised draft.

**c) Handbook:** L. Chamra/D. Punwani – Louay Chamra will review the current chapter and will begin working on the revisions with the subcommittee. The CTIC Subcommittee reported that CD+ updates are due Feb 1, 2011 for the Sep 2011 issue. The 2012 print chapter is due July 23, 2011 for the Spring 2012 print issue.

**d) Standards:** – The standard SPC 204 *Method of Test for Rating Micro Combined Heat and Power Devices* has been approved by ASHRAE Standards Committee and will begin official meetings in Las Vegas. Mark Davis will chair the committee and provide updates to the TC on their activities.

Standard 40 – TC8.3 has established a subcommittee for this. Isaac Mahderekal is the representative from TC1.10. There was no progress to report.

**e) Membership:** The roster is complete and correct. Membership updates to the roster will be worked in the Las Vegas meeting.

**f) Web Site:** Dragos Paraschiv is the new webmaster and will be updating the TC 1.10 website. Please contact him with any suggestions for webpage content.

**g) CTIC:** Effective July 1, 2010, Annette Dwyer will serve as CTIC subcommittee chair and Dharam Punwani will start as TC1.10 secretary.

6. Chairman’s Report: Harold Smith reported on items from the TC Chair’s Breakfast.
7. Old Business: none
8. New Business: Section Head Vic Penar presented Harold Smith with a certificate of appreciation for his service as TC 1.10 Chair. Harold thanked everyone for their support.
9. Adjourn: With no other business to consider, John Andrepont moved that the meeting be adjourned. Lucas Hyman seconded the motion and it was passed (For: 9, Against: 0, Abstain: 0, Absent: 2, CNV).

Minutes prepared and respectfully submitted by Tim Wagner, TC 1.10 Secretary.

**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, including for example Combustion Turbine Inlet Cooling (CTIC). 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).