

**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 Mar 21, 2016

TC/TG/TRG TITLE Cogeneration Systems

DATE OF MEETING Jan 26, 2016 LOCATION Orlando, FL

MEMBERS PRESENT	YEAR APPTD	MEMBERS ABSENT	YEAR APPTD	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
Dharam Punwani	2014	Sriram Somasundaram	2012	Dragos Paraschiv
Annette Dwyer	2014	Harold Smith	2012	Richard Sweetser
John Andrepont	2012	Gearoid Foley	2015	Mark Davis
Blake Ellis	2015	Lucas Hyman	2014	Geoffrey Bares
Tim Wagner	2015			Jason Woods
				Birol Kilkis
				Mahabir Bhandari
				Joana Melo
				Gordon Williams
				Rodolfo Area
				Mike Walters
				Farzin Rad
				Steve Tredinnick
				Amir Jokar

**DISTRIBUTION**

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

TAC SECTION HEAD:	Dr Amir Jokar	
TAC CHAIR:	Dr Thomas M Lawrence	
ALL COMMITTEE LIAISONS AS SHOWN ON TC/TG/TRG ROSTERS:	Chapter Technology Transfer Chair	Mr Christopher G Phelan
	Research Liaison	Prof Shinsuke Kato, PhD
	ALI/PDC	Mr Cameron R Labunski, PE
	Handbook Liaison	Mrs Annette Dwyer
	Standard Liaison	Mr Dennis A Stanke
	Staff Liaison	Mr Michael R Vaughn
Manager Of Standards	Stephanie Reiniche	
Manager Of Research & Technical Services	Mike Vaughn	

**ASHRAE TC 1.10 COMMITTEE MINUTES**  
**Orlando, FL**  
**January 26, 2016**

The TC 1.10 meeting was called to order by the Chair, Dharam Punwani, at 3:31 PM.

1. Chair Dharam Punwani welcomed all members and acknowledged the guests.
2. Self-introductions were made by all present. TC 1.10 has 9 Voting Members of which 5 were present. Hence, a quorum was established.
3. Secretary Dragos Paraschiv read the TC 1.10 mission statement.

**Mission Statement:** 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).

4. Copies of the draft minutes of the meeting held in Atlanta, GA were distributed to the attendees of the meeting. John Andrepont made a motion to approve the minutes of the meeting (with the corrections noted by Dharam Punwani). The motion was seconded by Blake Ellis and approved (5, 0, 0, 4, CV).
5. Dr. Amir Jokar, Section Head, and Ms. Annette Dwyer, ASHRAE Handbook Liaison attended the meeting.

6. **Subcommittee Reports**

a. **Programs:** Rich Sweetser

Orlando Program:

TC1.10 sponsored Seminar 6: Presenting ASHRAE's New CHP Design Guide and eTool, co-sponsored by TC6.2 and TC 8.3: The presenter was TC1.10 member Richard Sweetser, who also filled-in for Gearoid Foley, scheduled presenter who could not be present due to the snow storm on the East Coast. The seminar was well attended and well received (approx. 70 participants). TC1.10 member Tim Wagner filled-in for Jim Freihaut (schedule session chair) who also missed the session due to the snow storm.

TC1.10 also co-sponsored Seminar 23: Metrics Matter: How Should We Judge Energy Performance?, sponsored by TC2.8.

St Louis Program:

No seminars sponsored by TC1.10 at this conference.

Las Vegas Program:

Proposed ideas for this conference include a site tour at the City Center CHP site, a tour at Rio's CHP, or an Introduction to CHP seminar.

b. **Research:** Dragos Paraschiv

Dragos attended the research meeting on Monday and announced the following:

- 9 RTAR evaluated (5 accepted with comments, 4 rejected)
- 4 WS evaluated (1 accepted, 1 conditionally accepted, 1 returned, 1 incomplete)
- A new Research Liason for TC1.10: Shinsuke Kato

### TC1.10 Research

1762-RTAR Update the ASHRAE Design Guide for CTIC Systems:

The RTAR was approved by RAC for further development into a work statement (WS). Dragos Paraschiv will prepare the WS with Geoff Bares, representing TC6.9 and Jay Eldridge representing TC6.2 . The draft document will be sent for an email vote in advance of the next meeting.

Update the ASHRAE Design Guide for Absorption Cooling

TC8.3 has prepared an RTAR to update the Design Guide for Absorption Cooling and is requesting TC1.10 to co-sponsor. TC8.3 has approved the RTAR at this meeting. Dharam Punwani made a motion to co-sponsor the RTAR to update the Design Guide for Absorption Cooling. The motion was seconded by John Andrepont and approved (5, 0, 0, 4, CV).

TC6.9 is working on the WS to update the TES Design Guide and is requesting TC1.10 to co-sponsor. The WS will be circulated to the TC1.10 for review and comments.

**c. Handbook:** Dharam Punwani

Chapter7: Lucas Hyman

Chapter 7 was submitted to ASHRAE and proofs are expected. Annette Dwyer will check the status.

Chapter 8: Dharam Punwani

Chapter 8 was submitted to ASHRAE and proofs are expected. Annette Dwyer will check the status.

Starting after the next meeting Dr. Tim Wagner will be the Handbook Subcommittee Chair, and supervise the revision of Chapter 7. Geoff Bares will supervise the revision of Chapter 8.

**d. CTIC Subcommittee:** Annette Dwyer

The status of the CTIC handbook chapter (Chapter 8) is discussed above.

There are no Programs proposed for the St Louis meeting.

Research: The status of the CTIC Design Guide Update RTAR is discussed above.

The subcommittee is looking for a volunteer for the chair position in the future.

**e. Membership:** Dharam Punwani

Dharam Punwani reported that currently we have nine (9) voting members, and welcomed Blake Ellis, Tim Wagner and Gearoid Foley as new Voting Members. On June 30, 2016, 4 members will roll off (John Andrepont, Dharam Punwani, Harold Smith and Sriram Somasundaram).

After the next meeting, Annette Dwyer will become Chair, Dragos Paraschiv – Vice Chair, Blake Ellis – Secretary / Webmaster and Tim Wagner - Handbook Subcommittee Chair.

All other subcommittee positions are staying the same.

**f. Web Site:** Dragos Paraschiv

Dragos reported that the TC 1.10 website was transferred to the new ASHRAE TC website template. Please contact him with any suggestions for webpage contents.

**g. Honors & Awards:** Dharam Punwani

No nominations from TC1.10 at this meeting.

**h. Standards**

**SPC204P:** Mark Davis

Mark reported that the standard document is not yet ready for public review. The SPC 204 Subcommittee discussed outstanding changes during the meeting on Monday, as well as the public review process and associated support from SPC204 members.

The subcommittee intends to vote the standard document before the next meeting in St Louis, and then submit to ASHRAE for public review, with an expected date for publication in Jan 2017.

**ASHRAE Standard 100**

Richard Sweetser presented an update on the Energy Efficiency Standard for Existing Buildings (Standard 100), which is technically unfair to mixed-fuel buildings (CHP and District Energy examples). He reported that SSPC 100 is dealing with the site/source energy issue, under the standard continuous maintenance process. SSPC 100 recognizes that CHP and district energy are problematic for the standard and is seeking solutions, but the process is slow.

**7. Chairman's Overview and Report:** Dharam Punwani

Following the TC Chairs' Breakfast Meeting the Chair reported the following highlights:

- 2015-2016 Hightower Award was given to Steve Duda from TC4.3&9.1
- 2015-2016 ASHRAE Research Award had no nominations
- Starting in St Louis, speakers will be asked to submit a disclosure statement
- Four New Multidisciplinary Task Groups have been created; MTG.ASEC Avoided Source Energy Consumption Due to Waste Heat Recovery and Heat Pump Technologies may be of interest to TC1.10 members
- TC meetings can be broadcast on web: it may be an option for the meeting in June 2017.

**8. Old Business:**

John Andrepont reported on IDEA activities: See the attachment to this document for his report

**9. New Business:**

Gordon Williams mentioned that CSA is working on developing standards for CHP product certification standards.

Meeting Times for 2016 Annual Conference in St Louis: (Tuesday – June 28, 2016)

TC 1.10 Handbook, Program, Research, CTIC, Membership Subcommittee 1:00 pm – 2:00 pm

TC 1.10 main meeting from 2:30 pm - 4 pm

**Adjourn**

John Andrepont moved that the meeting be adjourned. Blake Ellis seconded the motion and it was approved (5, 0, 0, 4, CV).

Minutes prepared and respectfully submitted by Dragos Paraschiv, TC 1.10 Secretary.

January 22, 2016

## **IDEA Liaison Report to ASHRAE TC 6.2 and TC 1.10**

Prepared and presented by: John Andrepont (+1-630-353-9690 / [CoolSolutionsCo@aol.com](mailto:CoolSolutionsCo@aol.com))

The International District Energy Association (IDEA) is an industry association of over 1,000 members. The membership includes District Energy (Thermal) Utilities; Physical Plant and Utilities Personnel from University, Medical, and other District Energy Facilities; Equipment Manufacturer/Suppliers; Service Providers to the Industry; other District Heating & Cooling Associations; plus Government, Student, and other Personal members.

IDEA has two major conferences each year (one focused on campus District Energy systems and one focused on thermal utility systems), as well as smaller workshops on subjects such as marketing and thermal distribution, plus occasional regional-focused conferences. Each major conference also focuses on integrating Combined Heat & Power (CHP) and Thermal Energy Storage (TES) with District Energy.

Upcoming IDEA conferences include:

- 29<sup>th</sup> Annual Campus Energy Conference  
February 8-12, 2016 – Austin, Texas
- 107<sup>th</sup> Annual District Energy/CHP Conference and Trade Show  
June 20-23, 2016 – St. Paul, Minnesota
- 30<sup>th</sup> Annual Campus Energy Conference  
February 18-20, 2017 – Miami, Florida
- 108<sup>th</sup> Annual District Energy/CHP Conference and Trade Show  
June 26-29, 2017 – Scottsdale, Arizona

For further information on IDEA, contact:

Rob Thornton, President  
IDEA  
24 Lyman Street, Suite 230  
Westborough, Massachusetts 01581

tel: 508-366-9339  
fax: 508-366-0019  
e-mail: [rob.idea@districtenergy.org](mailto:rob.idea@districtenergy.org)  
website: [www.districtenergy.org](http://www.districtenergy.org)