

Technical Committee Meeting Minutes
Technical Committee, TC 1.10 Combined Heat and Power Systems
Tuesday, 2023-02-10, Hybrid Webex (Atlanta, GA)

TC 1.10 Combined Heat and Power Systems – Committee Meeting

Tuesday, February 7, 2023: 2:30 PM-4:00 PM EST; Omni CNN Center Atlanta, Room: Maple C (A-South)

Chairs and Voting Members:

Name	Position	Term	Voting Status	Present
Geoff Bares	Chair	2023-2024	Non-Voting	Yes
Michael Calabrese	Secretary/Webmaster	2023-2024	Voting	Yes
Ahmad Abuheiba	Secretary/Webmaster	2023-2026	Voting	No
Dragos Paraschiv	Handbook Subcommittee Chair	2021-2025	Voting	Yes
Gearoid Foley	Programs Subcommittee Chair	2020-2024	Voting	Yes
Farzin Rad	Research Subcommittee Chair	2021-2025	Voting	Yes
Isaac Mandereka Ahmad Abuheiba	Standards Subcommittee Chair	2021-2026	Voting	No
-	Membership Subcommittee Chair	2021-2022		-
-	Honors and Awards Subcommittee Chair	2021-2022		-
Marija Todorovic	Member Non-Quorum	2021-2022	-	
Dharam Punwani	Member	2019-2023	Voting	
Vikas Patnaik	Member	2021-2026	Voting	
Bill Ryan	Member	2021-2026	Voting	No

Non-Voting Members/Guests: For complete attendance list, see sign-in sheet.

Name	Position	Present
Cory Metzger	TAC Section Head	No
Richard Sweetser	DOE liaison	Yes
Bill Ryan	TC 8.3, Programs Chair	No

1. The Chair (Geoff Bares) Called to Order at 2:30 pm
2. ASHRAE Code of Ethics Commitment – Announced by TC Chair (Geoff Bares)

In this and all other ASHRAE meetings, we will act with honesty, fairness, courtesy, competence, integrity and respect for others, and we shall avoid all real or perceived conflicts of interest. (see full code of ethics: <https://www.ashrae.org/about-ashrae/ashrae-code-of-ethics>.)

3. Introductions / Attendees
 - A. Name, company/location, & position on committee. Roll call.
 - B. Quorum has been established with at least 5 voting members present.
 - C. Introduction to ASHRAE Liaisons

- i. Section Head report, Cory Metzger. None.
- D. Review of Current Voting Members, TC officers and Quorum.
 - i. Ahmad Abuheiba is no longer able to

4. The chair (Geoff Bares) discussed the Purpose Statement

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

5. Meeting Minutes from the 2022 Hybrid (Toronto) Summer Meeting

- A. Copies of the draft minutes of the 2022 Summer meeting were distributed to the membership via email.
 - i. Chair reviewed the minutes.
 - ii. A motion to approve the meeting minutes of the 2022 Hybrid Summer Meeting.
 - iii. Motion by Dharam Punwani-VM, second by Farzin Rad-VM, all Yea, no Nay. Motion passed, unanimously.

6. Sub-Committee Reports:

A. Handbook: Dragos Paraschiv (Sub-Committee Chair)

- i. Chapters 7 and 8, due for publication 2023.
 - (1) Forwarded the chapters to this TC for review.
 - (2) Online portal is available to edit these documents. Please track changes for chair to review.
 - (3) Chapter 7 is due March 14, 2023 and Chapter 8 in July 27, 2023
 - (4) List of Topics for future revision to Chapter 7
 - (a) Performance of reciprocating engines, fuels, renewable fuels, solar PV, microturbine, microgrids and storage, role of CHP in decarbonization
 - (b) Significant effort for rewrite will take place during next cycle.
 - (5) Dragos to distribute current chapter edits for review.
 - (6) Printed version and online versions. Online is available to edit but printed copy has a scheduled deadline.
 - (7) Richard Sweetser commented that Decarbonization with CHP, even with conventional fuels should be included.
 - (8) Will need a new Handbook chair for next cycle.

B. Honors and Awards: Geoff Bares, Vice Chair

- i. No awards.
- ii. Keep ASHRAE bio updated, awards available based on participation points.

C. Membership: Geoff Bares, Vice Chair

- i. Ahmad Abuheiba no longer participating in ASHRAE due to personal circumstances. Need to fill Secretary and Standards positions.
- ii. Dragos Paraschiv agrees to take over Standards, coupling role with Chair of SPC 204.
- iii. Praveen Cheekatamarla agrees to take over Secretary role.

D. Programs: Gearoid Foley (Sub-Committee Chair).

- i. Two seminars accepted for Atlanta.
- ii. Based on audience and tracks available for Tampa, will not submit a seminar proposal.
- iii. Possible future topics discussed included:
 - (1) Organic rankine cycle CHP (John Randtke to discuss further with Gearoid)
 - (2) Waste heat to power
 - (3) Past, present & future of CHP

E. Research: Farzin Rad (Sub-Committee Chair)

- i. Chair Breakfast Topics
 - (1) Budget has been restored, RAC is looking for RTARs to consider.
- ii. Discussion on integration of micro-CHP and battery storage for PV optimization (1.02.56)
- iii. Discussion on Site vs. Source energy RTAR
- iv. Discussion on integration of micro-CHP with air-source heat pumps and TES control strategy
- v. Co-sponsor TC 8.3 cogeneration, trigeneration modeling with e-quest and/or alternate platforms.
- vi. Publications reached out concerning update to "Fuel Cells in Building Applications". Guide is 20+ years old. Praveen and Ryan Millcraft expressed interest in reviewing and possibly writing an RTAR for revision.

F. Website: Geoff Bares (Webmaster)

- i. Website is updated with final documents.
- ii. 2022 Meeting minutes (for this meeting), and handout documents will be posted on the website.
- iii. Next subcommittee meeting information will be posted.

G. Standards: SPC 204, Dragos Paraschiv (Sub-Committee Chair).

- i. No meetings as of yet.
- ii. Micro CHP defined as 50kWe and less.

7. Chairman's Overview and Report, TC Vice Chair (Geoff Bares).

A. TC Chair breakfast

- i. Functional Groups (FG), MTG. Includes TCs, TRGs.
 - (1) Separate MOP required for the above.
- ii. Updates – must now be ASHRAE members for committee
- iii. New balance requirement – no specific group can hold a majority of voting member positions.
- iv. Task Force for Building Decarbonization in full swing
 - (1) Producing 6 new publications and guidelines, with aggressive publication dates.
 - (2) Blake Ellis heavily involved in effort, acting as TC 1.10 liaison.

8. Old Business-

A. None.

9. New Business

- A. TC Vice Chair (Geoff Bares) announced that there will be an online Subcommittee meeting prior to the Summer Meeting in June. The main committee meeting will be hybrid at the 2023 Tampa Summer Meeting

10. Adjourn

- A. Announcement by TC Chair (Geoff Bares) to close this session at 3:45 pm.
- B. Motion by Dharam Punwani -VM, second by Michael Calabrese-VM, all Yea, no Nay. Motion passed.

Subcommittee Meetings - Day, Date, Times, & Location Prior to TC 1.10 Meeting:

TC 1.10 Handbook, Program, Research – Wednesday 2023-06-13, 12:30 pm – 2:00 pm, Remote Teams Meeting