

ASHRAE TC 1.10 COMMITTEE MINUTES
Kansas City, MO
June 25, 2019

The TC 1.10 meeting was called to order by the Chair, Dragos Paraschiv, at 2:30 PM.

- 1) Chair Dragos Paraschiv welcomed all members and acknowledged the guests.
- 2) Chair Dragos Paraschiv read the ASHRAE Code of Ethics. The full code can be read at: <https://www.ashrae.org/about/governance/code-of-ethics>
- 3) Self-introductions were made by all present.
- 4) Chair Dragos Paraschiv read the TC 1.10 mission statement:

Mission Statement: 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) Subcommittee Reports

a) *Research:* Farzin Rad (subcommittee chair)

- i) Farzin Rad attend the research breakfast on Monday. He indicated there is a new Section Liaison for Section 1 starting July 1, 2019. He also indicated that there is a new process called PTAR that is in addition to the current RTAR process. Some statistics on past research projects from 2015-19 was presented. A total of \$11.2M was allocated and \$8.6M paid for an average of \$1.5M per year. An average project is \$131k in size and takes 18 months to complete.
- ii) Farzin provided an update of RP 1762. The research is almost completed. The project has had a no cost extension to January 31, 2020. Dragos is the project monitoring subcommittee chair.
- iii) There was discussion on the fuel cell publication. TC1.10 is going to contact the author to see if they are interested in updating the Fuel Cell design guide. Dragos asked if others are interested in providing input.
- iv) Bill Ryan provided an updated of the project titled “Cogeneration and trigeneration simulation modeling with eQuest” that is co-sponsored with TC 8.3. The project has been approved and a work statement is being prepared and is ready to be submitted. This will be voted on electronically.

b) *Membership:* Dragos Paraschiv (subcommittee chair)

- i) Dragos reported that there are 3 voting members leaving: Blake Ellis, Tim Wagner, Gearoid Foley and one member is joining: Dharam Punwani. This reduces the number of voting members to seven (7), which is the minimum.

c) *Web Site:* Geoff Bares (webmaster) – *Report by Dragos Paraschiv*

- i) Dragos asked how many people are using the TC1.10 website. Dragos mentioned that the membership portion of the website is automatic. Meeting notes and agendas will be posted on the website.

- 6) Section 1 Head Report (Jennifer Leach)
 - a) Jennifer indicated that she is interested in helping out with communications. If you are having issues with communication with ASHRAE staff, please let her know and she can help break any logjams.
- 7) Subcommittee Reports (continued)
 - a) Honors & Awards: Dragos Paraschiv (subcommittee chair)
 - i) The following people won awards at the plenary session on Saturday:
 - (1) Distinguished 50-Year Award
 - (a) Ainul Abedin
 - (2) Distinguished Service Award
 - (a) Richie Mittal
 - (b) John Molnar
 - (c) Marija Todorovich
 - b) Standards Annette Dwyer (subcommittee chair) – *Report by David Kalensky*
 - i) David Kalensky provided an update of SPC 204 (micro CHP – 50kW and under). That the standard has been voted to be moved forward to public review since the January meeting. However, Mark Davis has stepped down and Chris Dockery is Vice Chair and due to several reasons, the standard was never sent to ASHRAE to be posted to public review. During their meeting yesterday, it was determined that it still should be sent to public review. Dragos will send an email to the committee when the standard is out for public review.
- 8) Chairman’s Overview and Report: Dragos Paraschiv
 - i) Dragos reported that he attended the Chair’s Breakfast with Blake Ellis on Sunday. The format changed this year. There was a new format this year with all sections meeting at one time. Dragos felt it was good, except there was not enough time for section specific discussions.
 - ii) Roster access was discussed. Dragos asked people to check after July 1st to make sure everything is correct. If you were a provisional corresponding member attending TC 1.10 meetings, you should be converted to corresponding member.
 - iii) Victor Goldschmidt made a presentation of principles of leadership and change at the breakfast.
 - iv) Dragos indicated that an email has been sent by ASHRAE regarding your involvement. If you would like recognition, please reply to that email and a letter will be sent to your employer.
 - v) Deadlines
 - (1) Programs: August 2, 2019
 - (2) Hightower Award: September 1, 2019. Both Dharam and Lucas Hyman from this TC have won this award in the last ten (10) years.
 - vi) Remote participation meetings (RPMs) can be requested to make quorum.
 - vii) Dragos indicated that the ashrae.org website is much more organized.
- 9) Richard Sweetser joined the meeting. TC 1.10 currently has nine (9) quorum Voting Members of which five (5) were now present. Hence, a quorum was established.
- 10) Approval of the Minutes
 - a) Copies of the draft minutes of the meeting held in Atlanta, GA were distributed to the attendees of the meeting.
 - b) **MOTION** – Tim Wagner made a motion and Richard Sweetser seconded to approve the minutes of the Atlanta Meeting. **The motion was approved. (5-0-0, CV)**

11) Subcommittee Reports (continued)

- a) Programs: Rich Sweetser (subcommittee chair)
- i) Orlando (Winter 2020) Program:
- (1) Richard listed the program tracks for Orlando and the committee determined to submit a program in *Track 4: Cutting Edge Approaches*. See Attachment 1 with the addition of Blake Ellis as Chair.
 - (2) **MOTION** – Richard Sweetser made a motion and Farzin Rad seconded that “TC 1.10 approve the following program in Orlando: “*Cutting Edge Approaches to integrating modern HVAC&R systems with modern CHP Systems and IoT*”. **The motion was approved. (5-0-0, CV)**

Gearoid Foley joined the meeting. TCI.10 now has six (6) voting members present.

- b) Handbook: Dr. Tim Wagner (subcommittee chair)
- i) Tim mentioned that this committee is responsible for Chapters 7 and 8 of the HVAC Systems and Equipment Volume (last published in 2016). Chapter 7 is titled “*Combined Heat and Power Systems*” and Chapter 8 is titled “*Combustion Turbine Inlet Cooling*”. Both chapters are to be published for the 2020 Handbook and need to be approved at the 2019 Annual Meeting in Kansas City.
- (1) Chapter 7: Tim indicated that with the recently published CHP Design Guide, there were not any changes to this chapter.
 - (2) Chapter 8: This chapter will be staying the same as the last time. When the new Combustion Turbine Inlet Cooling (CTIC) Design Guide is completed, the chapter will be reviewed at that time.
 - (a) **MOTION** – Tim Wagner made a motion and Farzin Rad seconded that “TC 1.10 accept Chapter 7 (Combined Heat and Power Systems) with one modification to add the following sentence to the first paragraph in Subsection 7.1 CHP Electricity-Generating Systems of “*For additional information, see Combined Heat and Power Design Guide (ASHRAE 2016)*.” and accept Chapter 8 (Combustion Turbine Inlet Cooling) as is.” **The motion was approved. (6-0-0, CV)**

12) Old Business:

- a) None

13) New Business:

- i) IDEA Update: The IDEA Liaison report was provided by John Andrepont and read by Blake Ellis. See Attachment 2 to this document for his report. Blake also indicated that IDEA and ASHRAE signed a Memorandum of Understanding (MOU) to work together on a number of areas in May 2019. He will be working with Shelia Hayter and one other person to develop a workplan.
- ii) CHP Course: Lucas Hyman had previously developed a CHP ALI course. Dragos indicated that he will be checking with Geoff Bares and possibly Lucas Hyman on their interest to offer the course in the future.
- iii) TC 7.3 Request for Co-Sponsorship: John Karakash provided an invitation to the committee that is attached as Attachment 3 to the document.
 - (a) **MOTION** – Richard Sweetser made a motion and Dragos Paraschiv seconded the motion to co-sponsor the attached. **The motion was approved. (6-0-0, CV)** Following the vote, Blake sent an email to TC 7.3 indicating such.
- iv) DOE Update: Richard Sweetser provided an update of on the DOE’s E-Catalog. The E-Catalog is now available and covers CHP systems up to 7.5MW (<https://chp.ecatalog.lbl.gov/>). The catalog includes performance data on these systems. A question was asked if the first cost was included in the E-Catalog. Richard indicated that it does not.

v) Incentives in the Midwest: Dharam Punwani provided an update of some incentives for CHP in the Midwest. If additional information is needed, please contact Dharam.

vi) Next Meeting: In Orlando at the Winter meeting on Tuesday February 4th. The PMS will meet at 12:30pm, the subcommittees at 1:30pm and the main TC meeting from 2:30pm – 4:00pm.

14) Adjourn

i) **MOTION** – Richard Sweetser moved and Tim Wagner seconded that the meeting be adjourned. The motion was approved **(6-0-0, CV)**.

ii) Meeting adjourned at 4:01pm.

Minutes prepared and respectfully submitted by Blake Ellis, TC 1.10 Vice-Chair.