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TC/TG/MTG/TRG MINUTES COVER SHEET

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

TC/TG/MTG/TRG No. TC 1.10 DATE 8/15/2017

TC/TG/MTG/TRG TITLE Cogeneration

DATE OF MEETING 6/27/2017 LOCATION Long Beach, CA

MEMBERS PRESENT	YEAR APPTD	MEMBERS ABSENT	YEAR APPTD	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
Annette Dwyer	2016	Birol Kilkis (non quorum)		Andrew Babler (G)
Blake Ellis	2015			John Molnar (CM)
Geoff Bares	2016			Dharam Punwani (CM) (via RPM)
Gearoid Foley (via RPM)	2015			Daniel Pyewell (PCM)
Dragos Paraschiv (via RPM)	2016			Bill Ryan (CM)
Farzin Rad	2016			Walt Vernon (G)
Richard Sweetser (via RPM)	2016			
Tim Wagner (via RPM)	2016			

DISTRIBUTION: All Members of TC/TG/MTG/TRG plus the following:

TAC Section Head: Amir Jokar	SH1@ashrae.net
Christopher G Phelan, CTTC Research Liaison Shinsuke Kato, PhD, Research Liaison James W Bochat, ALI/PDC Florentino Roson Rodriguez, PE, Handbook Liaison Rick M Heiden, Standard Liaison	CTTC1@ashrae.net RL1@ashrae.net PDCchair@ashrae.net HBS5@ashrae.net SL1@ashrae.net
Mike Vaughn, Manager Of Research & Technical Services	MORTS@ashrae.net

Note: These draft minutes have not been approved and not the official, approved record until approved by the TC.

FINAL
ASHRAE TC 1.10 COMMITTEE MINUTES
Long Beach, CA
June 27, 2017

The TC 1.10 meeting was called to order by the Chair, Annette Dwyer, at 2:33 PM.

1. Chair Annette Dwyer welcomed all members and acknowledged the guests.
2. Self-introductions were made by all present. TC 1.10 has eight (8) quorum Voting Members of which all eight (8) were present. Hence, a quorum was established.
3. Secretary Blake Ellis 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. Approval of the Minutes

Copies of the draft minutes of the meeting held in Las Vegas, NV were distributed to the attendees of the meeting.

MOTION - Geoff Bares made a motion to approve the minutes of the Las Vegas Meeting. The motion was seconded by Farzin Rad and approved (7-0-0 CNV)

5. **Subcommittee Reports**

- a. **Programs:** Rich Sweetser (subcommittee chair)

Long Beach (Annual 2017) Program:

Richard reminded the committee that no technical programs were submitted for Long Beach.

Chicago (Winter 2018) Program:

Richard indicated that Track 4 – Earth Wind and Fire as being targeted for a seminar at the Chicago conference. Richard described a program that he has pulled together for the meeting. The proposed title is “How to thrive during your next natural disaster – Three operational Combined Heat and Power (CHP) case studies.” The theme of the seminar is to have case studies of three different CHP systems at a hospital, university and possibly a manufacturing plant. A case study outline was also presented. See Attachment 1 to these notes for additional information about the Chicago Meeting.

Richard Sweetser moved to approve this submission for Chicago. The motion was seconded by Farzin Rad and approved (8-0-0 CV)

Houston (Annual 2018) Program:

Richard indicated that Houston has a dedicated track to District Energy and Cogeneration Plants and Cindy Marano is the Program Chair. There was some discussion on the topic and because this track was closely aligned with several TCs that it was important to have a coordinated response. The conclusion of the discussion was that a meeting between the TC 1.10, TC 6.2 (District Energy), 6.9 (Thermal Storage) and 8.3 (Absorption and Heat Operated Machines) program chairs should meet to provide a coordinated response. It was discussed that Drew Overmiller (outgoing chair of TC 6.2) would be a good person the chair the committee. **Blake Ellis has the action item to discuss with Drew.**

b. Research: Dragos Paraschiv (subcommittee chair)

Dragos updated the committee that the CHP Design Guide that was closed out. The presentation is done and the guide is available in the ASHRAE Bookstore in Long Beach. Dragos is going to follow up on how the guide is selling.

The second project is an update of the CTIC design guide. Three bids were received. The project evaluation subcommittee (PES) is made up of Jay Eldridge (TC 6.2), Geoff Bares (TC 6.9) and Dragos from TC 1.10. The PES met on June 27th and they will have some future meetings to complete their recommendation. They will present their recommendation in Chicago.

Bill Ryan (CM) is also on TC 8.3 commented on the RTAR on cogeneration and trigeneration modeling that is co-sponsored by TC 1.10. The RTAR was received by RAC. RAC made comments and modifications have been made the RTAR has been resubmitted to RAC. Bill expects a determination on that RTAR at the Chicago meeting.

c. Handbook: Dr. Tim Wagner (subcommittee chair)

Tim mentioned that this committee is responsible for Chapters 7 and 8 of the 2016 HVAC Systems and Equipment. Chapter 7 is titled Combined Heat and Power Systems and Chapter 8 is titled Combustion Turbine Inlet Cooling.

Tim provided an overview of the process to improve and update the handbook to the committee. Because both chapters were just issued last year and the process to update the chapters for the 2020 Handbook has begun. Revisions should be completed by next year so they can be voted in time for the 2020 meeting. Tim indicated that he is looking for information on areas that need to be improved in the next cycle. He has not received any comments prior to the meeting.

Geoff Bares asked if the Chapter 7 is in line with the recently issued CHP Design Guide and if it needs to be reviewed. Gearoid Foley said that the CHP Design Guide tried to stay away from the specifics of the handbook, but it was determined that it made sense to review the chapter. Richard pointed out that some of the information in the handbook needs to be updated, for example the efficiency of reciprocating engine generators. Tim will also look at the CTIC References.

Geoff Bares indicated that the 2012 version of Chapter 8 had a major overhaul and he did not expect a major update in this version.

d. CTIC Subcommittee: Geoff Bares (subcommittee chair)

Geoff reported that majority of the items are a subset of the main TC. In Las Vegas, the topic was discussed to eliminate the CTIC subcommittee meeting. Geoff Bares moved to eliminate the CTIC subcommittee. The motion was seconded by Dragos Paraschiv and approved (8-0-0 CV)

e. Membership: Annette Dwyer (subcommittee chair)

Annette reported that currently we have eight (8) voting members and one non-quorum voting member. The new roster is out from ASHRAE. Annette read the voting members. Annette indicated she would review the roster.

f. Web Site: Blake Ellis (webmaster)

Blake reported that the TC 1.10 website was updated prior to the meeting and that it is easy with the new software. Blake indicated that he will try and get some analytics prior to the Chicago meeting.

g. Honors & Awards: Annette Dwyer (subcommittee chair)

Annette indicated the following committee members received awards at the plenary session on Saturday:

- Pat Graef (CM) – Exceptional Service Award
- Annette Dwyer (Chair) – Distinguished Service Award
- Blake Ellis (Secretary) – Distinguished Service Award
- Bill Ryan (CM) – Distinguished Service Award

h. Standards

Dragos mentioned that there was a meeting scheduled on Monday night. An RPM was set up for SPC204, chaired by Mark Davis, but Dragos was not able to attend. No other information was provided.

6. Chairman’s Overview and Report: Annette Dwyer

Annette attended the TC Chairs Breakfast for Annette Dwyer and reported the following highlights:

- Annette had Bacon, Eggs, Cheese and English Muffins for breakfast.
- Amir Jokar is our Section Head and he attended the meeting.
- All of the program tracks were detailed in the handout.
- There is a free registration class available that started at the Long Beach meeting.
- Geoff indicated that we should note on form that we wouldn’t be meeting quorum if we don’t have remote participation.

7. Old Business:

Blake Ellis read the IDEA Liaison report provided by John Andrepont. See Attachment 2 to this document for his report. Blake Ellis also indicated that ASHRAE has signed an MOU with IDEA in the last few years and starting July 1, 2017, Blake will be the official ASHRAE liaison to IDEA. He has already had conversations with IDEA to coordinate meeting times to eliminate conflicts.

8. New Business:

DOE Update: Richard Sweetster indicated that the president’s budget included a 70% reduction in the budget of the area where the CHP TAPs are located. House Appropriations Committee marked it up to today with a 40% reduction.

There was a discussion in Las Vegas regarding changing the name of the TC to match the title of the new chapter as Combined Heat and Power Systems. This was discussed in Long Beach and everyone was OK with the change. Annette had an action item to contact the section head for procedures. The revised scope for the TC was discussed and modified to the following, which will be voted on in Chicago:

“TC 1.10 is concerned with combined heat and power systems (CHP), 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 shaft) 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.”

The meeting times for the for the 2018 Winter Conference in Chicago was discussed. Annette indicated that the following request would be placed for meeting times:

- Tuesday (January 23rd) will be requested.
- TC 1.10 Handbook, Program, Research, Membership Subcommittee 1:00 pm – 2:30 pm
- TC 1.10 main meeting from 2:30 pm - 4 pm
- A remote participation conference will NOT be requested.

Adjourn

Blake moved that the meeting be adjourned. Richard seconded the motion and it was approved (8-0-0, CV).

Minutes prepared and respectfully submitted by Blake Ellis, TC 1.10 Secretary.