

TC 9.01 - Large Building Air Conditioning Systems

Tampa Annual Conference 2023

Program/Handbook/Research Subcommittee

Tuesday, June 27 12:00 PM – 1:00 PM EDT

JW Marriott Ashley (3)

Note: Not in same room!

Main Meeting

Tuesday, June 27 1:00 PM – 3:00 PM EST

JW Marriott Ashley (4)

Hybrid

Meeting ID: 236 512 9226

Passcode: TC9.1

MEETING MINUTES

Call to Order – Mark Fly 1:03pm

1) Welcome / Introductions - everyone introduced themselves.

Mark Fly	Chair	Voting
Douglas Cochrane	Vice Chair	Voting
Phillip Trafton	Secretary	Voting
Charles Henck	Standards	Non-voting
John Kuempel	Research	Non-voting
Jay Eldridge	Handbook	Voting
Elizabeth Primeau	Webmaster	Non-voting
Kelley Cramm	Member	Voting
Mark Pavol	Member	Voting
R Lee Millies	Standards	Non-voting
Dennis Wessel	Program	Non-voting
Alonzo Blalock		Non-voting
Stephen Duda		Non-voting
John Vucci		Non-voting
William Klock		Non-voting
Mehdi Jalayerian		Non-voting
Craig Messmer	TAC Chairman	Non-voting
Vicent Tang	GUEST	Non-voting
Peter Maus	GUEST	Non-voting

2) Administrative

- a. **ASHRAE Code of Ethics** - 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 interests.
(<https://www.ashrae.org/aboutashrae/ashrae-code-of-ethics>.)
- b. **Scope** - TC 9.1 is concerned with the general design concepts of the HVAC systems that are utilized for the conditioning of large buildings, including the integration of components into centralized and decentralized systems.

3) Determination of Quorum - **yes**

- a. Voting Members = 7 Member
 - i. Fly, Mark
 - ii. Cochrane, Douglas
 - iii. Trafton, Phillip
 - iv. Eldridge, Jay
 - v. Cramm, Kelley
- | |
|--------------------|
| Chair |
| Vice Chair |
| Secretary |
| Hndbk Subcom Chair |
| Member |

- vi. Pavol, Mark Member
- vii. Warren, Ken Member (**absent**)
- b. Non-Voting Subcommittee Chairs
 - i. Wessel, Dennis Program Subcom
 - ii. Kuempel, John Resrch Subcom
 - iii. Henck, Charles Stds Subcom
 - iv. Primeau, Elizabeth Webmaster

4) Review and Approve Minutes from 2023 Winter Meeting

- a. Kelley move to approve, Doug seconded
- b. Unanimous, CNV

5) Agenda Comments and Updates

No comments.

6) Chair Comments and Section 9 Report from Brad Cochran

- a. CEC has setup a process where new members can get a free registration to a conference; details to be sent out.
- b. New electronic roster plan; replacing old system as of Chicago 2024
- c. TAC is working on balance in all of the TCs; Brad does it with a spreadsheet with names, companies; ASHRAE wants it formalized; **members should update bio to include “discipline”.**
- d. Get your activity form in! 23 A-1
- e. Tara is sending out updated rosters
- f. Initiative: ISI is now Global Technical Interaction Committee (GTIC); comparing stds, working in conjunction; starting with ISO stds, ISO TC2.5 building Env Design, TC163 thermal perf and energy design, TC86 ref and AC, ISO TC142 cleaning equipment for air; **lets us know if any are conflicting in your experience**
- g. Handbook: applications handbook has doubled in size, they are looking at reducing it (duplicate info, out of date), if not then they will do 2 volumes.
- h. TC9.12: they are looking at a special track for tall building in Chicago; interest in presenting?
- i. Certificate of appreciation for Mark Fly! 😊
- j. Doug: decarb guidelines before annual meeting 2024; Alice Yates presented GAC information
- k. **Doug to send EP information to post on the website**

ASHRAE Liaison Reports:

- l. Society (e.g., TAC, Standards, Research, Handbook)

7) TC 9.1 Membership 2023-24

- a. Voting Members = 7 Voting Member
 - i. Trafton, Phillip Chair (VM)
 - ii. Warren, Ken Vice Chair (VM)
 - iii. Schultz, Madison Secretary (CM)
 - iv. Eldridge, Jay Hndbk Subcom Chair (VM)
 - v. Wessel, Dennis Program Subcom (New VM)

- vi. Cramm, Kelley Member
 - vii. Pavol, Mark Member
 - viii. Millies, Lee Member (New)
- b. Non-Voting Subcommittee Chairs
- i. Kuempel, John Resrch Subcom
 - ii. Henck, Charles Stds Subcom (need new Standards Chair)
 - iii. Primeau, Elizabeth Webmaster

8) TC Subcommittee Reports:

- a. Handbook – Eldridge
- i. Working on chapters for 2024 book
 - ii. Two chapters were emailed yesterday to VM and frequent attendees
 - iii. JK: chapter not ready
 - iv. Get the first few approved
 - v. Deadline: Phil T., Ken W., and John K. **late July deadline; July 31st 2023 submitted**
 - vi. Motion to approve chapter 1 and chapter 4 from Eldridge
 - 1. Comment: we would like to make small edits after vote (not content related)
 - 2. Unanimous, CNV
 - 3. Note from Mehdi: **issue with underfloor section;**
 - a. **Dennis Wessel and Charlie Henck to work on this with Mehdi**
 - b. **Jay to hold on sending this in**
 - c. **Mention applicable Design Guides and O&M manual**
 - vii. We will approve the other chapters by email.
- b. Research – Kuempel
- i. No report.
- c. Standards – Henck
- i. We are responsible for Guideline 16: Selecting Outdoor, Return and Relief Dampers for Air-Side Economizer Systems – reaffirmed May 2018.
 - ii. ASHRAE Guideline 34-2019 Energy Guideline for Historic Buildings. TC 7.6 is being asked to recommended revision, reaffirmation, or withdrawal of Guideline 34-2019. The 2019 version shows 9.1 as the cognizant TC? Sheila J. Hayter was the GL Chair.
 - 1. We are not responsible for this anymore; 7.6 is taking over.
 - iii. What standards can be made more international?
 - 1. Not applicable at this time;
- d. Honors and awards – Need Chair
- i. Still need a chair
 - ii. Any candidates for Fellow?
- e. Website – Primeau
- i. No report.
- f. Programs – Wessel
- i. Chicago 2024:
 - 1. Kelley and Phil to do forum
 - 2. Ken Warren to do a seminar on challenges pet relief area
 - 3. Potential co-sponsor with 9.12 on tall buildings

4. Forum discussed, Phil Trafton on Title 24; input from Controls company
- ii. Vegas 2026:
 1. Reducing water in building; no cooling towers.
- iii. Tampa 2023:
 1. Forum: System options in Evaporative cooling prohibited locations.
Chair – Dennis Wessel (Forum 3, Monday, June 24, 9:45 to 10:45 AM)
 2. Forum: Special design challenges in large and tall multi-family buildings
Chair – Dennis Wessel (Wednesday, June 28; 9:45 – 10:45 AM)
- iv. Other topics:
 1. Does solar and/or wind energy have a role in large building systems?
Co-sponsorship with TC-9.12 Tall Buildings – under 10 stories and requires battery storage.
 2. Title 24 requires 35% of roof area contain solar panels.
 3. Special challenges in grow facilities. Contact the Agricultural TC for co-sponsorship.
 4. HVAC System under sizing: How much is too much?
 5. Large system multizone control options.

9) TC/PC Liaison Reports

- a. TC 4.03 – Ventilation & Filtration
 - i. Duda: very old parking garage ventilation standard; this will be re-done.
 - ii. Duda: aerosol research into contaminant migration;
 - iii. No report
- b. TC 5.1 – Fans (Eldridge)
 - i. No report
 - ii. No report
- c. TC 5.7 – Evap cooling
 - i. Outlawed in Vegas
 - ii. Mark Pavol: looking to follow up on forum/discussion
 - iii. Mark Pavol: discussion about disease transmission are mitigated with higher RH, how to get involved in that
 - iv. Mark Pavol: standards for testing evap coolers
- d. TC 7.09 – Building Commissioning (Blalock)
 - i. Blalock: listened in
 1. DOE has established criteria for certifications for CX that is in the process of updating the list of criteria that organizations have to follow; no changes are likely.
- e. TC 9.08 – Specialized Building Applications (Molnar)
 - i. Molnar absent
- f. TC 9.09 Mission Critical - (Mark Pavol)
 - i. Pavol: discussion about performance parameters (too easy to game?), looking at better ways to do that
 - ii. Pavol: no one reads past the first psychrometric chart; but they should. Discussion around expanding the acceptable range.
- g. TC 9.10 – Laboratory Systems (Cramm/Henck)

- i. Cramm: updating laboratory design guide in progress
 - ii. Cramm: there is a research project: compared and characterize the geometry of the plume of air leaving lab discharge; contractor hired to work on this and test it.
 - iii. Pavol and Cramm to discuss this offline.
- h. TC 9.12 – Tall Buildings (Wessel)
 - i. Wessel: looking at changing their scope slightly
 - ii. Wessel: stack effect definitions don't align, need to check
 - iii. Track for Chicago: 6 or 7 programs
- i. SSPC 15 Mechanical Refrigeration Safety (Vucci)
 - i. Mark Fly went to it: lots going on with new refrigerants; significant update coming. Split systems and VRF??
- j. SSPC 62 Ventilation (Trafton)
 - i. Phil did not make it; keep it on the list.

10) Old Business

11) New Business

- a. Development of a Vision... our emphasis on Research, Programs and Handbook?
- b. Any research to be done?

12) Next Meeting – Chicago, IL - January 23rd, 2024

13) For Good & Well Being

14) Adjourn @ 2:41PM